Annual Report to the Board of Forestry: 2020 Forest Practices Act Effectiveness

Department of Natural Resources Division of Forestry



February 2021

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DNR Division of Forestry Annual Report to the Board of Forestry: 2020 Forest Practices Act Effectiveness February 2021

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 practices program budget was static this year, and the Governor's FY21 budget for forest practices remains level.

- Forest operations increased on non-state land throughout Southeast but decreased in the Mat-Su and Kodiak-Afognak archipelago. Given the current level of forest activity, DOF provided sufficient field presence to ensure that FRPA was effective in protecting water quality and fish habitat in 2020 in Southeast, but travel to Kodiak-Afognak Islands were suspended due to COVID.
- Southeast forest practices inspections increased slightly on state operations and on non-state operations compared to last year.
- Compliance monitoring scores are at the same level as last year in Region I and increased in Region III. RII was not computed as only one inspection occurred. Compliance remains strong statewide.
- DOF sold 2.3 MMBF of timber, a decrease from last year.
- DOF continued 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 (GNA) agreement to provide forest management services on national forest land.
 - The 30 MMBF young-growth timber sale on Kosciusko Island was the first sale sold under the GNA in the Tongass National Forest, and is currently being harvested.
 - o The second GNA sale in the Tongass, the ∼16MMBF Vallenar Timber Sale, was awarded in February, 2019, and the necessary Vallenar Road improvements were completed at the end of 2020.
 - o A third agreement with the USFS involves spruce beetle-killed hazard fuel mitigation in the Chugach National Forest, and will be done this coming summer.

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

A. Summary of forest practices activities

Notifications and inspections. In 2020, DOF received and reviewed 42 new harvest Detailed Plans of Operation (DPOs), four new reforestation/timber stand improvement DPOs, three new road

closure/maintenance DPOs, and 15 renewals for private, municipal, and state trust lands. (See Appendix A and Figure 4, page 24). New DPOs covered 10,214.5 acres and 70.47 miles of new forest road. The division conducted 18 inspections on private, municipal and trust land and 35 inspections on state timber sales.

DPOs reviewed and acreage notified on non-state land operations increased from 2019 to 2020. Most of the FRPA activity on private land occurred in the Southeast Area on Sealaska operations, the second year of a new operation on Mental Health Trust (MHT) land at Naukati, and second-growth harvesting in Yakutat on village corporation land, Yakutat Borough and MHT land. Southeast inspections on state land during 2020 was slightly higher than 2019, with operations at North Hollis, Gravina and Haines. Sales sold in late 2020 at Thorne Bay and on Tuxekan Island will be operational in 2021. Future sales are being planned at Sumez Island, Kosciusko and Whale Pass. Significant new road construction activity on Gravina Island began in 2017 and contributed open access to the western northern and western portion of the island.

Notifications and acreage notified decreased in the Kodiak-Afognak area. Minimal FRPA activity occurred on non-state land in Regions II and III, with one DPO reviewed in each of the two regions. Inspections in Region III did not occur on private land in 2020 and increased on State land from 2019 to 2020.

Variations. For the second time in as many years, there were no requests for variation for harvesting in riparian buffers in 2020.

Enforcement. No violations were issued in 2020. (Enforcement actions are summarized in Appendix B.)

B. Monitoring

Compliance monitoring. During 2020, 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, next page). Overall, Region I averaged 4.6 out of 5.0 on the ratings, and Region III scored 4.7. Region II was not evaluated, as only one inspection occurred. In Region I, 90% of all scores exceeded 4.0, as did 97% in Region III.

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¹ Note: FRPA data is reported on a calendar year basis because 11 AAC 95.220 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 2020 compliance monitoring scoresheet counts, number of BMP ratings, BMP mean

scores, and overall BMP implementation percentage by region and state

	# Score sh	eets/Inspections	# BMP	Mean score for	Percentage of all	
Region	State Private/Other Public		ratings	all BMPs	BMPs rated ≥ 4	
Region I	16	18	424	4.59	90%	
Region II	1	0	4	2.00	0%	
Region III	18	0	215	4.67	97%	
Total	35	18	643	4.60	91%	

Region I compliance was high as 90% of all BMPs evaluated met or exceeded compliance standards, although there were individual BMPs which required corrective action. Those BMPs were related to road drainage, adequate number of drainage structures and bull rail and fabric installations on log bridges. Operators acted quickly to rectify deficiencies as they were discovered. Active road maintenance and BMPs related to timber harvest were excellent. One training session was held in Southeast for ADFG and DEC staff. Due to low harvest activity, only one inspection was conducted in Region II, so compliance results were not summarized. Region III had excellent compliance results in 2020 at 97%, which is an increase over last year. Although 2020 was a wet year with challenging road conditions, nearly the entire Tanana Valley State Forest road system received routine maintenance and grading prior to freeze-up. Although this road system receives a significant amount of public use, the roads are currently in excellent shape. Multiple ice bridge crossings were successfully constructed, and compliance was exceptional on most harvest operations in Region III.

Effectiveness monitoring and road condition surveys.

DOF works with agencies and affected interests to prioritize effectiveness monitoring of the Forest Resources and Practices Act, and related research needs. The interagency Effectiveness Monitoring Working Group, including representatives from DOF, USFS, ADFG, USFWS, and Sealaska Corporation, will meet in January 2021 to discuss projects and priorities. The group remains in contact about several high priority projects, many of which have good prospects for funding as well as opportunities for collaboration among agencies.

2021 Effectiveness Monitoring Proposals

- Road condition surveys, Sealaska operations on Prince of Wales. Lead: Joel Nudelman, DOF.
- Windthrow prediction in SE Alaska. Lead: Greg Albrecht, ADFG.
- Fish passage mapping, incorporating federal and state data. Lead: Neil Stichert, USFS and Joel Nudelman, DOF.

Road condition surveys and remediation. No road condition surveys were conducted in 2020. The previous survey was in 2017, when DOF, with the assistance of ADFG, performed a road condition survey on 2.5 miles of forest road in the Southeast State Forest on Wrangell Island. The survey resulted in the removal of multiple culverts that impeded fish passage.

C. Reforestation

Reforestation exemptions. Harvests that are significantly composed of dead or dying trees may request an exemption from the FRPA reforestation requirements. DOF received one new request for a reforestation exemption in 2020, which was approved for 484 acres.

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 2020, DOF conducted one FRPA training session in Southeast with an attendance total of 11 people. No compliance monitoring sessions were held.

FRPA 101. The Division of Forestry completed a series of FRPA training modules using PowerPoint. The full series has 20 modules covering Purpose, Applicability, DPOs, Stream Classification, riparian standards, road construction and maintenance, stream crossings, reforestation, timber harvesting, inspections and compliance monitoring, enforcement, mass wasting, prosecution coordination, and hearing officer duties.

Most of the FRPA training materials are on the public Division of Forestry website: http://forestry.alaska.gov/forestpractices, and are used by a variety of users with questions about FRPA. The modules for FRPA enforcement, prosecution coordination, and hearing officer training are on the internal Division of Forestry website, and available for Division employees as needed.

III. RESOURCE MANAGEMENT ACTIVITY ON STATE LAND

A. Statewide summary

State timber sales. FY20 timber sale offerings on state land are summarized by area in Table 2, on the following page. In FY20, DOF sold 31 sales on 573 acres of land for a total of approximately 2.3 million board feet. Compared to FY19 and previous years, timber sale volume decreased sharply. 2021 should return to normal levels as multiple sales were sold late in the calendar year. Staff recruitment and retention efforts in Southern Southeast have been difficult. Two positions are currently vacant, which will hopefully be filled early in 2021.

Table 2. FY20 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	Number of Sales	Acres Sold in New Sales	Volume Sold - Units Converted to MBF
Southern Southeast	3	9.00	156.05
Northern Southeast	2	20.00	106.35
Kenai - Kodiak	3	40.00	250.00
Mat Su	0	0.00	0.00
Coastal Total	8	69.00	512.40
Fairbanks	6	38.10	224.70
Delta	8	318.45	1,076.46
Tok	9	147.60	508.00
Copper River	0	0.00	0.00
Northern Total	23	504.15	1,809.16
State Total	31	573.15	2,321.56

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, the 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 2020, DOF surveyed 166 acres for regeneration. No precommercial thinning, pruning or planting occurred on DOF managed lands in 2020.

