

# Annual Report to the Board of Forestry: 2016 Forest Practices Act Effectiveness



Department of Natural Resources  
Division of Forestry



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## Table of Contents

I.	Overview	2
II.	Forest Practices Implementation on Private, State, Municipal, and Trust Land	2
	A. Summary of forest practices activities	2
	B. Monitoring	3
	C. Reforestation	5
	D. Training	5
III.	Resource Management Activity on State Land	6
	A. Statewide summary	6
	B. Resource management activity on state land in FY16	6
	C. Roads, infrastructure, and bridges	9
	D. Forest inventory	10
	E. Beach log salvage and log brands	10
	F. Land use planning	11
IV.	Federal Land Activity	11
	A. Tongass Land and Resource Plan implementation	11
	B. Tongass timber sales	11
	C. Challenge Cost Share Grant	13
	D. Good Neighbor Agreement	13
V.	Special Projects	13
	A. Statutory changes	13
	B. Regulatory changes	14
VI.	Budget and Staffing	15
	A. FY17 total funding	15
	B. Anticipated funding needs and new initiatives	16
	C. Staff and organizational changes	16
VII.	Statement of FRPA effectiveness and recommendations for changes	17
VIII.	Research and Monitoring Priorities for 2017	17
IX.	Additional Tasks and Initiatives for 2017	17
Appendix A	FRPA activities on private, state, municipal and trust land 2007-2016	19
Appendix B	Summary of 2016 enforcement actions	27
Appendix C	Reforestation research, monitoring, and planning recommendations	28

### **Tables and Figures**

Table 1	2016 compliance monitoring summary by region	4
Table 2	FY16 timber sales on state land	6
Table 3	Tongass national forest timber sale volume FFY 2007-16	12
Figure 1	Forest practices activities trends	18
Figure 2.	Trends in Core Funding and Dedicated Project Funding, FY 08-17	16

# DNR Division of Forestry Annual Report to the Board of Forestry: 2016 Forest Practices Act Effectiveness February 16, 2017

## I. OVERVIEW

The Department of Natural Resources (DNR) Division of Forestry (DOF) is pleased to submit its annual report on the Forest Resources and Practices Act (FRPA) and regulations to the Board of Forestry. DOF is the lead agency for implementation of the Forest Resources and Practices Act. Primary activities include coordinating interagency review of Detailed Plans of Operation (DPOs) for activities on private, municipal, and trust land; field inspections, implementation monitoring, and enforcement actions on these lands; and incorporating the standards of the Act and regulations into state timber sales. Forest practices related work on federal land is conducted by the Alaska Department of Environmental Conservation (DEC) and the Alaska Department of Fish and Game (ADF&G) Habitat Division based on their authorities for water quality and fish habitat protection.

### **Notable activities, conditions, and trends.**

- The State forest program budget has been cut by approximately 42% over the past three years.
- Forest operations remained low on non-state and decreased on state land. Funding for FRPA implementation and FRPA inspections also declined. Given the low level of forest activity, DOF provided sufficient field presence to ensure that FRPA was effective in protecting water quality and fish habitat in 2016. However, if activity increases as expected, the Division's ability to conduct adequate field inspections, monitoring, and enforcement will be constrained by the current budget.
- Successful road remediation in the Interior resulted in the highest Region III FRPA compliance monitoring scores on record.
- DOF sold 8.3 MMBF of timber, a decrease from last year, particularly in Southeast. The Southeast area was hit by a combination of budget cuts, difficulty filling vacant positions, and timber sale appeals.
- The Southeast State Forest Management Plan and final Southeast State Forest inventory were adopted.
- DOF embarked on three major cooperative efforts with the US Forest Service – Forest Inventory and Analysis (FIA) in Interior Alaska, a cost-share agreement covering young-growth inventory and work force development in Southeast Alaska, and a Good Neighbor Authority agreement to provide forest management services on national forest land.
- DNR adopted updated FRPA regulations for reforestation.

## II. FOREST PRACTICES IMPLEMENTATION ON PRIVATE, MUNICIPAL, AND TRUST LAND

### A. Summary of forest practices activities

**Notifications and inspections.** In 2016, DOF received and reviewed 28 new harvest DPOs, 18 new reforestation/timber stand improvement DPOs, 5 new road work DPOs, no voluntary plans of operations, and 16 renewals for private, municipal, and state trust lands (see Appendix A, p.19 and

Figure 1, p. 18).<sup>1</sup> New DPOs covered 5,856 acres and 45 miles of road. The Division conducted 29 inspections (including variation inspections) on private, municipal and trust land and 51 inspections on state timber sales. The number and acreage of new DPOs remained at the low level of recent years, and inspections continued to decline in proportion to funding and activity levels.

**Variations.** The Southeast Area received three requests for variations for harvesting in riparian buffers and approved 286 of the 301 trees requested. The Kenai-Kodiak Area received two buffer variation requests and approved 4,327 of the 4,353 trees requested. The Southeast Area also had two variation requests for leaving bridges on closed roads; both requests were approved.

**Enforcement.** Enforcement actions are summarized in Appendix B (p. 27). DOF issued no new directives, charging documents, or stop work orders in 2016. DOF completed one notice of violation case for harvesting trees in a riparian buffer on Afognak Island and the responsible party paid the fine of \$8,000.

## **B. Monitoring**

**Compliance monitoring.** During 2016, DOF conducted compliance monitoring on all FRPA inspections. A rating of 5 means the BMP was consistently and effectively implemented where applicable; a rating of 1 means the BMP was rarely implemented where applicable or was implemented ineffectively. The data shows solid implementation rates in all regions (see Table 1, p.4). Overall, Regions I and II averaged 4.46 out of 5.0 on the ratings, and Region III scored 4.96. In Region I, 93% of all scores exceeded 4.0, as did 99% in Regions II and III.

The number of inspections was down in all regions on both state and non-state land. Region I and II scores remained high, and Region III scores are the highest on record due to maintenance and repair work done since September 2015. Region I had regular on-site presence for all ground base operations in SE, Afognak and Kodiak, so any concerns with new road construction, timber harvesting and maintenance were dealt with early. All Region I operators seem to have good working knowledge of the BMP's for every aspect of FRPA. When the rare low scores occur, there is field discussion and understanding of the causes. Region II operations took place on State and borough lands in both Mat-Su and Kenai Peninsula. Some operators that needed oversight early on now have a better understanding and require less oversight. Overall, the logging has been straightforward on flat ground and winter weather has been cold enough for the ground to freeze. Very little road construction took place in Region II during 2016 and no new crossing structures were installed except for one ice bridge. In Region III, reconstruction work and maintenance went very well in 2016 as DOF found better rock in the pits developed in 2015 and 2016 and weather was more favorable. Having an equipment operator now on the DOF staff has been a tremendous asset. Roads still get heavy use from the public for firewood and hunting access, but maintenance due to the active timber operations have kept up with the high use during 2016.

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<sup>1</sup> Note: FRPA data is reported on a calendar year basis because 11AAC95.220 requires Region I DPOs to be submitted by calendar year. Data on state forest management (e.g., state timber sale volumes) are reported by fiscal year to be consistent with state budget documents.

**Table 1. Calendar year 2016 compliance monitoring scoresheet counts, number of BMP ratings, BMP mean scores, and overall BMP implementation percentage by region and state**

Region	# Score sheets		# BMP ratings	Mean score for all BMPs	Percentage of all BMPs rated $\geq 4$
	State	Private/Other Public			
Region I	10	25	587	4.47	93
Region II	13	3	109	4.45	99
Region III	28	1	391	4.96	99
Total	51	29	1087	4.64	96

**Effectiveness Monitoring.** DOF continues to work with agencies and affected interests to prioritize new effectiveness research, and seek funding for high priority projects whenever possible. Funding for effectiveness research is exceedingly difficult to find and recent operating budget reductions make it impossible for the DOF to come up with required matching funds. Due to staffing shortages, DOF has not held an interagency effectiveness monitoring coordination meetings since 2012. The Division was able to participate in two significant efforts that culminated in 2016.

Mat-Su effectiveness monitoring. The final report for the Region II Forest Resources and Practice Act Effectiveness Monitoring project on three streams in the Mat-Su was published in May 2016. The streams were pre-harvest sampled in 2006 and post-harvest sampled in 2015. The Aquatic Restoration & Research Institute (ARRI) conducted the study with support from a Mat-Su Salmon Partnership grant.

ARRI reported that:

“There were some differences in water quality and habitat characteristics between the treatment and reference streams but these differences could not be attributed to timber harvest activities. The concentrations of macronutrients differed between these two streams and total phosphorus in the treatment stream is declining over time. Both streams are becoming warmer over time; however, the rate of change is similar. Turbidity increased during storm events; however, there was no indication of increased turbidity downstream from the road crossing. There was no significant change in channel width, width to depth ratios, substrate size, large wood, or debris dams between the two streams or over time in either stream. There is currently, and has been no significant change in food resources (algal abundance or benthic organic matter) between the two streams. The macroinvertebrate community of the treatment stream has remained relatively consistent over time; however, macroinvertebrate metric scores were lower in the reference stream in 2015 compared to previous measures. Both streams continue to support rearing juvenile coho and Chinook salmon and there has been no significant trend in their relative abundance over time in either stream.

The low level of harvest and road building within the treatment watershed did not provide for a robust evaluation of the effectiveness of the FRPA. The effectiveness of current regulations at protecting water quality and fish habitat should be reevaluated if the level of harvest and road building increases. However, based on personal observation, harvest and road construction within the Willer-Kash Harvest Area is comparable to the level of harvest that has occurred to date on other state and Matanuska-Susitna Borough lands within the Susitna River and Little

Susitna River watersheds. Therefore, the results from this study are likely representative of conditions in tributaries within the Petersville, Houston, and Rabideux timber blocks subject to similar levels of timber harvest activity.”

Region II-III reforestation research and monitoring priorities. The Region II-III Reforestation S&TC and Implementation Group identified research and planning needs, and the Implementation Group prioritized them. The recommendations and priorities may be used to focus research activity and support funding requests by agencies, universities, or other research partners. The proposed projects are listed in Appendix C,

**Road condition surveys and remediation.** No new road conditions surveys were conducted in 2016. Based on the 2012 forest road condition survey near Tyonek, DOF secured a Sustainable Salmon Fund grant to close a forest road with two problematic culverts. The culverts will be removed and the natural drainage courses reestablished. This will provide access to approximately six miles of Coho habitat. The division will also replace an undersized culvert impeding fish passage for an outlet stream to a lake listed in the ADF&G Anadromous Waters catalog. This replacement will provide improved fish passage to two stream miles and two lake miles. Work began in July with a site visit by DOF and an engineer from the DNR Division of Parks & Outdoor Recreation. The result of that work will be an engineering design that will be included in a request for proposal for the removal of two culverts, replacement of one culvert, and road closure.

## **C. Reforestation**

**Kenai-Kodiak Area FRPA reforestation compliance.** During the past several years landowners have favored planting immediately after harvest to ensure establishment, and prevent accumulating backlog acres. During the 2016 field season landowners planted approximately 500,000 seedlings in harvested units throughout Kodiak and Afognak Islands. Plantings of 500,000 seedlings or more are planned for upcoming field seasons.

**Reforestation exemptions.** Harvests that are significantly composed of dead or dying trees may request exemption from the FRPA reforestation requirements. DOF received three new requests for reforestation exemptions in the Kenai-Kodiak Area in 2016; all were approved. Two were in Region 2 for 451 acres, and both of these sales will likely meet reforestation requirements after logging. One request was for 763 acres in Region 1 on Kodiak Island Borough lands that burned in the Twin Creek Fire. Although the owner applied for and was granted an exemption, they will plant the site in the spring and early summer of 2017. This is the first exemption request for an operation in Region I.

## **D. Training**

Landowner/operator training. Training for landowners and operators is provided by DOF area office and regional office staff. Sessions vary from formal classroom presentations to more informal “tailgate” sessions conducted during field inspections. DOF also provides training in the form of DPO reviews and inspection reports that recommend ways to conduct operations to implement the BMPs. In 2016, DOF conducted two training sessions – one in Southern Southeast for six people, and one in Fairbanks attended by ten.

DOF is drafting training modules on various aspects of FRPA, including changes to the reforestation regulations.

### III. RESOURCE MANAGEMENT ACTIVITY ON STATE LAND

#### A. Statewide summary

**State timber sales.** FY16 timber sale offerings on state land are summarized by area in Table 2 below. In FY16, DOF sold 34 sales on 1,601 acres of land for a total of 8,314 board feet. Timber sales in Southeast Alaska were low in FY16. The Area was affected by budget cuts, reorganization, resignations, difficulty filling vacancies, and administrative appeals of planned timber sale projects. Several large sales are currently in preparation for sale in FY17 for local use and export, and appeals received to date have been resolved. Southeast sale volume should increase in FY17. Areas outside of SSE continued to make sufficient timber available to meet local demand.

**Table 2. FY16 Timber Sales Sold on State Land.**

Note: some sales are offered in cords, green tons or cubic feet rather than board feet. For comparison in this chart, all volumes have been converted to thousand board feet (MBF). Therefore, the total volumes are approximate.

Area	Total sales sold		
	# sales	Acres	Vol. (MBF)
SSE	2	11	194
NSE	9	59	207
Kenai-Kodiak	2	25	50
Mat-Su/SW	0	0	0
Coastal Total	13	95	451
Fairbanks	8	119	1996
Delta	7	357	1873
Tok	6	1030	3994
Copper River	0	0	0
Northern Total	21	1506	7864
<b>State Total</b>	<b>34</b>	<b>1601</b>	<b>8314</b>

**Reforestation and stand improvement.** Regeneration of harvested or naturally disturbed areas is an essential part of forest management on state land. In areas where planting is desirable, DOF collects cones for seed extraction, contracts for seedling production, and plants seedlings to improve reforestation. In many areas, natural regeneration, with or without scarification, provides sufficient regeneration to meet reforestation standards. In 2016, DOF planted 168 acres, and scarified 90 acres for natural regeneration in the Fairbanks Area. There was no pruning or thinning on state forest land in 2016.

#### B. Resource management activity by area

**Fairbanks & Delta Area.** Commercial timber sales are active on State, Borough, University of Alaska, and Native Corporation lands throughout the Fairbanks and Delta areas. On State lands alone, the Fairbanks office has 105 active timber sales under contract with 32 operators, the Delta office has 30 active timber sales under contract with 11 operators. Demand for saw logs remains stable, and Northland Wood Products continues to be the primary purchaser of saw logs. Overall market demand

for commercial and personal use fuelwood has decreased in the last two years most likely due to low heating oil prices. The sale of personal use firewood permits decreased approximately 15% in 2016.

Regeneration surveys continue to be conducted every spring in the Fairbanks area, and 3 units were planted with white spruce seedlings in July of 2016. Scarification is a common treatment after harvest in Fairbanks and the area is trying different applications to determine what method achieves the best results. Reforestation and post-harvest treatment continue to play a very important role in ensuring future timber supply.

Minimal road work and maintenance was done in the Fairbanks area in 2016. A 1/2-mile stretch of the Cache Creek Road was capped with gravel and graded as a test to see if it lasts through spring melt. If this road treatment works, more miles of road will be capped in the same manner providing a lower cost alternative for road maintenance. The Fairbanks area is working with DNR, the Attorney General's Office, and the Fairbanks North Star Borough to obtain an easement to access the Hastings Fire Salvage area. The Delta area raked and graded approximately eight miles of Quartz Lake Road Extension in 2016.

DOF staff in Fairbanks met with Fairbanks Economic Development Corporation, Superior Pellet Fuels, and the Fairbanks North Star Borough to discuss grant applications for the USFS Wood Innovations Program, and explore new and better ways to expand wood chip and pellet fuel use in the interior.

**Tok & Copper River Area.** Near Tok, demand continues for timber sales to supply orders for fuel wood, lumber, and biomass. Thirteen operators have active sales throughout the area. Sale areas include Moon Lake, Tok River, Porcupine Ridge Road, Johnson Slough, Dry Creek, and salvage from the 1990 Tok River fire. Local biomass production is anticipated to increase this year with the school district planning for a third chip-fired facility. There are two densified wood product producers in the area; the newest producer plans to start measurable production this summer. Local mills continue to produce log homes that are being constructed locally and in other areas with milled, kiln-dried logs.

In the Copper River basin, DOF continues to offer saw log sales over the counter; three commercial timber sales are currently available. Infrastructure created over the past three years is now in place to facilitate access into sale areas if the saw log market begins to rise.

Firewood, however, remains the focal point as heating oil prices begin to rise again in rural Alaska. Beetle-killed spruce for firewood is still the most requested forest product. Even with public education efforts about cutting, storage, and properly seasoning green wood, an estimated 75% of the homeowners in the Copper River basin still rely on dead, standing, dry wood as their primary or secondary source of heat. The local demand for dead standing wood in close proximity to urban areas exceeds supply – most of the accessible beetle-killed spruce has already been removed. Creating new firewood opportunities for the public is a high priority. DOF manages 15 different areas for the public to harvest personal use firewood in the Copper River basin and eastern Prince William Sound from Cordova and Valdez to Gulkana. Wood cutting permits for all these areas are available online.

Work continues on two grant-funded projects in Tok and Mentasta Lake to reduce wildfire hazards by providing safe passage for residents, FireWise structures, and safe evacuation sites in case of fire. Most of the hazardous fuel removed in these projects has been made available for use in the Gateway School District's biomass boilers. The Tok School is installing an additional steam generator that runs on low pressure steam, allowing power generation when outside temperatures are warmer, thus having a greater window of opportunity for power generation. The Mentasta School also continues successful operation of their wood fired hydronic boiler using local biomass fuels.

Two Forest Health grant projects have mitigated conditions for *Ips* beetle outbreaks. Thinning was completed near the Tok River, along with beetle trapping, monitoring, and slash burning in the communities of Tok, Tanacross, and Dry Creek. The Tanana Chief's fire crew and state wildland fire resource technicians have worked on all these projects.

DOF partnered with ADF&G to continue to improve moose and grouse habitat. The improvements are achieved by using a roller-chopper to cut down stand of aspen in the fall, which promotes new growth through coppice regeneration. This treatment enhances habitat for wildlife and breaks up fuel continuity to slow the progress of a wildland fire.

**Mat-Su and Southwest Area.** The Area includes the MatSu, Anchorage, and western Prince William Sound (14.6 million acres) and Southwest Alaska (85.4 million acres). It is the largest and most populous DOF managed administrative district, but also contains its most remote region.