B. FY20 Resource management activity by area Northern Region Forest Management.

The Division of Forestry supports and creates new opportunities and maintains the flow of timber to the industry in interior Alaska. The Northern Region continues to support local value-added wood processors and jobs in its timber sale program. DOF identifies and offers timber for salvage that was damaged by insects, floods, fires, and windstorms. Making sales available for purchase in the Fairbanks, Delta, Tok, and Copper River areas for all-season and winter access and harvesting is a priority.

The saw log demand remains stable while the firewood and biomass industry in Interior Alaska has declined slightly due to lower oil prices. The biomass mills in North Pole and Tok, however, continue to produce wood pellets and pellet logs and distribute their products statewide. The Fairbanks-Delta office produces DOF's highest revenue and volume outside of Southern Southeast Alaska. It historically provides 70% or more of timber in the Interior. Volume offered in previous fiscal years but not sold remains for sale over the counter at each area office.

Saw log spruce goes primarily to three mills operating in the Interior: Northland Wood in Fairbanks, Logging and Milling Associates in Dry Creek, and Young's Timber Inc. in Tok. While pole and pulp

timber go to Aurora Energy Solutions, the largest purchaser in the Interior is Tok Biofuels, which produces compressed fire logs.

The division cooperates with other agencies to provide information on the benefits of burning dry, well-seasoned wood. The U.S. Environmental Protection Agency has warned Fairbanks and North Pole of the ongoing danger to human health caused by high levels of particulate matter caused by burning wood.

Fairbanks-Delta Area

Commercial timber continues to be sustainably harvested throughout the Fairbanks and Delta areas. There are over 89 active timber contracts with 25+ operators on state land. The demand for saw logs remains stable. Northland Wood Products, located in Fairbanks, remains the primary purchaser; it procures and processes approximately three million board feet annually.

Aurora Energy Solutions LLC formed early in 2020 and acquired Superior Pellet Fuels, which had purchased the most lower quality pole timber and fuelwood in recent years. Aurora Energy Solutions is producing pellets, compressed logs, and kiln dried firewood for Interior Alaska. Much of the raw material this company uses comes from the Tanana Valley State Forest. Operators of the firewood kiln estimate they will need 5,000 to 6,000 cords per year to meet demand.

Personal use firewood sales have increased since 2019. Through the end of November, Fairbanks Area sold 381 permits for a total of 1,102 cords and Delta Area sold 41 permits for a total of 169 cords.

Regeneration surveys continue every spring in the Fairbanks-Delta Area. Following the every-other-year planting cycle management option, no seedlings were planted in 2020. The Area's resource foresters are preparing to acquire and plant 40,000 seedlings in 2021. Scarification continues to be a common post-harvest treatment for promotion of natural regeneration.

Road work and maintenance are an ongoing need in the Fairbanks-Delta Area. Contractors and Forestry staff work on road projects annually to ensure multi-use access to the Tanana Valley State Forest. The 2020 road work season was plagued with frequent and heavy precipitation. The wet conditions slowed but did not stop road work from progressing. DOF staff reestablished proper road surface profiles on most of the roads. Brush was removed from the edges of Cache Creek Road to allow more sunlight and air flow onto the road surface. Major work was completed on a troublesome section of Standard Creek Road including brushing, ditching, filling, and grading.

Fairbanks Area plans to repair Fortune Creek Bridge and upgrade sections of Standard Creek Road through an RSA with ADF&G in 2021. The Delta Area roads were deemed to be in good shape when they were assessed during breakup so little work was done. Some winter work will be done on the Delta River West roads to provide turn around and pull off spots.

Tok-Copper River Area

The Tok-Copper River Area encompasses approximately 30 million acres in the eastern Tanana River Valley and the Copper River Basin. Ownership is comprised of private, state, federal, and Native corporation lands. Offices in Tok and Glennallen support initial attack wildland fire response for the region and manage state timber sales.

The highest demand for raw materials from state lands continues to be firewood followed by logs and biomass in the Tok area. There have been sporadic requests for house logs and saw timber in the Copper River Area, but firewood is the top required resource. Seasonal access and broken ownership patterns are the limiting factor for personal use firewood in the Copper River Basin. The Tok Area has enjoyed an abundant supply of fire killed spruce since the 1990s. However, this supply has dwindled greatly or

succumbed to rot over the years. The Area explores other options and locations to provide accessible firewood in the future.

Four commercial firewood operators were active this year, harvesting approximately 675 cords of fire-killed spruce for firewood with some value-added products included in the Tok Area. The value-added products were used to produce cabin kits.

The Alaska Gateway School District harvested approximately 20 acres of its timber sale. There are potential plans to develop biomass heating at the Northway school. Should this happen, the school district could purchase more hazardous fuels in future sales to meet its increased needs.

Two large, negotiated sales active last year produced a combined total of 1,068 tons of sawlogs and 286 tons of utility wood. The units within these sales consist of dense mature white spruce stands. The goal for these units is to create openings and promote moose browse during early successional seral stages of stand development. The Area and the Alaska Department of Fish and Game have discussed prescribed fire and other post-harvest treatments to promote browse species.

A negotiated timber sale was sold to a small operator in McCarthy this year. The operator has a niche market in the area for interior tongue and groove paneling, dimensional lumber, and firewood. Field work was completed during the summer to identify four potential sale areas. These locations should supply the individual with raw material for the next three to four years.

After the active fire season of 2019, there is interest in the Copper River Basin to reduce hazardous fuel loading and explore potential biomass markets. Various groups in the Copper River Basin have discussed using the biproducts of fuel break construction to fuel biomass heating facilities. The Tok-Copper River Area is working closely with these groups to provide information and support as discussion progresses.

Coastal Region Forest Management Southeast Area

The Southeast (SE) Area covers the Alaska panhandle from Haines to Ketchikan. The public and private land in this Area provides most of the timber volume and revenue harvested from forested land in Alaska. The SE Area manages the Southeast and Haines state forests and administers the Alaska Forest Practices Act on extensive private holdings within its jurisdiction.

The division used field data collected in 2019 to update the inventory of forested state land in 2020. A U.S. Forest Service State & Private Forestry grant and a Challenge Cost Share Agreement funded this work. The result is a baseline of information that will be used to plan sustainable forest management activity on land classified as state forest and general use. The Area revised the annual allowable cut based on the inventory to 9,147 MBF per year.

Most timber harvest activity on state land in the southern panhandle was due to small sale activity early in the year. There was no activity by the Vallenar GNA sale purchaser (mostly young growth) in 2020. Work was completed on the 4,500 MBF Parlay Timber Sale on Kosciusko Island in the fall; the sale was held pending market improvement and development of a log transfer facility contract.

The SE Area completed design and field work on a 15,000 MBF sale in Thorne Bay on state forest and settlement classified land advertised at the end of 2020. Large and small purchasers showed significant interest in the sale due to the decreasing availability of timber from other sources. Local use of Haines State Forest timber by small mills remained strong. The division performed several deferred

maintenance projects on the Sunshine and Kelsall forest road systems to maintain basic access to the forest for commercial operators and the public.

Forest Practices notifications declined in the first half of the fiscal year, but activity increased in the second half. Market anxiety also increased as domestic and export markets adapted to the growing demand for building precipitated by COVID-19. COVID-19 also brought logistical and staffing hurdles for timber sale purchasers and agencies. For most of the year uncertainty due to tariffs implemented by China and the associated market response depressed the market; COVID-19 further complicated the ability to respond. Agreements to restrain tariffs and the shifting supply chains brought some opportunity towards the end of the year. White wood slowly recovered to allow purchasers to operate in old and young growth timber. Timber sales containing red cedar remained in relatively high demand.

Kenai-Kodiak Area

This area includes the Kenai Peninsula and Kodiak Archipelago, totaling approximately 10 million acres. The area supports initial attack wildland fire response and manages state timber sales and the Forest Practices program in Regions 1 and 2.