The MatSu had 83 fires this year on 1,260 acres including the 780 acre McHugh Fire in Anchorage and the 320 acre Moose Creek Fire near Sutton. The Southwest had 58 fires on 73,100 acres. 95% of the fires in the MatSu are human caused while 90% of the fires in the Southwest are lightning caused fires.

Four purchasers have 6 active state timber sales on 520 acres in the Mat-Su. The Area has received a bid for a 60-acre over-the-counter timber sale near Houston and has another 138 acres available for bid. The Area has issued 27 negotiated personal use contracts for remote landowners in the MatSu valley and throughout Southwest Alaska.

The area maintains over 12 miles of road. These roads ensure continued access for the commercial timber sale program, personal use timber sales, and the online firewood program.

Napaimute Enterprises, LLC continued its firewood operation on 400 acres of Kuskokwim Corporation lands. The operation supplies firewood to villages on the Lower Kuskokwim and is planning on putting a saw mill on the site. Operations should continue for the next few years.

**Kenai & Kodiak Area.** While natural gas is available on several of the major travel corridors, many Peninsula residents rely on fuel oil for home heating and the demand for firewood is extensive. The Kenai Peninsula Borough Assessing Department has determined over 10,000 homes on the Kenai Peninsula use wood for home heating. DOF offers personal use firewood areas and commercial firewood sales to help address the need for firewood.

Commercial timber sales supply firewood and provide saw logs to several small local mills. Local lumber and house logs are used for new construction in the area. Within the past year, a new business turning logs up to 24 feet long has created an additional outlet for local timber.

DOF staff worked on projects funded by a USDA Forest Health grant to clean up and dispose of spruce beetle-killed timber in Soldotna.

Multiple warm winters resulted in an outbreak of spruce aphids (*Elatobium abietinum*) in Homer and across Kachemak Bay. Spruce aphid has been a resident of Southeast Alaska since the 1970s but this is the first documented case of spruce aphid appearing Southcentral in Alaska.

With funding from the US Fish and Wildlife Service and ADF&G and landowner contributions from Cook Inlet Incorporated, the Kenai Peninsula Borough, and the State Mental Health Trust, a 124-acre

fuel break was created between the Kenai National wildlife Refuge and the community of Sterling. The implementation and designed of the project was conceived after the success of the Funny River fuel break established in 2013.

**Southeast Area.** The Southeast Area office has operated with a 50% decrease in staff since early 2016 with the one remaining Forester II leaving to take a position in private industry. The DOF has had few qualified applicants apply for the vacant position, and it remains unfilled. The Area Forester is currently the only professional forester to support timber activity in Southern Southeast. The Haines and Juneau offices and DOF planning staff helped support forestry activities in Southeast. Operations and field work slowed as a result of the staff shortage. FRPA field inspections were below normal levels and small and large timber sales decreased.

FRPA activity on private and trust land occurred generally in the Southern Southeast. Private FRPA activity is projected to increase as the new Sealaska land becomes operational.

For State land managed by DNR, DOF sold a small amount of timber and conducted a correspondingly small number of FRPA inspections. The only FRPA activity in the northern part of the Southeast Area was on small timber sales on state land in Haines. The State has been slow to clear volume through the review and disposal process in the southeast due to staff limitations and several appeals of state sales. We anticipate a marked increase in volume and acreage of state timber sales and FRPA activity in 2017 because the appeals received in 2016 were upheld by the DNR Commissioner (see below) and have not been taken to Superior court.

DNR received administrative appeals or requests for reconsideration on four timber sales in 2015-16. Appeals on the Coffman Cove and Baby Brown (Haines) final best interest findings (BIF) were upheld by the DNR Commissioner, and Forest Land Use Plans (FLUPs) are out for review. In general, the Commissioner has affirmed the BIF decisions. While our larger southeast timber sales have come under more resistance, appellants have not exercised their option to file suit in Superior Court over any of these sales.

Part of the Vallendar final BIF was remanded to DOF to incorporate the final Southeast State Forest Management Plan (SESFMP) and Southern Southeast Inventory; other issues were upheld and DOF issued a FLUP and then a contract for the road construction part of the project. A new BIF with the SESFMP and inventory information will be issued prior to a timber sale FLUP. A BIF for the Edna Bay Parlay timber sale was appealed on the same grounds as the Vallendar sale. DOF withdrew the BIF to incorporate the SESFMP and inventory, reissued it with the new material in October 2016, and is reviewing comments prior to issuing the final BIF.

### **C. Roads Infrastructure & Bridges Section.**

In 2016 the Roads, Infrastructure & Bridges Section went from two Project Engineers to one due to decreased funding for capital infrastructure projects. During this period, the section introduced new road construction standards to include in timber sale contracts and small construction projects. The new standards based on American Association of State Highway and Transportation Officials (AASHTO) guidelines for geometric design bring DOF into compliance with State statutes and regulations for forest roads that incur public use.

In Southeast, Forestry awarded over \$5 million in new road construction contracts in Vallendar Bay, Edna Bay, and Hollis providing access to future State timber sales and landscape scale transportation

corridors vital to the timber industry's transition to young growth harvest over the upcoming years. In the Northern Region, DOF spent \$225,000 repairing storm damaged roads on the Tanana Valley State Forest. To harden forest roads and make them more resistant to erosion, engineers are experimenting with schist overlays in different amounts. If successful, repairs will continue on other roads in the Tanana Valley State Forest Corridor in 2017.

DOF received a grant for \$187,000 from the Alaska Sustainable Salmon Fund to replace one culvert near Tyonek and remove two others. This closed out a road originally constructed in the 1970's for timber harvest on the west side of Cook Inlet. Forestry has partnered with the Division of Parks and Outdoor Recreation Design & Construction Office for a "stream-simulation design" allowing for year-round fish passage. Construction will be complete by September 2017.

The Division also improved facilities for wildland fire and resource operations in the Valdez-Copper River Area and Delta Area offices. Improvements corrected health & safety deficiencies and improved wildland fire training and response capabilities.

Evolving with a changing landscape, the Roads, Infrastructure & Bridges Section took over program management of the \$4.3 million Challenge Cost Share Agreement (CCSA) with the U.S. Forest Service. The CCSA is fueling many of the activities to promote a young growth timber industry on the Tongass National Forest and providing a road map to a stable and sustainable timber-based economy.

#### **D. Forest inventory**

**Forest Inventory and Analysis (FIA).** As of 2016, after more than 15 years of national debate, funding for full implementation of the FIA in Interior Alaska has finally been realized. This is a US Forest Service (USFS) program that generates information needed to assess America's forests nationwide. It provides a comprehensive permanent sample plot grid to assess timber and woods products resources, vegetation structure, carbon and biomass accounting, and disturbance and change over time. This is especially important in Interior Alaska where mean annual temperature has increased 3 to 5° since 1950. FIA plots have been established in southeast and southcentral coastal Alaska but not interior. The USFS Pacific Northwest Research Station and DOF established a Joint Venture Agreement to effectively inventory Interior Alaska. For 2016, DOF received \$1,100,000 to install 188 plots in the Fairbanks and Manley Hot Springs area. Crew work was exceptional and exceeded USFS quality assurance inspection targets. DOF managed the project hiring two permanent forester positions and six seasonal technicians. A significant amount of field preparation time was involved including the establishment of a field safety program, helicopter, camp provisioning and supplies procurement and extensive plot installation protocol training. This is an ongoing program and DOF expects to increase its operations for 2017 and install upwards of 250 plots in the Fairbanks and Delta areas.

**Southeast inventory.** DOF updated the operational forest inventory for 69,790 acres in the Southeast State Forest and on General Use lands in Southern Southeast Alaska and adopted it on February 9, 2016. The inventory identified a net timber base of 44,196 acres with an annual allowable cut of 11,200 thousand board feet.

## **Beach Log Salvage and Log Brands.**

The Ketchikan office issued one new beach log salvage license and renewed three existing licenses for the Duke, Hydaburg, and Craig areas. DOF also registered three new log brands and renewed ten existing log brands.

## **E. Forest Planning**

DOF staff review and comment on a wide range of state and federal agency land-use plans to help ensure the Division and the public have continued access to forest resources on state lands, and the salvage of timber takes place when forested land is cleared for right-of-ways or other purposes.

**Southeast State Forest Management Plan.** The DNR Commissioner adopted the final Southeast State Forest Management Plan on February 29, 2016. At the same time the Commissioner signed the Land Classification Order changing the General Use lands located within the state forest to the Forest classification. Four requests for reconsideration of the Commissioner's decision were submitted during March 2016. On June 13, 2016, the Commissioner affirmed his decision to adopt the forest plan and it is now guiding forest management within the Southeast State Forest.

**Copper River Basin Area Plan.** With area planning in the Susitna and Tanana basin now complete, the DNR Division of Mining, Land and Water has turned to the Copper River basin. They completed public scoping period for the Copper River Basin Area Plan update on April 29, 2016. The next step is preparation of an Agency Review Draft that will be followed by a Public Review Draft. DOF will participate in plan reviews and provide input on forestry-related elements.

**Susitna Matanuska Area Plan.** The DNR Commissioner adopted the Susitna Matanuska Area Plan in 2011 for managing the area's nine million acres of state land. The plan designates about 700,000 acres of these lands for forestry and recommends consideration of legislative designation of a Susitna State Forest for the forest classified land. This area plan calls for the development of a separate Forest Resources Management Plan for the forested lands, to be developed jointly by DOF and the DNR Division of Mining, Land, and Water. Planning for the Forest Resources Management plan is expected to begin in 2017.

## **IV. FEDERAL LAND ACTIVITY**

**A. Tongass Land and Resource Plan implementation.** The state provided coordinated comments to the draft Tongass Land and Resource Management Plan and participated in the objection process. 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. The State also hammered on treatment of the "seek to meet demand" standard from the Tongass Timber Reform Act and a weak demand study.

The USFS responded to the objections and signed the final Record of Decision without any significant changes, despite requests to delay the signature until additional information is available from timber studies now in process. There are no more administrative options to challenge the plan. The State is considering options for a legal challenge.

**B. Tongass timber sales.** The new Tongass plan decreases the Tongass annual allowable cut 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. If Alaska loses timber industry capacity, it will affect the State’s ability to sell timber. The USFS sold 36.4 MMBF of timber in FFY16 (see Table 3, p. 12.)

**Table 3. Tongass National Forest Timber Sale Volume (MMBF) – Federal Fiscal Year 2007-16.**  
TTRA Volume is the Tongass Timber Reform Act “seek to meet” market demand estimate.

Federal Fiscal Year (Oct.1-Sept. 30)	TTRA Volume Offered	Timber volume offered	Timber volume sold	Timber volume harvested	Timber volume under contract
2007	116	32	30	19	114
2008	99	42	5	28	97
2009	146	36	10	28	84
2010	173	46	46	36	98
2011	110	44	38	33	105
2012	127	53	53	21	150
2013	143	115	16	36	110
2014	142	105	105	39	154
2015	not reported	43	48	57	118
2016	not reported	423	12	45	85
<b>Average</b>		<b>55.9</b>	<b>36.4</b>	<b>34.2</b>	<b>111.5</b>

**C. Challenge Cost Share Grant.**

In 2013, the Secretary of Agriculture issued Memorandum 1044-09, addressing sustainable forestry in Southeast Alaska and directing the Tongass National Forest “to speed the transition away from old-growth timber harvesting and towards a forest industry that utilizes second growth – or young growth – forests.” The Secretary also emphasized that the transition must take place “in a way that preserves a viable timber industry that provides jobs and opportunities for residents of Southeast Alaska.” The Alaska Division of Forestry and the U.S. Forest Service are working collaboratively with communities, and other partners through a Challenge Cost Share Agreement signed in June, 2015, to improve existing young growth information and increase economic opportunities for local communities in both the short- and long-term. The Alaska Division of Forestry serves as the lead partner in this effort coordinating over \$4.3 million in federally funded activities.

Young-Growth Inventory. In 2016, the USFS entered into a \$4,000,000 Challenge Cost Share Agreement with DOF. Part of the agreement instructs DOF to inventory 35,000 acres of second-growth timber in the Tongass National Forest. The Tongass Forest Plan Amendment directs the USFS to transition from an old-growth dependent timber sale program to one based on young growth, while maintaining a viable forest products industry. The cooperative inventory effort will improve existing young-growth information, and increase economic opportunities for local communities in both the short and long term. The inventory will help ensure that young-growth forest health is maintained and enhanced as the transition from old growth to young growth forest management proceeds. During the 2016 field season, DOF completed 4,866 plots on 12,165 acres. The crew included five DOF staff members and five forest technicians local to the area who

participated in a field inventory training academy. The plots were all on or near Prince of Wales Island. The USFS and Hollis Forest Science helped provide housing, and the USFS and AD&G provided transportation. This inventory, along with the FIA project, provides an avenue for the state to employ entry level foresters and help develop candidates for upper level forester positions.

Workforce development. One branch of the Challenge Cost Share Agreement provides technical forestry training for Alaskans. DOF is collaborating with the Dept. of Commerce and Economic Development and other agencies on this program. Program graduates are candidates for forest technician jobs on groups on inventory projects and stand exams with the forestry agencies, and restoration work with NGOs. The project will also provide internships for college students and career information for high school students in resource management and support fields. Additional equipment and mill operation training may occur as funds allow; the State has applied for additional workforce development grants. The program is reaching out to Southeast communities to get as many local people as possible into the training.

A spring 2016 academy on Prince of Wales Island trained 8 people to work on inventory efforts, including seven from the island. Trainers for the two week academy were DOF and USFS staff. DOF has hired six of the graduates and Sealaska Timber offered an employment opportunity to one. The second Forestry Academy will be offered March 20-31, 2017 in Thorne Bay with space for 12 students.

#### **D. Good Neighbor agreement.**

The Good Neighbor Authority allows the Forest Service to enter into cooperative agreements or contracts to allow states to perform watershed restoration and forest management services on National Forest System lands. In November 2016, DOF entered into a master Good Neighbor Authority agreement with the USFS Alaska Region to manage forested lands on the Tongass National Forest. This integrated and collaborative approach will enable the transition to a young-growth industry through landscape-scale management efforts. Each individual project under the master agreement will have a Supplemental Project Agreement with provisions guiding specific forest management activities. The first project under consideration as a Supplemental Project Agreement is the Kosciusko Vegetation Management and Watershed Improvement Project. In this project the DOF will collaboratively manage 29 million board feet of young growth timber over approximately 1400 acres of the Tongass National Forest using the state's timber sale program.

### **V. SPECIAL PROJECTS**

#### **A. Statutory changes**

Negotiated timber sales under AS 38.05.118. The Legislature passed SB32 in the 2016 session, and the Governor signed the bill in July. The bill

- expanded DOF authorities for negotiated timber sales under AS 38.05.118 by removing requirements for high unemployment, underutilized manufacturing capacity, and excess annual cut. This allows DOF to offer negotiated sales statewide.
- specified that negotiated sales must comply with the requirements for Forest Land Use Plans (AS 38.05.112) and Five-year Schedules of Timber Sales (AS 38.05.113). This ensures that large negotiated sales are developed with adequate notice to the industry and general public, and necessary site-specific design.

- clarified that DNR may negotiate sales to wood fiber users, including biomass energy producers, in addition to wood product manufacturers.
- clarified that the DNR commissioner may determine which applicable sale method is in the best interest of the state for each timber sale (AS 38.05.110(c)). The proposed changes were endorsed by the Alaska Timber Jobs Task Force and the Board of Forestry.

## **B. Regulatory changes**

DOF is proposing two amendments to the state timber sale regulations. These changes were recommended by the Alaska Timber Jobs Task Force.

- 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 (see above) in the 2016 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.

DOF will proceed with the changes to 11 AAC 71.045 and .055 (see above) in advance of other proposed changes to the material and timber sale regulations in 11 AAC 71.

Material sale regulations. The DNR Division of Mining, Land, and Water (DMLW) is drafting changes to the material sale regulations. Currently those regulations are in 11 AAC 71 and are combined with the regulations for timber sales. The proposed changes would remove the material sale regulations and establish them in a new section. The proposed amendments would also make changes in 11 AAC 71 to conform to current regulation drafting standards. Because DMLW is still working on new sections for the material sale regulations, DOF will proceed with the changes to 11 AAC 71 .045 and .055 (see above) in advance of the overall 11 AAC 71 package.

Fee regulations. DMLW is leading a project to move DOF fees for each division into their own sections. The forestry section will include the fees for beach log salvage licenses and for log brand registration, transfer, or renewal. DOF reviewed the agency draft and does not propose any change to these fees at this time.

FRPA reforestation regulations. In August, 2015, the Board of Forestry endorsed the regulation recommendations of the Region II-III FRPA Reforestation Standards Review, including the work of the Science & Technical Committee (S&TC) and Implementation Group.

The proposed regulatory changes were sent out for public review from October 12 through November 23, 2016. Proposed changes follow:

- 11 AAC 95.235: Add criteria for evaluating a request for a variation to reforestation stocking standards in Regions II and III.
- 11 AAC 95.375(b): Ensure that all size classes of trees are considered in determining whether reforestation standards are met in Regions II and III.
- 11 AAC 95.375 (d):
  - Allow an extended period for natural regeneration to meet the reforestation standards where site conditions indicate that natural regeneration is likely to succeed in Regions II and III, and

- Increase the percentage of a harvest area that may be below the stocking standard in Regions II and III. This corresponds to natural variation in stocking and wildlife habitat benefits from patchiness in forest cover.
- 11 AAC 95.375(f):
  - Allow landowners to include a mix of seed from native tree species grown up to 10 degrees latitude south of the planting area in Regions II and III. This reflects recent research on seedling growth and survival as a result of warming climates, and
  - Prohibit planting known invasive trees species on commercial forest operations regulated by the Forest Resources and Practices Act in Regions II and III.
- 11 AAC 95.375(g): Allow applicants for reforestation exemptions in all regions to use various methods approved by the Division of Forestry to document areas of dead and dying trees. This reflects rapid development of remote sensing technologies since adoption of the original regulation requiring ground-based surveys.
- 11 AAC 95.380: Clarify that paragraph (a) applies specifically to natural regeneration from seed.
- 11 AAC 95.385:
  - Allow forest landowners in Regions II and III to use various methods approved by the Division of Forestry to document compliance with the reforestation standards. This reflects rapid development of remote sensing technologies since adoption of the original regulation requiring ground-based surveys; and
  - Require regeneration reports after five years and at the end of the reforestation period for sites where an extended period is allowed for natural regeneration in Regions II and III.

DOF received comments from ADF&G, DEC, and three individuals during the comment period. There were no requests for changes to the draft regulations.