The Kenai-Kodiak Area sold three timber sales in 2020. Timber is marketed as firewood, round logs for dimensional milling, and house logs. Multiple small mill operators on the Kenai Peninsula rely on timber harvest on state lands as a material source, producing dimensional lumber, cabin kits, and dunnage (typically 4x4x48 inches or 6x6x48 inches, used in oilfield construction and shipyards). Firewood demand from the public remains high and land management agencies coordinate to provide public access for gathering firewood. The state maintains eight miles of forest roads on the Kenai Peninsula, providing access for the public, future commercial timber sales, and personal use firewood gathering.

Timber operators in Region 1 on Afognak Island harvested approximately 27 million board feet in 2020 and harvesting operations are ongoing. The Area processed two detailed plans of operation (DPOs) totaling 601 acres of proposed harvest on Afognak Island. Several contractors are continuing to harvest timber on DPOs submitted in previous years in both regions. The Area Office makes field inspections on Kodiak and Afognak Islands, ensuring reforestation and ongoing operations meet Forest Practices Act requirements. In 2020, inspections were hampered by COVID-19 concerns in local communities on Afognak Island and by partner agencies' COVID-19 standard operating procedures.

DOF seasonal staff completed fuels mitigation work on 25 acres at the Funny River State Recreation Area during the fall. Staff hand-felled and -thinned dense stands of black spruce forest to approximately 12 feet between tree crowns, removed lower limbs, and removed all dead standing beetle-killed trees within the project area.

DOF seasonal staff also completed approximately five acres of fuels mitigation work at the Morgan's Landing State Recreation Site, where work will continue this year as field conditions allow. Staff handfelled and -thinned dense stands of black spruce forest to approximately 12 feet between tree crowns and removed lower limbs. Mature dead white spruce have been heavily impacted by spruce bark beetle and immediate measures are being taken to safely remove dead trees in areas with high human foot traffic to increase safety for the public and reduce the risk and intensity of wildfire in the area.

Matanuska-Susitna & Southwest Area

This Area includes the Mat-Su, Anchorage, and western Prince William Sound (14.6 million acres), and Southwest Alaska (85.4 million acres) for a total of 100 million acres, making it the largest administrative district managed by DOF. The Area is managed from the Palmer office and a seasonal office in McGrath. The Anchorage Bowl, including Joint Base Elmendorf-Richardson and Eagle River,

encompasses the largest wildland-urban interface in the state. Lands in Southwest Alaska are among the least populated and most remote.

There are two active state commercial timber sales and operators on a total of 105 acres in the Mat-Su. The Area Office sold 540 cords of personal-use firewood through online permits, eight negotiated personal use contracts for 75 cords of firewood, and five MBF of house logs for remote landowners.

An ongoing spruce beetle epidemic has killed significant numbers of mature white spruce throughout the Area, from Anchorage to north of Denali State Park. Two popular state park campgrounds, Byers Lake and South Rolly, closed in 2019 due to hazardous conditions from dead spruce, but were reopened in the spring of 2020 after Mat-Su Area Wildland Fire and Resource Technicians, the Gannett Glacier Fire Crew, Pioneer Peak Interagency Hotshot Crew (IHC), and contractors coordinated to reduce fuels and mitigate hazards. The work was funded by the U.S. Forest Service.

The Area contracted for additional fuels reduction and hazard mitigation work in Sheep Creek, Caswell Creek, and Susitna Landing campgrounds in the fall. Contractors removed 808 dead spruce, increased user safety and reduced the risk of an escaped fire. In the spring, the Gannett Glacier crew, with support from the Alaska Department of Fish and Game, worked in remote, boat accessible only campsites at Susitna Landing, removing approximately 700 beetle killed spruce and other hazardous fuels from seven sites located along the Susitna River. The crew cut and stacked usable logs for firewood and created 318 piles of slash that Mat-Su Area techs burned in the fall of 2020.

Mat-Su Area Techs and members of the Gannett Glacier and Pioneer Peak IHC crews worked 48 days along Nancy Lake Parkway adding to a fuel break along the road that was begun in 2019. This year 138,474 cubic feet of hazardous fuels were removed, completing three miles of fuels reduction work. In 2020, state fire technicians logged 1,444 work hours, and Pioneer Peak and Gannett Glacier crews logged a combined 6,821 hours of fuels reduction work in the Mat-Su.

Wildland Fire

Following one of its busiest and most-destructive fire seasons in 2019, the Division of Forestry experienced a much tamer fire season in 2020. A total of 347 fires burned an estimated 181,253 acres statewide, the lowest number of acres burned in a season since 2008. The slow season was due largely to heavy spring snow and cool temperatures in the Interior that delayed the start of the season, and heavy rain from mid-June through August that kept ignitions and spread low.

There were 179 human-caused fires and 168 lighting-caused fires. Lightning-caused fires burned 180,945 acres. Only 308 acres were burned by human-caused fires. No homes were destroyed and there were no serious injuries suffered by firefighters or the public in 2020.

In DOF protection areas 191 fires burned 135,926 acres. Most of the acreage (99%) was in the Southwest (McGrath) Area, with 29 fires burning about 135,589 acres. Most of those fires were in remote areas and were not suppressed as they did not pose a threat. The largest fire was a lightning-caused 54,099-acre fire in the SW Area, which accounted for more than one-quarter of the total acreage burned statewide.

C. Forest inventory

Forest Inventory and Analysis

The Forest Inventory and Analysis (FIA) program of the U.S. Forest Service provides information to assess America's forests. In interior Alaska, the Division of Forestry has partnered with the USFS to install and measure plots through a joint venture agreement. As the nation's continuous forest census,

the program monitors the status and trends of all public and private forestlands in the US. This is especially important in Alaska where significant changes in temperature, permafrost, and plants are occurring and expected to increase.

A suite of items is sampled at each plot including trees, soils, understory plants, and woody debris. State field crews have successfully conducted the Interior Alaska FIA program for five years and have met all USFS quality control metrics. For purposes of planning, data analysis, and logistics, interior Alaska has been divided into five inventory units.

In 2020, mitigation plans were implemented for COVID-19, including testing before each shift and minimum interactions with people outside of the crew. Despite the challenges and delay caused by the virus, the field data collection met the minimum goal for the year. The field crew completed the Susitna-Copper Unit, the second of the five units, and began work in the Southwest Unit. Most plots required a helicopter to access. For the remaining three units, the crew will operate from a field hub off the road system, which requires more complex logistics and planning.

In 2020, staffing included two permanent coordinators, one non-permanent quality assurance forester, six non-permanent crew leads, and 11 non-permanent crew members.

Southeast Inventories

Forest inventories have been completed for the Haines Southern Southeast state forests. In Haines this included revision of the timber type and ownership geographic information system (GIS) layers, acreage determination and volume projections for the young growth timber stratum. This information is summarized in a report titled "Timber Inventory of State Forest Lands in the Haines Area 2020." In addition, a web mapping site was developed that displays forest information interactively, tying inventory database records directly to the map application GIS interface. The inventory report and web mapping site are on the DOF website: https://forestrymaps-soa-dnr.hub.arcgis.com.

Work in Southern Southeast included revision of the timber type and ownership GIS layers, acreage determination, and volume projections for the young growth timber stratum. In addition, the operable timber base was refined by examining areas believed to contain non-merchantable or non-operable timber stands such as timber in isolated areas, poorly drained sites, or difficult terrain. These areas were identified and removed from the operable timber base. This information was summarized in a report titled "Southern Southeast Area Operational Forest Inventory and Annual Allowable Cut Analysis for State Forest and General Use Lands." A web mapping site similar to the Haines site has also been produced: https://forestrymaps-soa-dnr.hub.arcgis.com.

The inventory was funded from a Challenge Cost Share Agreement between USFS State & Private Forestry and DOF. Funding also allowed DOF to inventory 30,000 acres of Tongass National Forest young growth timber from 2016-2018. Tongass inventory data was recently summarized by forestry consultant Terra Verde Inc. These two projects completed across ownerships provide a wealth of information for forest planning in southern Southeast Alaska.

D. Beach Log Salvage and Log Brands

The Southeast Area office issued 5 beach log salvage licenses in Southern southeast and sold 22 log brands, including renewals.