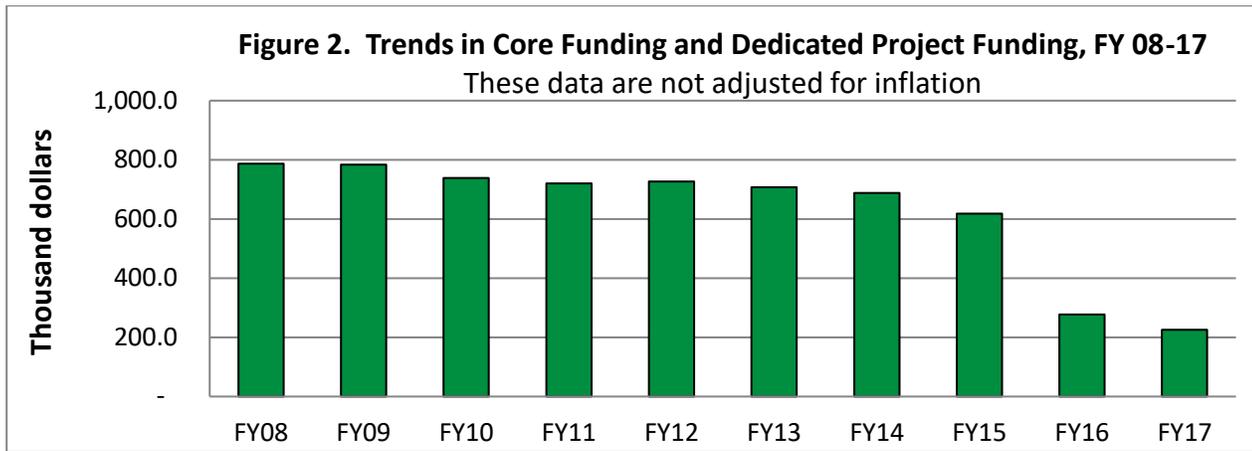
## **VI. BUDGET AND STAFFING**

### **A. FY17 total funding**

Funding for core FRPA work declined to its lowest level since implementation of the program in FY94. Figure 2 (p. 16) show the decline in funding over the last ten years. This funding for core forest practices work covers two full-time equivalents spread over 12 positions. The positions include field staff, clerical support, and program management. The 12 positions coordinate forest practices work among the resource agencies, review notifications, conduct field inspections and compliance monitoring, and enforcement actions, perform compliance monitoring, provide training, and lead review and development of FRPA standards and regulations on all non-federal land. Since FY12, all funding for core forest practices work has been from the state General Fund.

The Board of Forestry reviewed forest practices funding mechanisms in other states with similar forest practices programs. State General Fund money is the primary funding mechanism except in California. The California program is funded by a sales tax on lumber products at the point of sale. Idaho, Washington, and Oregon fund about 24-45% of their programs from other taxes. Fees are a small component of the funding in several states, but fees are insufficient to be a major source of funding without significant increasing costs to the industry.

In FY17, DOF also received \$184,200 in grant funding from the Pacific Coastal Salmon Recovery fund for remediation of fish passage issues (see Road Condition Survey section , p.5).



**B. Anticipated Funding Needs and New Initiatives**

**Projected 2017 FRPA activity.**

- In Southeast, activity is likely to increase as Sealaska begins operations on its newly acquired land, and state timber sales increase in the Haines and Southern Southeast areas.
- Activity is likely to decrease on Kodiak Island. Harvesting on Leisnoi land on Kodiak finished in 2016 and activity on Kodiak Island Borough land will wrap up in 2017. Harvesting will continue on Afognak Island.
- Overall level of activity in Regions II and III is projected to remain modest; if borough sales at Fish Creek and Chijuk Creek proceed, there could be some increase in activity in the Mat-Su area.

**FY18 anticipated funding.** The Governor’s FY18 budget for FRPA implementation is expected to be level with FY17.

**A. Staff and organizational changes**

- Jeff Graham and Patricia Joyner retired as the long-time managers of the Forest Stewardship and Community Forestry programs, respectively. Trevor Dobell is the new program manager for Forest Stewardship. DOF is readvertising the Community Forestry position.
- Jeff Hermanns, Tok Area Forester, relocated to Montana. DOF is recruiting to fill that position.
- Jim Eleazer has returned to DOF as a non-perm working on the Good Neighbor agreement.
- Gary Mullen retired after a long career leading the Copper River Area Office.
- Kevin Meany was promoted to a Resources Forester III in the Fairbanks Area. We are recruiting for the Forester II position Meany vacated.

Recruiting to fill vacant positions remains challenging. A combination of issues is leading to low applicant and job acceptance rates when an offer is made. The Lower 48 economy is good relative to Alaska’s, the pool of experienced field foresters and fire management officers is tighter due to demographics in the potential workforce, Tier IV benefits are not competitive relative to other employers and the current contraction of the state budget and workforce layoffs cause hesitation in acceptance of employment offers. A new employee is much more likely to be laid off due to seniority status compared to other employees.

## **VII. STATEMENT OF FRPA EFFECTIVENESS AND RECOMMENDATIONS FOR CHANGES TO CORRECT PROCEDURAL OR SUBSTANTIVE PROBLEMS**

Overall, the FRPA was effective in protecting water quality and fish habitat, while providing for continued timber and fishing industry opportunities in 2016. DOF maintained sufficient field presence to implement the Act, and to conduct compliance monitoring on the low level of FRPA activity in 2016. DOF conducted 32 field inspections on private, municipal, and trust land this year, and issued no new enforcement actions. Strong results from the compliance score sheets in all three regions indicate a high degree of compliance with the Act, and show continued success in preventing problems through DPO review, training, and field consultations with the operators. DEC listed no impaired waters under Section 303(d) of the Clean Water Act due to forestry activities on private, state, or other public lands regulated by the FRPA. DOF completed work to fix road maintenance problems in Region III that were identified in 2014.

At current levels of funding, the effectiveness of the Act depends on the low level of current activity, experienced landowners and operators, and a high level of compliance. Expected increases in state timber sales and activity on new Sealaska land, are likely to increase FRPA activity, as could resolution of the Mental Health trust land exchange. If the level of FRPA activity increases, if new operators that require additional training begin work, or if violations increase, effectiveness will be compromised. Current budget levels constrain DOF's ability to respond to increased needs for field inspections, compliance monitoring, and training, and DEC reports that in 2017 they will no longer have the funding and staffing to routinely review DPOs and FLUPs.

## **VIII. RESEARCH AND MONITORING PRIORITIES FOR 2017**

- Continue compliance monitoring in all three FRPA Regions.
- The Region II-III FRPA Reforestation Standards Review identified and prioritized reforestation research needs (see Appendix C. page 29). DOF will use this information to support funding requests by the agencies, university, or other partners.