E. Forest Planning

The Division of Forestry reviews and comments 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.

In addition, DOF works to encourage the salvage of timber when forested land is cleared for rights-of-way or other purposes and provides stipulations for protecting forest health.

State Forest Action Plan

DOF completed a new Alaska Forest Action Plan in 2020. The first Forest Action Plan was completed in 2010 and revised in 2016. A full revision every 10 years is required by the Cooperative Forestry Assistance Act, as amended by the 2008 Farm Bill, for continued federal funding of cooperative forestry and cooperative fire programs.

The 2020 Alaska Forest Action Plan provides a statewide, all lands assessment of forest conditions and trends, identifies threats to forest resources, sets forward a strategy to address those threats, and delineates the priority landscape on which to focus that strategy. This effort pulled together DOF staff and other key stakeholders to develop an Alaska-focused strategy to meet the national state and private forestry priorities to conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The 2020 Forest Action Plan is a way for DOF, in cooperation with stakeholders, to prioritize where and how to apply strategies that will make the most of the funding available to address forest issues. The 2020 strategies were developed with cross-program and cross-boundary efforts in mind.

IV. FEDERAL LAND ACTIVITY

A. Good Neighbor Authority

The Division of Forestry undertook the Good Neighbor Authority (GNA) federal grant projects in the Tongass National Forest in 2016 in cooperation with the USFS Region 10. The GNA stems from the 2014 federal Farm Bill that allows the USFS to enter into agreements with state forestry agencies to accomplish critical management to keep forests healthy and productive across land ownerships.

Kosciusko Island Timber Sale

This GNA forest restoration project is located within the Tongass National Forest on Kosciusko Island near Edna Bay. The sale includes about 1,500 acres of various harvest prescriptions containing about 25 MMBF of young growth spruce and five MMBF of young growth hemlock for a total of 30 MMBF. There is no old growth in this sale. The timber sale contract was signed in September 2017 and is set to end on December 31, 2023.

There is no road access to Kosciusko Island. Although located entirely within Tongass National Forest, hauling to the sale must cross two other landowners' roads and it will use a State of Alaska log transfer facility. Use of the road and sort yard are allowed under a road and facility use agreement. The purchaser is responsible to pay costs outlined in the road and facility use agreement and adhere to all terms of the agreement. The contractor is responsible for any permits, surveys, and cleanup associated with the timber sale.

Harvest, hauling, scaling, and road work continued in 2020 and approximately 8,030 MMBF of young growth timber has been harvested. Several price reductions were negotiated due to market tariffs, oversupply of beetle-killed wood in Europe, and COVID-19. Alcan Timber requested a second reduction of the contractual stumpage rate to base rates of \$10/MBF. Currently a waiver from previously imposed tariffs is in place for export timber markets.

Cooperators made extensive changes to harvest units to make the paper plan fit on-the-ground conditions. The purchaser laid out the sale, which resulted in many interactions between state and federal administrators, the purchaser, and the inter-disciplinary team. In September, after a long

collaborative effort between all parties, the final layout appears complete, incorporating all three silvicultural prescriptions (even-age, two-age, and uneven-age), and is therefore NEPA compliant. Field trips to the sale area helped assess and mitigate various challenges to designing an economic sale that includes varying timber types, buffer areas, and access issues. The sale aims to be the first positive value young growth timber sale in the Tongass National Forest.

Vallenar Bay Timber Sale

This was the first true GNA project in Alaska in that it includes a joint management effort on both national and state forest lands. The timber sale includes about 481 acres within the Southeast State Forest and Tongass National Forest on the northwest end of Gravina Island. The Vallenar Bay sale involves about 16 MMBF of timber from a mix of old- and young-growth Sitka spruce, western hemlock, red alder, western red cedar, and Alaska yellow cedar. The project will require about three miles of road construction on state and federal land. The timber will be harvested through a combination of ground-based and cable logging systems.

The combined sale was appraised and offered for competitive sale with a bid closing date of September 24, 2018, but there were no bids. The DOF theorizes that its appraisal of the timber sale did not correctly reflect all risks associated with the young growth timber (for example, potential tariffs) and may have also applied too high of a value on the old growth timber on state land that is bundled with the USFS wood. The tariff implemented by China just after the bid date was not included in the appraisal. The tariff was not a verifiable cost at the time of initial offer and the primary market for the young growth timber is projected to be China.

The USFS and the state discussed the risk and the appropriate party and method to handle the cost. Observations by DOF and industry led to a review of the cruise data for the state land old growth; the higher sort amounts listed were not typical. The data were edited to yield a more representative distribution of sorts and grades for the area. Most of the change in the appraisal value occurred in the old growth timber on state land. No change was made to the sort distribution for the young growth. There was a change in value in the young growth on USFS and state land as the result of market risk.

The young growth timber market demand and confidence was significantly affected by the tariff levied by China in the last quarter of 2018. The state's response was to increase the profit and risk percentage in the wood destined for China to account for the uncertainty of the market and tariff condition. The value at the time of the reappraisal placed the USFS wood at approximately equal to the projected costs; consequently, the state marketed it with the state timber at the USFS minimum stumpage rates.

The reoffer sale package was compiled and publicly noticed the first week of January 2019. The state received one bid at the end of January and the sale was awarded to Alcan Timber Inc. on February 6, 2019. The purchaser and the state signed the contract for the sale of the timber during the second week of February 2019. No activity has occurred on the timber sale since the signing of the contract.

The Ketchikan office of the DOF issued a contract for public works construction improvements to the alignment of the Vallenar Road mainline in August 2020. The contractor began work in October 2020 and completed approximately 80% of the project by late November. The work on the State Forest road focuses on adjusting the vertical alignment to improve sight distance. The work uses residual funds from the state capital fund that originally financed the road.

Wildfire Protection

DOF entered into two GNA agreements with the Bureau of Land Management, one to assist with developing a fuel break near Delta Junction, and the other to develop Community Wildfire Protection Plans for 10 communities in the Copper River Valley.

B. Sykes Act

The DOF entered an agreement with the US Army Corps of Engineers on Fort Wainwright to provide forestry support on military training lands under authority of the Sikes Act. The act allows state resource agencies to help conserve and rehabilitate natural resources on military bases. Under the agreement, the DOF began conducting forest inventory on the base in 2020.

C. Alaska Roadless Rule. The 2001 Roadless Area Conservation Rule (Roadless Rule) is a national regulation that establishes prohibitions on road construction, road reconstruction, and timber harvesting on 58.5 million acres of inventoried roadless areas on National Forest System lands throughout the U.S. According to the USFS, the intent of the 2001 Roadless Rule is to "provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple-use management." The State of Alaska believes that this rule limits opportunities for Alaskans that live and work in the Tongass National Forest. As such, the State of Alaska, along with Alaska's Congressional Delegation, has worked over the consecutive terms of six governors (one Democratic, one Independent, and four Republican) to exempt the Tongass from the Roadless Rule. In January 2018, the State petitioned USDA Secretary Sonny Purdue for rulemaking to exempt the Tongass from the Roadless Rule in the interest of the socioeconomic well-being of its residents.

In October 2020, The U.S. Department of Agriculture (USDA) announced a final Alaska Roadless Rule that exempts the Tongass National Forest from the 2001 provision that prohibited road construction, road reconstruction and timber harvests.

The Record of Decision identifies the selected alternative, provides the rationale for the decision, and explains that the exemption does not authorize any specific projects in Alaska. Proposed projects must continue to comply with the 2016 Tongass Land Management Plan and be analyzed under the National Environmental Policy Act.

In 2019, DOF signed a cooperative agreement with the Alaska Forest Association, which subcontracted with Terra Verde, Inc., to complete a GIS-based analysis of the six alternatives in the USFS Environmental Impact Statement for the Roadless Rule Rulemaking Process in the Tongass National Forest.

The analysis determined that, regardless of alternative chosen, the 2016 Tongass National Forest Plan will defer 80% of the suitable old growth forest land base from timber harvest over the next 20 years because of factors such as:

- non-development land use designations, wilderness areas, and lands protected by the Tongass Timber Reform Act;
- provisions that are mostly designed to protect other forest resources such as timber retention buffers adjacent to fish streams and marine shorelines and in areas of high vulnerability karst; and
- areas where road construction and/or timber harvest are not feasible due to topography, economics, and/or the limitations of conventional harvesting technologies.

Terra Verde found that, based on current project planning trends, an amount equal to an additional seven percent of the suitable land base will be deferred, due to selective harvesting prescriptions, during the planning process. Additional reductions are likely on a project-by-project basis. The initial 80% deferred by the 2016 Forest Plan plus the seven percent identified in the analysis means that at least 87 out of every 100 acres of suitable old growth forest will be unavailable to maintain the existing timber industry during its transition to young growth.

D. Challenge Cost Share Grants. Tongass Young Growth Conversion

The DOF began the Young Growth Conversion project in the Tongass National Forest in 2015 using a Challenge Cost Share Grant in cooperation with the USFS Tongass National Forest and the USFS State & Private Forestry branch. Numerous federal and state employees, many non-profit organizations, and one for-profit forestry consulting firm have contributed to this six-year project.

A final report of current young-growth forest inventory data and stand mapping, completed in 2020, provide a detailed analysis of young growth over the entire Tongass National Forest. The report states:

- The combined gross acreage of all Tongass young-growth timber stands totals approximately 452,600 acres. The current field inventory focused on identifying, sampling, and classifying young-growth timber stands that originated from historic timber harvests.
- A GIS-based analysis of potential fall-down acreage estimates approximately 190,700 acres or 42 percent of the total Tongass young-growth stand acres will not be managed for timber production and harvest due to legislative, administrative, and harvest operability constraints. Actual fall-down acreage can only be fully determined by site-specific field review of each planned young-growth timber harvest unit.
- The estimated combined net acreage of all Tongass young-growth timber stands that can be managed for timber production and harvest totals approximately 261,900 acres.

The report does not attempt to make a robust comparison between methods used for this analysis and the separate methods used by the USFS to define "suitable" young-growth acreage in the 2016 Tongass National Forest Plan. However, net young-growth acres presented here (261,917 acres) are substantially fewer than acres defined as suitable (338,973 acres) in the Tongass Forest Plan.

The Tongass Forest Plan considered all acres in certain retention and partial retention zones as suitable, since thinning across the entire stand would be permissible if site-specific standards and guidelines were followed. By using the best forest-wide information available and explicitly removing acres mapped in retention and partial retention zones, net young-growth stand acreage listed in the report more closely approximates the acres that will be managed for timber production and harvest in the future.

Economic Young-Growth Timber Volume Flow

A separate growth and yield analysis of all timber stands in the net young-growth timber base in the Tongass National Forest estimated the total volume of young-growth timber that could be economically harvested annually. The timber volume threshold used to denote an economic harvest opportunity is close to the 2-Log Rule found in the current (2016) Tongass Forest Plan: the rule used in this analysis assumes that for a young-growth timber stand to support economic timber harvest it must contain a minimum volume of 20.5 MBF per acre, and the average height of trees in the stand must be at least 90 feet. Annual projected demand is 41 MMBF/year according to the Forest Plan. Results of this analysis show that enough stands will achieve the 2-Log Rule to meet and exceed that demand by 2026, but the stands are geographically scattered, making potential sales economically infeasible until the year 2030. Widespread availability of stands reaching the 2-Log Rule will begin occurring in denser geographic concentrations starting in 2030. Putting together large young-growth timber sales (20 to 30 MMBF) in the next six to 10 years will be challenging. For purposes of Figure 1, on the next page, "GIS acres" means gross young-growth acres for each year depicted.

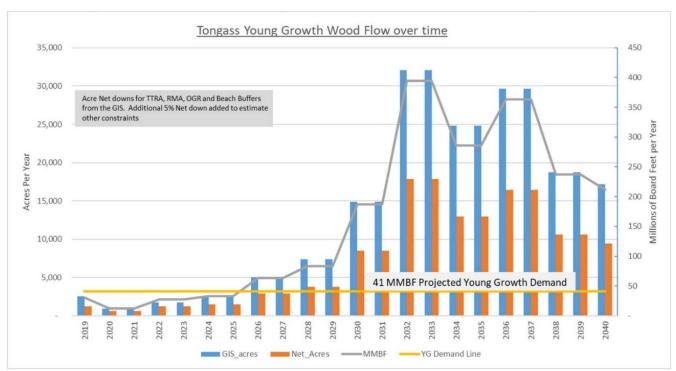


Figure 1. 2-Log Rule near-term volume flow and stand acres contributing over time

A time-lapse analysis of the Thorne Bay area suggests that it will be 2029 before 30 MMBF, contained in about 15 separate young-growth timber stands, is available in the same operational area. A timber sale of about 30 MMBF is simply a benchmark that represents sufficient volume to support a reasonably sized one-year harvest operation or a modest two-year harvest program. Operations of this size have a better chance of covering costs and are more likely to attract competitive bidding. This innovative time-lapse planning tool will be especially useful in planning future young-growth timber sales in areas where more than one harvest entry is planned. Stands will need to be placed into separate sale offerings and in combinations that maximize the economic viability of all sale offerings planned for that area.

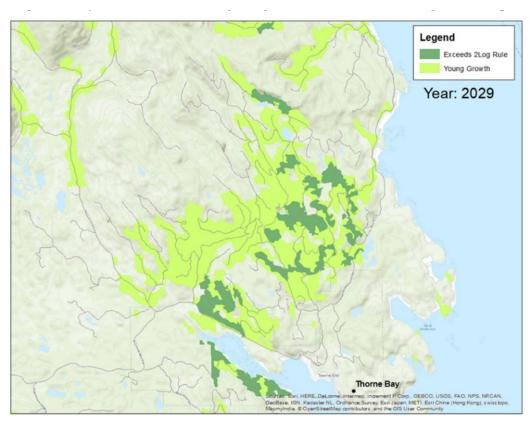


Figure 2. Example of basin/area level analysis for timber harvest planning

V. SPECIAL PROJECTS A. COVID Response

The Division of Forestry formed a COVID-19 Response Team in March, led by Deputy Director Tim Dabney and former Chief of Fire Tom Kurth, to provide for the safety of its employees, wildland firefighters, and the public. The team created COVID-19 directives and health and safety recommendations for the DOF based on scientific information from the U.S. Center for Disease Control. Implementation of guidelines continued as wildland fire activity increased in late-May through mid-June and as regular forest resources fieldwork began. Constant communication between the COVID team and employees in the early months of the COVID outbreak led to effective policies.

During August, as Alaska's fire season ended, the Response Team focused on supporting crews and staff on assignments in the Lower 48 (L48) as the fire season there escalated. The Response Team provided detailed information on mitigating risks when choosing assignments and traveling to the L48, following state mandates when returning to Alaska, and traveling safely and responsibly between L48 states. As the division experienced some COVID-19 exposures, the Response Team helped develop protocols to keep employees safe while serving the public.

The DOF staff assisted the Department of Natural Resources (DNR) with its DNR-wide COVID-19 mitigation plan. Final products included return-to-work and step-by-step procedures to guide DNR leaders if an employee tested positive or had a confirmed exposure to COVID-19. The final transparent and scientifically based plan helps to keep the workforce safe and informed during the pandemic.

The DOF continues to implement these plans to help ensure staff safety at the office, in the field for resources work, and on wildland fires. Tools, mitigations, and protocols developed are still being used; however, with the ever-changing landscape that the COVID-19 pandemic brings, the DOF is modifying and making improvements as needed, such as:

- Maintaining the DOF COVID-19 web page (http://forestry.alaska.gov/covid) with COVID-related information, updated travel guidelines, safety protocols, and technology assistance for all DOF employees.
- Maintaining a Continuity of Operations Plan for each area and facility in case an office must be shut down due to COVID-19 contamination.
- Continually updating and adding new information about mandates to the DOF COVID-19 Handbook and providing it via email and online. On December 10, the DOF made the 14th version of the handbook available to DOF staff and the public. It contains:
 - o Updated travel and social distancing guidelines for interstate and intrastate travel, based on the Governor's November 16 Health Orders No. 6 and 8.
 - o Instructions for facilities and offices, including social distancing, face coverings, and decontamination.
 - o Testing requirements and instructions for incoming Lower-48 firefighting resources.
 - o Testing and social distancing instructions for DOF staff and Emergency Firefighters returning from assignments in the Lower 48.
 - o COVID-19 evaluations such as screening and testing.
 - o Instructions for quarantine after confirmed exposure and for isolation if an employee tests positive.
 - Administrative instructions.
 - o Teleworking and technologytips.
 - o Links to other online resources.
- Developing and making available COVID-19 educational and safety messaging.
- Adapting COVID mitigations for continuing fieldwork for forest inventory and resources-related work.