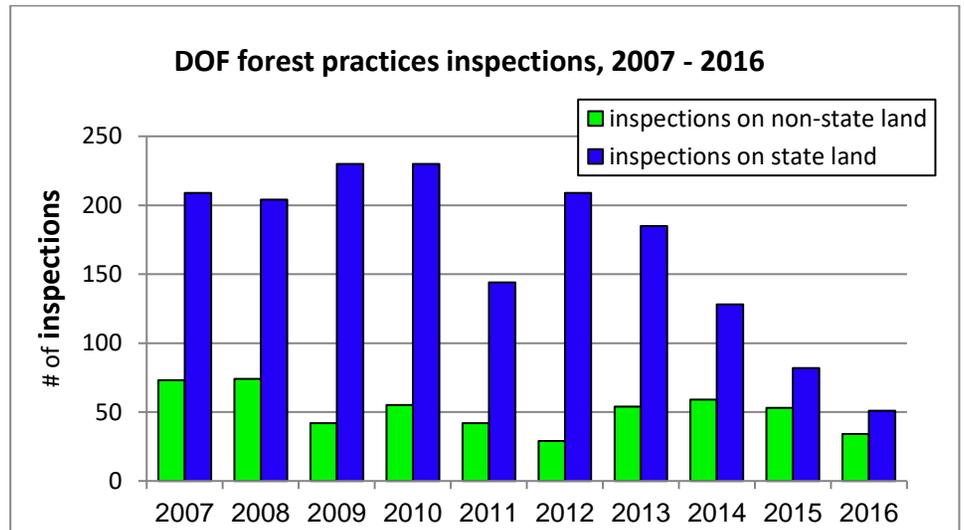
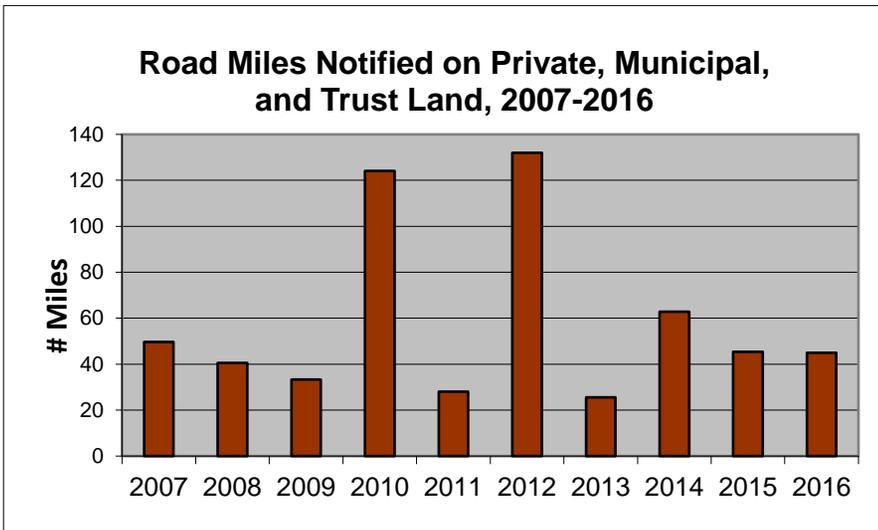
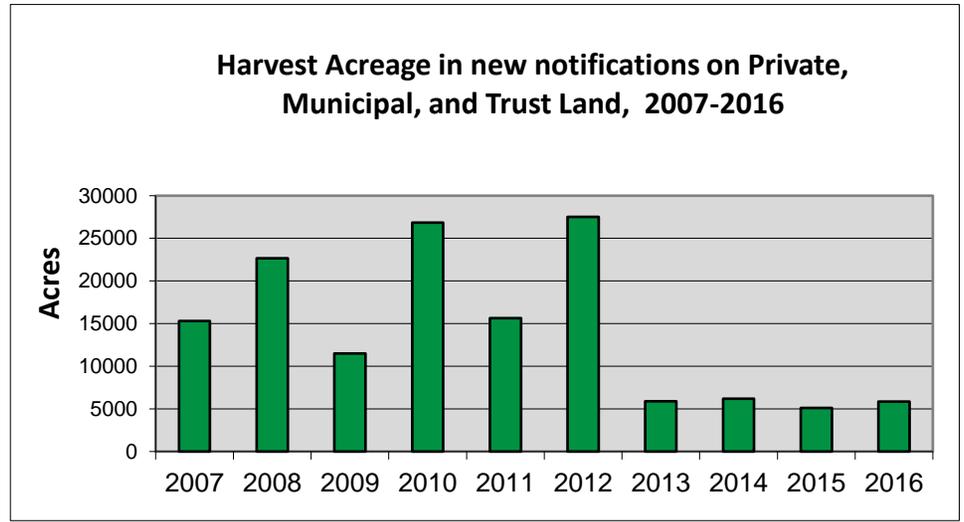
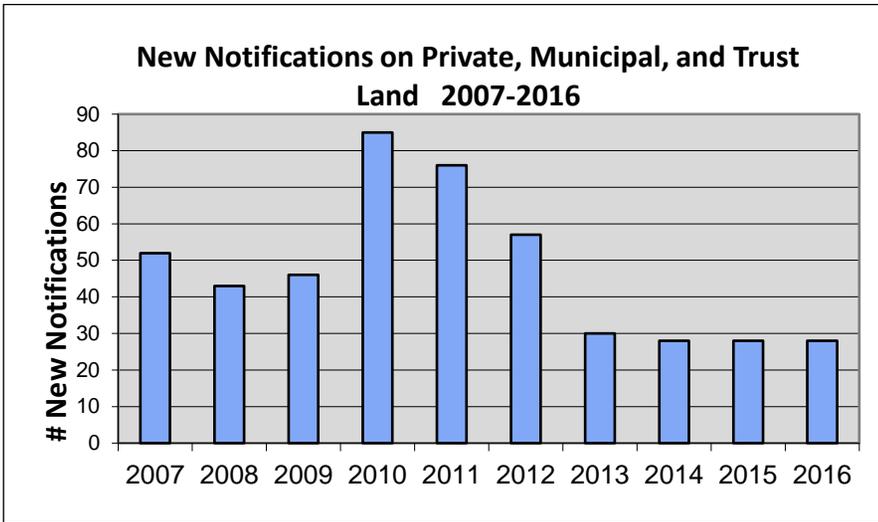
## **IX. ADDITIONAL TASKS AND INITIATIVES FOR 2017**

In addition to ongoing FRPA implementation and enforcement work, and the items listed in section VII and VIII, specific DOF tasks for 2017 include the following:

- Recruit and train to fill staff vacancies as they occur.
- Implement the Challenge Cost Share Agreement for young-growth inventory and work force development in Southeast.
- Implement the Good Neighbor Agreement to provide forest management services on Tongass National Forest.
- Continue Forest Inventory and Analysis work in Interior Alaska.
- Complete Attorney General's Office review and official filing of the FRPA regulations for reforestation. Incorporate changes into the implementation fieldbook ("purple book") and FLUP and DPO forms. Provide training on the new reforestation regulations.
- Adopt revised regulations for negotiated timber sales on state land. Work with other agencies, organizations, and researchers to accomplish priority research and monitoring tasks.
- Work with other agencies, organizations, and researchers to accomplish priority research and monitoring tasks.
- Complete "FRPA 101" training modules; compile and post FPRA training materials.

- Train DOF staff on scoring and completing BMP compliance score sheets for every FRPA inspection on private or State land, and provide FRPA training to other agencies, and operators;
- Play a leadership role in developing opportunities for the use of renewable biomass energy in heating and power generation including working with project sponsors to secure biomass supply;

**Figure 1. Forest practices activities trends**



**APPENDIX A: FRPA ACTIVITIES ON PRIVATE, MUNICIPAL AND TRUST LAND 2007-2016**

All Forest Practices activity is reported on a calendar year basis.

**Table I: 2007-2016 FRPA ACTIVITIES ON PRIVATE, MUNICIPAL, AND TRUST LAND**

**NOTE:** Forest practices actions are reported on a **calendar year** basis

**Number of New Notifications (DPOs)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	34	27	32	61	54	32	14	14	16	19
NSE	7	2	8	8	6	3	3	0	0	0
Mat-Su/SW	3	1	0	0	0	0	2	2	1	0
Kenai-Kodiak	7	12	6	15	11	13	7	8	6	7
COASTAL	51	42	46	84	71	48	26	24	23	26
Fairbanks	0	0	0	1	0	5	4	4	5	2
Delta	0	1	0	0	0	0	0	0	0	0
Tok	0	0	0	0	4	4	0	0	0	0
Copper R.	1	0	0	0	1	0	0	0	0	0
NORTHERN	1	1	0	1	5	9	4	4	5	2
<b>TOTAL</b>	<b>52</b>	<b>43</b>	<b>46</b>	<b>85</b>	<b>76</b>	<b>57</b>	<b>30</b>	<b>28</b>	<b>28</b>	<b>28</b>

**Number of Notification Renewals**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	29	27	35	24	27	9	11	12	11	10
NSE	2	0	2	1	0	1	1	3	1	1
Mat-Su/SW	8	1	0	0	0	0	1	1	2	1
Kenai-Kodiak	7	6	6	2	6	4	8	4	0	4
COASTAL	46	34	43	27	33	14	21	20	14	16
Fairbanks	0	0	0	0	0	0	0	1	0	0
Delta	0	0	0	0	0	0	0	0	0	0
Tok	1	0	0	0	0	0	0	4	0	0
Copper R.	0	1	0	0	0	0	0	0	0	0
NORTHERN	1	1	0	0	0	0	0	5	0	0
<b>TOTAL</b>	<b>47</b>	<b>35</b>	<b>43</b>	<b>27</b>	<b>33</b>	<b>14</b>	<b>21</b>	<b>25</b>	<b>14</b>	<b>16</b>

**Harvest Acreage in New Notifications Received**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	10,263	18,988	7,752	17,532	5,577	8,373	4,717	1724	1,820	3,341
NSE	1,039	211	1,858	1,740	2,241	6,379	40	0	0	0
Mat-Su/SW	235	160	0	0	0	0	131	154	160	0
Kenai-Kodiak	3,697	2,949	1,894	7,389	4,684	8,918	836	3826	2,831	2,387
COASTAL	15,234	22,308	11,504	26,661	12,502	23,670	5,724	5,704	4,811	5,728
Fairbanks	0	0	0	168	0	161	174	269	299	128
Delta	0	360	0	0	0	0	0	0	0	0
Tok	0	0	0	0	2,940	3,685	0	208	0	0
Copper R.	84	0	0	0	205	0	0	0	0	0
NORTHERN	84	360	0	168	3,145	3,846	174	477	299	128
TOTAL	15,318	22,668	11,504	26,829	15,647	27,516	5,897	6,181	5,110	5,856

**Road Miles Notified**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	23	23	30	55	28	15	15	16	18	28
NSE	1	0	0	0	10	16	0.3	0	0	0
Mat-Su/SW	2	1	0	0	61	64	0	0	0	0
Kenai-Kodiak	24	16	3	66	0	0	6	44	25	15
COASTAL	50	40	33	122	99	95	21	60	43	43
Fairbanks	0	0	0	3	0	6	4	2	2	2
Delta	0	1	0	0	0	0	0	0	0	0
Tok	0	0	0	0	27	31	0	1	0	0
Copper R.	0	0	0	0	1	0	0	0	0	0
NORTHERN	0	1	0	3	28	37	4	3	2	2
TOTAL	50	41	33	124	127	132	26	63	45	45

**# FRPA Inspections Conducted on forest operations on private, municipal, and trust land - DOF**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	39	42	29	37	18	6	20	31	24	11
NSE	8	5	3	1	2	1	3	3	0	0
Mat-Su/SW	16	5	0	0	0	0	0	5	5	1
Kenai-Kodiak	6	11	10	17	21	21	29	20	21	16
COASTAL	69	63	42	55	41	28	52	59	50	28
Fairbanks	0	0	0	0	0	0	2	0	3	1
Delta	0	2	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	4	9	0	0	1	1	0	0	0	0
NORTHERN	4	11	0	0	1	1	2	0	3	1
					2					
TOTAL	73	74	42	55	42	29	54	59	53	29

Note: Inspections include regular FRPA inspections + variation inspections + reforestation inspections

**# FRPA Inspections Conducted on forest operations on private, municipal, and trust land - ADF&G**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fairbanks	2	0	0	0	0	0	1	0	0	0
Anchorage	8	17	8	9	16	12	15	15	15	11
Prince of Wales	16	15	26	25	14	19	8	8	7	10
Petersburg	0	0	N/A							
Juneau/Douglas	32	0	1	7	4	2	6	2	1	2
Kenai	0	0	0	0	3	10	1	2	1	0
Mat-Su	3	0	0	0	1	0	0	0	0	0
TOTAL	61	32	35	41	38	43	31	27	24	23

**Note:** For data on other ADF&G foresty-related field work, including fish habitat inspections under AS 16.05.841 and .871, road condition surveys, and other effectiveness monitoring, see ADF&G annual report text.

**Note:** In 2009 the Petersburg office merged with the Douglas office. After 2009, data from the Petersburg Area is reported as part of the Douglas area.

**Note:** This table does not include field work for the SE Road Condition Survey.

**Note:** The number of inspections is different than the number of field days spent by the agencies. Some inspections, such as those at Icy Bay, take more than a single day. In other cases, multiple operations can be inspected on a single day. An inspection is counted for each inspection report that is filed. Each report covers a single operating area.

**# FRPA Inspections Conducted on forest operations on private, municipal, and trust land - DEC**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SE Region	6	6	0	0	0	0	0	0	0	
SC Region	0	3	12	14	10	12	18	18	3	3
Interior Region	0	0	0	0	0	0	0	0	0	0
TOTAL	6	9	12	14	10	12	18	18	3	3

**# FRPA Inspections Conducted on forest operations on STATE land - DOF**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	70	44	36	15	26	27	16	19	21	4
NSE	9	25	11	15	8	7	9	8	11	3
Mat-Su/SW	18	29	23	21	52	70	13	6	4	12
Kenai-Kodiak	9	7	13	19	29	24	9	18	8	1
COASTAL	106	105	83	70	115	128	47	51	44	20
Fairbanks	38	42	46	40	27	21	82	30	19	15
Delta	42	7	57	21	25	18	26	24	10	5
Tok	10	37	20	20	7	7	2	16	6	11
Copper R.	13	13	24	23	39	10	0	7	3	0
NORTHERN	103	99	147	104	98	56	110	77	38	31
TOTAL	209	204	230	174	213	184	157	128	82	51

Note: Inspections include regular FRPA inspections + variation inspections + reforestation inspections

**# FRPA Inspections Conducted on forest operations on STATE land - ADF&G**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fairbanks	7	0	3	0	2	0	0	0	2	0
Anchorage	0	0	0	0	0	0	0	15	0	0
Prince of Wales	0	4	1	0	2	3	0	7	1	1
Petersburg	0	0	N/A	N/A	N/A		N/A		N/A	
Juneau/Douglas	1	65	3	2	3	0	0	0	0	0
Kenai	0	0	0	1	1	3	1	0	0	0
Mat-Su	2	1	0	0	0	0	0	3	0	0
TOTAL	10	70	7	3	8	6	1	25	3	1

**Note:** For data on other ADF&G forestry-related field work, including fish habitat inspections under AS 16.05.841 and .871, road condition surveys, and other effectiveness monitoring, see ADF&G annual report text.

**# FRPA Inspections Conducted on forest operations on STATE land - DEC**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SE Region	0	0	0	0	0	0	0	0	0	0
SC Region	0	0	0	0	0	0	0	0	0	0
Interior Region	2	0	0	0	0	0	0	0	0	0
TOTAL	2	0	0	0	0	0	0	0	0	0

**Note:** This table does not include field work for the SE Road Condition Survey.

**Note:** The number of inspections is different than the number of field days spent by the agencies. Some inspections, such as those at Icy Bay, take more than a single day. In other cases, multiple operations can be inspected on a single day. An inspection is counted for each inspection report that is filed. Each report covers a single operating area.

**# field days spent on FRPA Inspections on all non-federal land - DOF**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	109	86	65	52	19	29	33	50	33	10
NSE	17	30	14	16	6	3	2	11	13	9
Mat-Su/SW	34	34	23	21	23	39	11	17	10	19
Kenai-Kodiak	15	18	23	36	109	71	51	44	53	38
COASTAL	175	168	125	125	157	142	97	122	109	76
Fairbanks	38	42	46	40	34	31	59	30	65	64
Delta	42	9	57	21	33	18	15	24	0	20
Tok	10	37	20	20	2	7	14	16	7	13
Copper R.	17	22	24	23	76	11	0	19	1	0
NORTHERN	107	110	147	104	145	67	88	89	73	97
TOTAL	282	278	272	229	223	209	185	211	182	173

**# field days spent on FRPA Inspections on all non-federal land - ADF&G**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fairbanks	9	0	3	0	2	0	1	0	1	0
Anchorage	8	17	8	9	23	36	15	15	15	11
Prince of Wales	16	19	27	25	14	22	8	15	14	11
Petersburg	0	0	N/A							
Juneau/Douglas	33	65	4	9	6	20	6	2	1	2
Kenai	0	0	0	1	2	13	2	4	1	0
Mat-Su	5	1	0	0	1	0	0	0	0	0
TOTAL	71	102	42	44	48	91	32	36	32	23

**# field days spent on FRPA Inspections on all non-federal land - DEC**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SE Region	6	6	0	0	0	0	0	0	0	
SC Region	0	3	12	21	20	36	18	13	3	2
Interior Region	2	0	0	0	0	0	0	0	0	
TOTAL	8	9	12	21	20	36	18	13	3	2

**# Variation requests received**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	0	26	10	2	1	1	4	5	3	3
NSE	0	0	0	0	0	0	1	0	0	0
MS/SW	0	1	0	0	0	0	0	0	0	0
Kenai-Kodiak	2	3	1	2	3	3	1	1	6	2
COASTAL	2	30	11	4	4	4	6	6	9	5
Fairbanks	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	0	0	0	0	0	0	0	0	0	0
NORTHERN	0	0	0	0	0	0	0	0	0	0
TOTAL	2	30	11	4	4	4	6	6	9	5

Note: One of the Kenai-Kodiak Area 2006 variation requests was for a provision other than harvesting in buffers.

**# Variation Trees Reviewed (approved, denied, and other)\* in site-specific variations**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	0	538	222	14	6	46	312	202	266	304
NSE	0	0	0	0	0	0	243	0	0	0
Mat-Su/SW	0	7	0	0	0	0	0	0	0	0
Kenai-Kodiak	168	327	361	160	294	678	41	80	458	4,353
COASTAL	168	872	583	174	300	724	596	282	724	4,657
Fairbanks	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	0	0	0	0	0	0	0	0	0	0
NORTHERN	0	0	0	0	0	0	0	0	0	0
TOTAL	168	872	583	174	300	724	596	282	724	4,657

\*Variation trees reviewed covers all trees inspected on site in site-specific variations. This includes trees approved or denied for harvest, plus "other" trees such as those that are withdrawn from the variation request or that are found to be outside the riparian buffer. It does not include trees harvested in small streamside zones under 11 AAC 95.240

\*\*Variations in the Tok Area were for groups of small trees rather than individual large trees. See report text for description.

**# Variation Trees Approved**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	0	531	222	14	6	46	272	195	239	286
NSE	0	0	0	0	0	0	237	0	0	0
Mat-Su/SW	0	7	0	0	0	0	0	0	0	0
Kenai-Kodiak	167	321	361	160	295	640	38	64	450	4,327
COASTAL	167	859	583	174	301	686	547	259	689	4,613
Fairbanks	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	0	0	0	0	0	0	0	0	0	0
NORTHERN	0	0	0	0	0	0	0	0	0	0
TOTAL	167	859	583	174	301	686	547	259	689	4,613
% approved	99%	99%	100%	100%	100%	95%	92%	92%	95%	99%

**FRPA Notices of Violation Issued**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	0	0	0	0	0	0	0	0	1	0
NSE	0	0	0	0	0	0	0	0	0	0
Mat-Su/SW	0	0	0	0	0	0	0	0	0	0
Kenai-Kodiak	0	0	1	0	0	0	1	0	0	0
COASTAL	0	0	1	0	0	0	1	0	1	0
Fairbanks	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	0	0	0	0	0	0	0	0	0	0
NORTHERN	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1	0	1	0

**Acres Reviewed for Reforestation Exemptions**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSE	0	0	0	0	0	0	0	0	0	0
NSE	0	0	0	0	0	0	0	0	0	0
Mat-Su/SW	0	0	0	0	0	0	0	0	0	0
Kenai-Kodiak	0	0	0	0	0	1,201	114	0	67	0
COASTAL	0	0	0	0	0	1,201	114	0	67	0
Fairbanks	0	0	0	0	40	0	0	0	0	0
Delta	0	40	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0
Copper R.	0	0	0	0	0	0	0	0	0	0
NORTHERN	0	40	0	0	40	0	0	0	0	0
TOTAL	0	40	0	0	40	1,201	114	0	67	0

## APPENDIX B: SUMMARY OF 2015 ENFORCEMENT ACTIONS

### ACTIONS INITIATED PRIOR TO 2016

#### AS 41.17 Charging documents for violations

Case #	Date initiated	Location	Issued by	Date of compliance
KK-13-1V	10-1-13	Afognak	Kenai/Kodiak Area	4-21-16

On or about July 31, 2013, Transpac was responsible for cutting 78 trees within an anadromous estuarine area in unit N29 on Afognak Island. The investigation was completed and a Notice of Violation was issued. The Prosecution Coordinator and the Respondent agreed to a proposed settlement. The Hearing Officer approved the settlement and the Respondent paid a fine of \$8,000, which closed this case.