The division will continue to maintain open communications with staff, partner agencies, the Alaska Department of Health & Social Services, and the Governor's Office. It will use new communications technology to share information and maintain connections between staff members. And the DOF will keep up to date with new mandates and the latest scientific information and guidelines.

B. Recreation & Forestry Partnership

The Board of Forestry's initiative to partner working forests with recreation interests was successful in obtaining a Recreational Trails Program (RTP) grant through DNR's Division of Parks and Outdoor Recreation (DPOR) for the Rosie Creek forestry road system. While recreation and timber proponents are sometimes at odds, the access that forest management provides can offer many benefits to outdoor recreationists, including mountain bikers, skiers, runners, snowmachiners, dog mushers, ATV users, and more. The Rosie Creek forestry roads within the Tanana Valley State Forest will be the division's pilot project. The RTP grant will provide road maintenance, improved parking and trailhead access, a map and information kiosk, directional and land ownership signs along the narrow and scenic forestry roads, and a link to an online GPS map of the road system. DOF has partnered with the Interior Alaska Trails and Parks Foundation to accomplish the work.

The Board of Forestry further strengthened its commitment to maximizing the sustainable public value of Alaska's State Forests and state lands classified for forestry by writing a letter of support for the Alaska Trails Initiative. (For details see: https://www.alaska-trails.org/alaska-trails-initiative.) The board supports the goals of expanding recreational uses that strengthen the state's economic and community health. The primary use of State Forest lands is forest management, which includes logging, thinning, and reforestation. At the same time, and matching the legislation that established State Forests, the board encourages smart multiple use management of State Forest lands that add value for all users, especially in providing improved motorized and non-motorized recreational access to public lands.

C. Compensatory Mitigation

The Board of Forestry set up a working group to address compensatory mitigation for stream crossings on forestry roads. Some project managers look outside their project area for opportunities to offset activities that affect fish passage. The BOF group aims to use GIS to locate culverts on forestry roads that do not adequately allow fish to pass and determine how much fish habitat would be gained by bringing the stream crossing up to fish passage standards.

Using this information, fish passage projects can be compared and prioritized. By partially preparing these potential projects and getting them approved by the Alaska Department of Fish and Game and Corps of Engineers, the board hopes that project proponents will choose forestry road culverts for compensatory mitigation.

D. Fire Prevention

The Division of Forestry has the statutory responsibility to protect all state, municipal and private lands throughout the state from threats posed by wildfires. Fire prevention is accomplished via public education and outreach, investigating all wildland fires under its suppression protection for origin and cause, and enforcing violations of the wildland fire protection laws under AS 41.15 and 11 AAC 95.

The main platform for public education outreach is DOF's "Take Time to LEARN Before You Burn" campaign, which focuses on a 10% annual decrease in human caused wildfires in major WUI zones. The campaign promotes a wide variety of fire mitigation platforms to all residents and businesses in Alaska, including FireWise; Ready, Set, Go; safe burning practices; DOF's small- and large-Scale burn permit program; fuels reduction; and Smokey Bear.

Staff mailed information about the LEARN Before you Burn campaign to 100,000 residents statewide in February and held eight public workshops and events before COVID-19 restrictions took effect. Events included homeowner association meetings, community focused fire prevention workshops, an interagency fire prevention law enforcement workshop, and a training class for a law enforcement agency.

Staff are developing virtual workshops on fire prevention, burn permit requirements, and open burning safety, and will mail information to licensed contractors and hunting and fishing guides throughout Alaska. They will also develop short video PSAs about the campaign and fire prevention, mail information to targeted audiences, and plan virtual and in-person presentations for other staff members, the public, and cooperators.

The Division's fire investigation program collaborates with a number of local, state and federal agencies using scientific techniques and methodologies to determine the origin and cause of all wildfires within the Division's protection areas. The program currently has 10 experienced investigators with several more in training. During times of high fire activity and on complex fires, additional qualified investigators are brought in from the lower 48. The Division also reciprocates with our federal partners and agencies in the lower 48 by providing qualified Division investigators to assist as needed.

The Division's enforcement program is currently composed of 16 Fire Prevention Officers who have been trained in wildfire law enforcement. These FPOs have the authority to issue written warnings and minor offense citations to parties found to be in violations of wildfire protection laws.

During the 2020 fire season, the program accomplished the following: achieved the 2nd year in a row of a 10%+ decrease in human caused wildfires; provided public education outreach to over 450,000 residents; issued over 15,000 small scale burn permits; issued 158 large scale permits; undertook over 250 prevention/compliance actions; issued 18 written warnings and no civil or criminal citations offense citations.

VI. BUDGET AND STAFFING

A. FY20 total funding

FY20 funding for core FRPA work remained at the same low level as FY19. Figure 3, below, shows the decline in funding over the last ten years. This funding for core forest practices work applies to forest practices field work, clerical support, and program management. DOF staff 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.

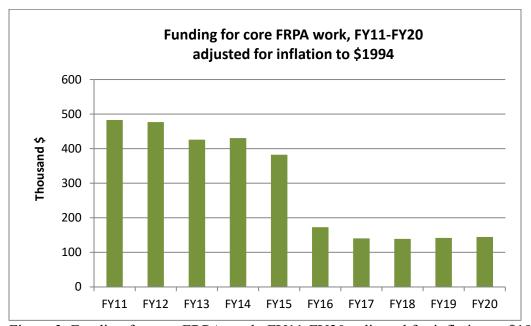


Figure 3. Funding for core FRPA work, FY11-FY20, adjusted for inflation to \$1994

B. Projected FRPA activity

In Southeast, activity is projected to be busy. Historic log prices precipitated by the COVID-19 building boom and market disruption have buoyed activity that was initially depressed due to tariff disruptions with China. Market anxiety defaulted to activity for most operations. The notable exception to this is Sealaska Timber's decision in early 2021 to exit active timber operations and log marketing. The migration of active operations under a FRPA structure to long term sustainable commitments is expected be a significant workload in the year due to the extensive land holdings under active management by

Sealaska. Activity has been steady in Yakutat for the second year in a row by Yak Tat Kwaan Corporation harvesting young growth. The DOF is seeing activity on all its sales sold and anticipates contract administration that includes FRPA oversight at three large timber sales adjacent to communities in 2021 as well as several smaller scale operations. The Mental Health Trust has sustained initial activity started in 2020 associated with their land trade and is poised for adding significant activity with the remainder of the new land base when it is finalized mid-year. The education of new operators and personal associated with all operations in Southeast is notable as staff has been turning over at a high rate.

The Division of Forestry conducted limited forest practices inspections on Kodiak and Afognak Islands due to the restrictions associated with the Corona virus. Active harvest operations on Afognak Island will continue into 2021 and beyond. Depending on fire activity and weather delays the Division typically makes six Forest Practices Inspections from March to November each year.

FRPA activity in the Mat-Su is projected to remain stable in 2021. Both the State and Borough released their Five Year Schedule of Timber Sales and are preparing to offer timber sales this year. There is potential/expressed interest in both Mat-Su and State timber sales in the lower Susitna Valley / Fish Creek area. If this interest becomes reality, or if there is renewed interest in the Borough's Chijuk sale, there would be increased FRPA activity in the Mat-Su.

FY21 projected funding. The Governor's proposed budget for FRPA implementation is flat for FY21.

C. Staff and organizational changes

In early 2020, both Northern and Coastal Region Forester positions were filled. The Northern Region Forester is Jeremy Douse, formerly Fairbanks-Delta Area Forester, and the Coastal Region Forester is Hans Rinke, formerly the Kenai-Kodiak Area Forester.

During 2020, DOF

- Promoted Hans Rinke from Kenai/Kodiak Area Forester to Coastal Regional Forester.
- Promoted Jeremy Douse from Fairbanks/Delta Area Forester to Northern Regional Forester.
- Promoted Diane Campbell from Wildland Fire Dispatcher III to Kenai/Kodiak Area Forester.
- Promoted Will Pace from Office Assistant II in Palmer to Accountant Technician II in Palmer.
- Promoted Christy Rambo from Accountant Technician II in Fairbanks to Administrative Officer I in Fairbanks.
- Hired Matt Stevens as Fairbanks/Delta Area Forester.
- Hired Andrea Fruean as an Accountant III in Palmer.
- Hired Stacie Ogden as an Accountant Technician II in Palmer.
- Hired Teresa Rose as State Logistics Coordinator in Fairbanks.
- Hired Jennifer Medl as Wildland Fire Dispatcher in Copper Center.
- One Forester I/II position and one Forester III position in Ketchikan were being recruited with possible selections in 2021.

Recruiting to fill vacant positions remains challenging. A combination of issues is leading to low numbers of applicants and low 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. Applicants are hesitant to accept employment offers due to the current contraction of the state budget and workforce.

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. DOF maintained sufficient field presence to implement the Act, and to conduct compliance monitoring on the low level of FRPA activity in 2020. DOF conducted 18 field inspections on private, municipal, and trust land this year, and issued no notices of violation. 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.

At current levels of funding, the effectiveness of the Act depends on a low level of current activity, experienced landowners and operators, and a high level of compliance. Potential increases in state timber sales and activity on new Sealaska and Mental Health Trust land are likely to increase FRPA activity. If the level of FRPA activity increases, if new operators that require additional training begin work, or if violations increase, effectiveness will be compromised at current staffing levels.

VIII. RESEARCH AND MONITORING PRIORITIES FOR 2021

The priority for 2021 is continued compliance monitoring in all three FRPA Regions and compliance monitoring training for new agency staff. For effectiveness monitoring, the interagency Effectiveness Monitoring Working Group was reconstituted in 2019 and met in January of 2021 to discuss projects and priorities. The group, which included representatives from DOF, ADFG, DEC, USFWS, USFS, and Sealaska, agreed on several high priority projects, and will continue to work cooperatively and share information.

2021 Effectiveness Monitoring Priorities

The following projects are all continuing efforts by agencies.

DOF, ADFG, DEC, USFWS and USFS: monitor implementation of best management practices to ensure clean water and fish passage, re-installing, retrofitting or removing crossings that do not meet passage standards in fish streams.

USFS & USFWS: monitor stream restoration projects.

USFS & ADFG: prediction of and effectiveness of riparian buffers and influence on windthrow adjacent to streams.

USFS: invasive plant species control, detection, and mitigation.

USFS: management of young growth riparian stands

ADFG, DOF, DEC & USFS: conduct road condition surveys, focusing next year on Sealaska lands as timber program is closed out. Future surveys should occur at East Icy Bay. Road and culvert information will be shared on ADFG fish mapper:

https://adfg.maps.arcgis.com/apps/MapSeries/index.html?appid=a05883caa7ef4f7ba17c99274f2c198f

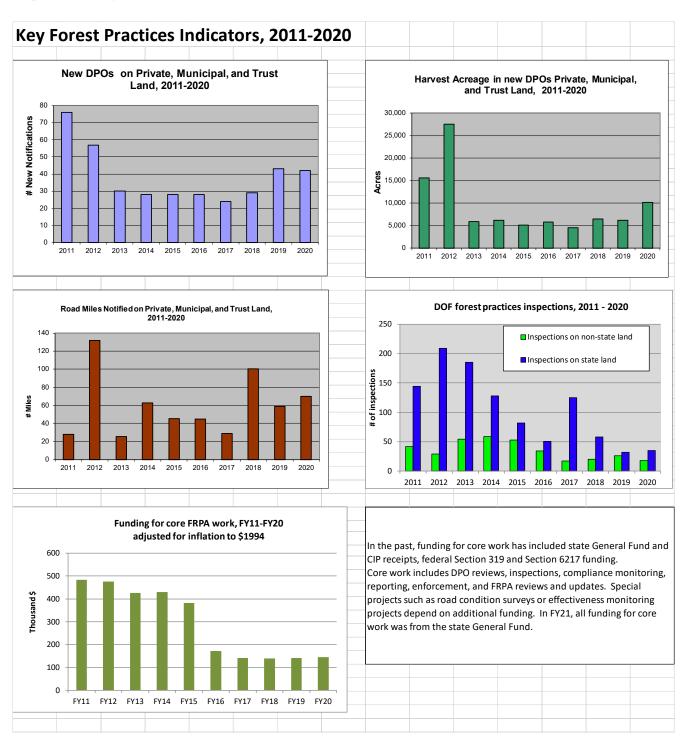
DOF's northern region: reforestation implementation standards and site preparation.

IX. ADDITIONAL TASKS AND INITIATIVES FOR 2021

In addition to ongoing FRPA implementation and enforcement work, and the items listed in section VII and VIII, specific DOF tasks for 2021 include the following:

- Recruit and train to fill staff vacancies as they occur.
- Implement Challenge Cost Share Agreements for young-growth inventory and work force development in Southeast.
- Implement Good Neighbor Agreements to provide forest management services on National Forest.
- Explore further opportunities for forestry & recreation partnerships on State Forest lands.
- Continue Forest Inventory and Analysis work.
- 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.
- Continue to work with the Governor's office on legislative initiatives that will increase the efficiency of forest management planning and create more opportunities to fund hazardous fuel reduction projects.

Figure 4. Key Forest Practices Indicators, 2011-2020



APPENDIX A.

2011-2020 FRPA ACTIVITIES ON PRIVATE, MUNICIPAL, AND TRUST LAND

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

Number of New Notifications (DPOs) for commercial operations

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	54	32	14	14	16	19	19	14	24	37
NSE	6	3	3	0	0	0	1	10	13	4
Mat-Su/SW	0	0	2	2	1	0	0	1	0	0
Kenai-Kodiak	11	13	7	8	6	7	2	3	5	3
COASTAL	71	48	26	24	23	26	22	28	42	44
Fairbanks	0	5	4	4	5	2	2	1	1	1
Delta	0	0	0	0	0	0	0	0	0	0
Tok	4	4	0	0	0	0	0	0	0	0
Copper R.	1	0	0	0	0	0	0	0	0	0
NORTHERN	5	9	4	4	5	2	2	1	1	1
TOTAL	76	57	30	28	28	28	24	29	43	45

Number of Notification Renewals

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	27	9	11	12	11	10	20	13	7	14
NSE	0	1	1	3	1	1	0	0	1	1
Mat-Su/SW	0	0	1	1	2	1	2	1	1	0
Kenai-Kodiak	6	4	8	4	0	4	4	7	5	0
COASTAL	33	14	21	20	14	16	26	21	14	15
Fairbanks	0	0	0	1	0	0	0	4	0	0
Delta	0	0	0	0	0	0	0		0	0
Tok	0	0	0	4	0	0	0		0	0
Copper R.	0	0	0	0	0	0	0		0	0
NORTHERN	0	0	0	5	0	0	0	4	0	0
TOTAL	33	14	21	25	14	16	26	25	14	15

Harvest Acreage in New Notifications Received

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	5,577	8,373	4,717	1,724	1,820	3,341	3,758	2,479	4,376	8231
NSE	2,241	6,379	40	0	0	0	0	863	961	880
Mat-Su/SW	0	0	131	154	160	0	0	1,646	0	0
Kenai-Kodiak	4,684	8,918	836	3826	2,831	2,387	691	1,460	841	1084
COASTAL	12,502	23,670	5,724	5,704	4,811	5,728	4,449	6,448	6,178	10,195
Fairbanks	0	161	174	269	299	128	79	29	29	45
Delta	0	0	0	0	0	0	0		0	0
Tok	2,940	3,685	0	208	0	0	0		0	0
Copper R.	205	0	0	0	0	0	0		0	0
NORTHERN	3,145	3,846	174	477	299	128	79	29	29	45
TOTAL	15,647	27,516	5,897	6,181	5,110	5,856	4,528	6,477	6,207	10,240