### ACTIONS INITIATED IN 2016

#### AS 41.17.136 Directives

Case #	Date initiated	Location	Issued by	Date of compliance
NONE				

#### AS 41.17.131 Charging documents for violations

Case #	Date initiated	Location	Issued by	Date of compliance
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**APPENDIX C**  
**REFORESTATION RESEARCH, MONITORING, AND PLANNING**  
**RECOMMENDATIONS**

**Developed by the Science & Technical Committee (S&TC) and Implementation Group (IG) for the Review of FRPA Region II-III Reforestation Standards**  
**June 22, 2016**

**Note:** Labels with an “R#” form refer to the full package of S&TC and IG reforestation standard recommendations. For more information see the package on the DOF website at: <http://forestry.alaska.gov/Assets/uploads/DNRPublic/forestry/pdfs/forestpractices/Regulation%20and%20other%20implementation%20needs%20-%20Final%2006-22-16.pdf>

Topic	Priority	Research and Monitoring Needs
<b>Stocking and stand development</b>	<b>Moderate</b>	<b>R4.</b> Based on existing data, including the Levels-of-Growing-Stock (LOGS) study (e.g., Hollingsworth 2002, Packee 2001, 1999(b)), the existing standard in (d)(2) is acceptable. However, additional research is recommended on how stands at densities of 450 seedlings per acre and higher develop over the rotation in terms of form, growth rate, and mortality. Studies should review both spruce and hardwood stands.
	<b>Very High</b>	<b>R10.</b> Recommend a systematic review to document forest regeneration that has occurred on harvest areas in relation to local site conditions and forest management practices. This would be similar to the study done by Miho Morimoto in the Fairbanks area. Priorities for studies are the Tyonek, Copper Basin, Mat-Su, Kenai, and Tok-Delta areas, as well as more remote areas with a history of harvesting. This also contributes to developing model in R14am (below). Consider Tyonek and Caribou Hills studies; also Kenai Peninsula Borough plantings on small private ownerships and areas covered by Jandreau report on the Kenai Peninsula.
	<b>High</b>	<b>R14am.</b> To better predict future growth and yield, we need better information on the timing and processes that occur between harvesting and canopy closure in both spruce and hardwood stands, particularly on sites where natural regeneration is the means of achieving reforestation. Include assessment of the effect of different site preparation and reforestation methods. It would be helpful to have Forest Vegetation Simulator (FVS) modules predicting stand development in interior and southcentral Alaska in the US Forest Service growth model.
<b>Reforestation after infestation</b>	<b>Moderate</b>	<b>R3am.</b> What reforestation and forest development has occurred on harvested areas exempted from reforestation requirements following spruce bark beetle mortality, with and without subsequent burning? How do they compare to areas that were logged and reforested?

Site prep	Low	<p><b>R8.</b> Research is needed to determine the optimum conditions and timing for use of prescribed fire to achieve tree regeneration in birch-dominated stands where grass competition after disturbance is a concern. Note: This is focused on birch stands where there is a risk of competition from grass. The low rating relates to the difficulty of using prescribed fire in Alaska due to wildfire risks and shortage of staff to manage prescribed fires, etc.</p>
Site prep	Very High	<p><b>R15.</b> Research is needed to determine the optimum methods for mechanical site preparation to achieve tree regeneration in stands where grass competition after disturbance is a concern. Studies should include equipment and timing.</p>
Seed source	Moderate	<p><b>R7.</b> Good records on seed source are valuable to assess reforestation success and contribute to research on adaptation to climate change. The S&amp;TC recommends that</p> <ol style="list-style-type: none"> <li>1) landowners maintain records of seed and seedling sources,</li> <li>2) a group be convened to compile and analyze existing records, and address questions of successes and risks in selecting seed sources,</li> <li>3) information on Alaska tree seed sources be included in the national gene data bank.</li> </ol>
	Very High	<p><b>R9.</b> Systematic testing of non-native species for potential benefits and risks in adapting to climate change is encouraged, with a focus on species that are known to be capable of naturalizing in Regions II and III (see also S&amp;TC/IG recommendations regarding options for planting). Include documentation and ongoing monitoring by DOF or another agency/institution of existing provenance trials such as those established by John Alden.</p> <p>More information is needed on how seedlings of native species from other provenances and non-native species grow over a full rotation. Existing and future provenance trials need to be tracked over long periods of time and documentation preserved and kept publicly available.</p>
Harvesting, regeneration, and wildlife	High	<p><b>R6am.</b> In the long term, a monitoring program of stand- and landscape-level harvest treatments provides the opportunity for adaptive management of both forest regeneration and beneficial ecosystem services of wildlife. Timber harvest in Regions II and III has historically been small (10-40 acre) diameter-limit cuts that reflected the patchiness of the forest, and most research has focused on that type and scale of harvest.</p> <p>For boreal forests, we recommend research on whether timber harvest could mimic landscape patterns of natural burns by having larger sale units that retain multiple “habitat islands” to mimic unburned patches with lateral forest characteristics (Hunter 1993). Larger sale units would create more early seral forage that should reduce proportional browsing effects compared to relatively small timber sales in a matrix of mature forest. Retention islands provide interior forest conditions and a wind-firm environment for retention of snags or cavity trees compared to retaining single trees or more open harvest units.</p> <p>This monitoring strategy for timber sales provides a means of</p>

<b>Harvesting, regeneration, and wildlife</b>		<p>hypothesis testing to determine: (1) the optimal size of “habitat islands” for selected wildlife species or guilds, and (2) the key habitat features that best provide for commercial tree output while sustaining the wildlife populations and key ecosystem services described in the bibliographic summary (e.g. maintain habitat for wildlife species that inoculate soil with mycorrhizal fungi and for species that prey on tree herbivores).</p> <p>Gaining reliable knowledge through adaptive management (Walters and Holling 1990, Fisher 2002) would be best achieved with (1) explicit objectives for tree and wildlife species and (2) at least 2 plausible cause-effect mechanisms for each treatment variable before logging and reforestation activities begin. Monitoring designs should include non-treatment (control) sites to discern possible confounding of treatment effects and include the context of spatial scale when interpreting outcomes at specified future dates.</p> <p>Follow-up studies on large-scale harvests on the Kenai Peninsula in response to the spruce bark beetle outbreaks would be valuable for assessing wildlife use as well as reforestation across the landscape.</p>
	<b>Moderate</b>	<p><b>R5am.</b> In the short term, recent research highlights a need to identify the degree to which key timber species in the Interior rely on root-associated fungi dispersed by red-backed voles, the most common small mammal in Alaska boreal forests. Obligate dispersal of spores by red-backed voles is positively related to extent of forest retention in the Pacific Northwest (Jacobs and Luoma 2008), and recent data for Alaska point to an unexpectedly high amount of fungi in the diet of this species (Baltensperger 2015). Diets of <i>Microtus</i> voles in Alaska also include fungi, but to a lesser degree than red-backed voles (Baltensperger et al. 2015). The relative importance of <i>Microtus</i> in dispersing key mycorrhizal fungal spores in Alaska is unknown.</p>
	<b>Moderate</b>	<p><b>R13.</b> Whole-tree logging alters debris at harvested sites, thus potentially impacting small mammal species that can promote regeneration via dispersal of tree-root fungal spores. The primary research goal is to determine whether differences in debris loading (volume and size class) or dispersion following whole-tree logging are associated with an alteration in peak rodent abundance measured in late summer. Experimental design could evaluate debris patterns and wildlife outcomes before vs. after logging, and compare this to control sites. It may be possible to evaluate outcomes under different winter conditions (extreme vs. moderate temperature vs. snow-free). Logging during extreme cold and/or snow-free conditions is expected to produce the greatest debris shed during skidding. Sampling design should also include the factor of green coniferous debris &gt;4” diameter as a risk factor of <i>Ips</i> and spruce beetle damage on surrounding live conifers (<b>F17am</b>). Substantive differences in small mammal abundance associated with differences in debris may inform harvest guidelines for maintaining debris on harvested sites as habitat for species that are the primary dispersing agent of key tree-root (mycorrhizal) fungi. Include consideration of economics among harvesting systems.</p>

<b>Cooperative research and planning</b>	<b>Northern Forest cooperative</b>	Re-establish the Northern Forest Cooperative or a similar group to share information on ongoing research, research needs, improve collaboration, etc. This could help move forward the high priority research needs. The Working Forest Group is a possibility for help coordinating. The All-hands/All Lands group on the Kenai performs a similar function
	<b>Reforestation planning</b>	<b>R12.</b> The S&TC recognizes that climate change is likely to lead to large-scale disturbances (e.g., more frequent and extensive wildfire and insect infestations) that will result in needs for reforestation. The S&TC recommends that the State and other landowners conduct cooperative advanced planning to meet anticipated needs for reforestation. Possible actions include seed collection and maintenance of seed banks.