Road Miles Notified

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	28	15	15	16	18	28	20	22	36	38
NSE	10	16	0.3	0	0	0	1	36	14	12
Mat-Su/SW	61	64	0	0	0	0	0	9	0	0
Kenai-Kodiak	0	0	6	44	25	15	6	31	6	8
COASTAL	99	95	21	60	43	43	27	98	56	58
Fairbanks	0	6	4	2	2	2	2	3	3	7
Delta	0	0	0	0	0	0	0	0	0	0
Tok	27	31	0	1	0	0	0	0	0	0
Copper R.	1	0	0	0	0	0	0	0	0	0
NORTHERN	28	37	4	3	2	2	2	3	3	7
TOTAL	127	132	26	63	45	45	29	100	59	65

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	18	6	20	31	24	11	9	9	10	10
NSE	2	1	3	3	0	0	0	1	8	8
Mat-Su/SW	0	0	0	5	5	1	1	1	0	0
Kenai-Kodiak	21	21	29	20	21	16	7	6	4	0
COASTAL	41	28	52	59	50	28	17	17	22	18
Fairbanks	0	0	2	0	3	4	0	3	4	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.	1	1	0	0	0	0	0	0	0	0
NORTHERN	1	1	2	0	3	4	0	3	4	0
	2									
TOTAL	42	29	54	59	53	32	17	20	26	18

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

# FRPA Inspections Conducted on forest operations on private, municipal, and trust land - ADF&G											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Fairbanks	0	0	1	0	0	0	0	0	0	0	
Anchorage	16	12	15	15	15	11	10	3	1	0	
Prince of Wales	14	19	8	8	7	10	4	7	5	5	
Juneau/Douglas	4	2	6	2	1	2	1	0	3	2	
Kenai	3	10	1	2	1	0	1	0	0	0	
Mat-Su	1	0	0	0	0	0	1	2	0	0	
TOTAL	38	43	31	27	24	23	17	12	9	7	

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.

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 lcy 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											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
SE Region	0	0	0	0	0	0	0	0	0	0	
SC Region	10	12	18	18	3	3	0	0	0	0	
Interior Region	0	0	0	0	0	0	0	0	0	0	
TOTAL	10	12	18	18	3	3	0	0	0	0	

# FRPA Inspections (Conducted on forest operations of	on STATE land - DOF
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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	26	27	16	19	21	4	78	24	8	5
NSE	8	7	9	8	11	6	3	8	5	11
Mat-Su/SW	52	70	13	6	4	12	13	1	1	1
Kenai-Kodiak	29	24	9	18	8	1	3	0	5	0
COASTAL	115	128	47	51	44	23	97	33	19	17
Fairbanks	27	21	82	30	19	12	16	20	8	14
Delta	25	18	26	24	10	5	7	5	2	4
Tok	7	7	2	16	6	11	5	0	3	0
Copper R.	39	10	0	7	3	0	0	0	0	0
NORTHERN	98	56	110	77	38	28	28	25	13	18
			·							
TOTAL	213	184	157	128	82	51	125	58	32	35

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

# FRPA Inspections Conducted on forest operations on STATE land - ADF&G												
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Fairbanks	2	0	0	0	2	0	0	0	0	0		
Anchorage	0	0	0	15	0	0	0	0	0	0		
Prince of Wales	2	3	0	7	1	1	3	1	3	0		
Juneau/Douglas	3	0	0	0	0	0	2	0	0	0		
Kenai	1	3	1	0	0	0	0	0	0	0		
Mat-Su	0	0	0	3	0	0	0	1	0	0		
TOTAL	8	6	1	25	3	1	5	2	3	0		

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.

# FRPA Inspections Conducted on forest operations on STATE land - DEC											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
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	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	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											
# field days spent	t on FRPA I	nspectio	ns on all n	on-federa	al land -	DOF					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
SSE	19	29	33	50	33	10	85	38	7	15	
NSE	6	3	2	11	13	9	4	9	0	16	
Mat-Su/SW	23	39	11	17	10	19	10	18	1	1	
Kenai-Kodiak	109	71	51	44	53	38	25	20	20	0	
COASTAL	157	142	97	122	109	76	124	85	28	32	
Fairbanks	34	31	59	30	65	64	15	20	99	44	
Delta	33	18	15	24	0	20	4	12	18	8	
Tok	2	7	14	16	7	13	3	0	0	0	
Copper R.	76	11	0	19	1	0	0	0	0	0	
NORTHERN	145	67	88	89	73	97	22	32	117	52	
TOTAL	223	209	185	211	182	173	146	117	145	84	

# field days spent on FRPA Inspections on all non-federal land - ADF&G												
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
Fairbanks	2	0	1	0	1	0	0	0	0	0		
Anchorage	23	36	15	15	15	11	10	3	1	0		
Prince of Wales	14	22	8	15	14	11	7	8	8	2		
Juneau/Douglas	6	20	6	2	1	2	3	0	10	4		
Kenai	2	13	2	4	1	0	1	0	0	0		
Mat-Su	1	0	0	0	0	0	1	3	0	0		
TOTAL	48	91	32	36	32	24	22	14	19	6		

# field days spent on FRPA Inspections on all non-federal land - DEC											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
SE Region	0	0	0	0	0	0	0	0	0	0	
SC Region	20	36	18	13	3	2	0	0	0	0	
Interior Region	0	0	0	0	0	0	0	0	0	0	
TOTAL	20	36	18	13	3	2	0	0	0	0	

# Variation	requests received
	2011

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	1	1	4	5	3	3	2	2	0	0
NSE	0	0	1	0	0	0	0	0	0	0
MS/SW	0	0	0	0	0	0	0	0	0	0
Kenai-Kodiak	3	3	1	1	6	2	0	0	0	0
COASTAL	4	4	6	6	9	5	2	2	0	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	4	4	6	6	9	5	2	2	0	0

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

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	6	46	312	202	266	304	56	2	0	0
NSE	0	0	243	0	0	0	0	0	0	0
Mat-Su/SW	0	0	0	0	0	0	0	0	0	0
Kenai-Kodiak	294	678	41	80	458	4,353	0	0	0	0
COASTAL	300	724	596	282	724	4,657	56	2	0	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	300	724	596	282	724	4,657	56	2	0	0

^{*}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

Variation Trees Approved

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	6	46	272	195	239	286	48	2	0	0
NSE	0	0	237	0	0	0	0	0	0	0
Mat-Su/SW	0	0	0	0	0	0	0	0	0	0
Kenai-Kodiak	295	640	38	64	450	4,327	0	0	0	0
COASTAL	301	686	547	259	689	4,613	48	2	0	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	301	686	547	259	689	4,613	48	2	0	0
% approved	100%	95%	92%	92%	95%	99%	86%	100%	N/A	N/A

FRPA Notices of Violation Issued

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SSE	0	0	0	0	1	0	1	2	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	1	0	0	0	0	0	0	0
COASTAL	0	0	1	0	1	0	1	2	0	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	1	0	1	2	0	0

Acres Reviewed	for Reforestation	Exemptions

Acies iteviewed	ioi iveidies		Filipuolis							
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	1,201	114	0	67	0	60	0	159	484
COASTAL	0	1,201	114	0	67	0	60	0	159	484
Fairbanks	40	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	40	0	0	0	0	0	0	0	0	0
TOTAL	40	1,201	114	0	67	0	60	0	159	484

APPENDIX B: SUMMARY OF 2020 ENFORCEMENT ACTIONS

NONE	
ACTIONS INITIA	TED IN 2020
AS 41.17.136	Directives
NONE	

CARRY-OVER ACTIONS INITIATED PRIOR TO 2020

AS 41.17	Charging			
Case # NONE	Date initiated	Location	Issued by	Date of compliance

 $AS\,41.17.131\,Stop\,Work\,Orders$

NONE