



Alaska Department of Natural Resources

DIVISION OF FORESTRY

2019 Annual Report



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The mission of the Division of Forestry is to proudly serve Alaskans through forest management and wildland fire protection by:

- Managing a wildland fire program on public, private, and municipal land;
- Encouraging development of the timber industry and forest products markets;
- Conducting timber sales for commercial use, personal use, and fuel woods;
- Protecting water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act;
- Managing the Southeast, Haines, and Tanana Valley state forests, which cover a total of 2.1 million acres;
- Administering the federally funded Community Forestry, Forest Health Protection, and Forest Stewardship programs; and
- Giving technical assistance to owners and managers of forested land.

The State Forester’s Office is in Anchorage. The division has regional offices in Fairbanks and Palmer and other offices throughout the state. As of December 2019, the division had 28 full-time, 190 part-time/seasonal, and five non-permanent positions.



For online copy of annual report, go to <http://forestry.alaska.gov/overview>

Cover photo: Tustumena Lake Fire on the Kenai Peninsula initial attack on June 5. (Division of Forestry)
Right: Southeast Alaska forest.

ALASKA STATE FORESTERS

Earl Plaurde	October 1959 to June 1968
William Sacheck	July 1968 to June 1974
George Hollett	July 1974 to June 1976
Theodore Smith	July 1976 to April 1982
John Sturgeon	May 1982 to June 1986
George Hollett (acting)	July 1986 to February 1987
John Galea	March 1987 to May 1988
Tom Hawkins (acting)	June 1988 to December 1988
Malcolm “Bob” Dick	January 1989 to November 1992
Dean Brown (acting)	December 1992 to February 1993
Tomas Boutin	March 1993 to January 1997
Dean Brown (acting)	January 1997 to July 1997
Jeff Jahnke	July 1997 to July 2005
Dean Brown (acting)	July 2005 to October 2005
John “Chris” Maisch	October 2005 to present



STATE FORESTER'S COMMENTS



Alaska State Forester Chris Maisch with a morel mushroom, which are often found in boreal forests following a fire.

The focus of my forward to the annual report the past few years has been on the change and challenges we face as an organization. This year is no exception and once again I am impressed and grateful for the hard work and effort put forward by our division to help ensure communities and citizens of the state are provided wildland fire and forest management services as our core missions. This was no easy task as the state experienced 719 wildland fires that burned 2.58 million acres with several regions setting new records for high temperatures, low rainfall and fuel burnability characteristics.

The response was equally large with assistance coming from 49 states, Puerto Rico, and several Canadian provinces. There were numerous Incident Management Team assignments including 12 Type 1 and 2 incidents and 122 crews from the Lower 48 with 118 being Type 1 or Type 2 Initial Attack resources. The Alaska National Guard was mobilized and provided aviation, traffic control, and security services on various statewide incidents. Crew and staff mobilization centers were open at the University of Alaska Fairbanks and Anchorage campuses to facilitate the movement of resources to incidents around the state. This season was a long and difficult one and all the first responders and support staff should be commended for their individual and collective efforts. Job well done!

Another notable aspect of this fire season was the value of advance preparations to reduce risk around our communities. The Shovel Creek Fire on the outskirts of Fairbanks made use of a large landscape scale fuel break that ran along a ridge to successfully stop the advance of the fire into the community. Firefighters used the fuel break as an anchor point to burn out fuels in front of the advancing wildfire; essentially using “good fire” to stop “bad fire”. Fuel breaks were also utilized in the Swan Lake Fire on the Kenai Peninsula and smaller shaded fuel breaks were used in other incidents. The value of these pre-fire treatments and close attention by home and business owners who followed Firewise principals to reduce risk around their properties paid big dividends this season. While some structures were lost, thousands were protected with values of structures and land approaching a billion dollars.

Technology and the skills of our responders also played important roles in keeping the public informed as various social media platforms were utilized to provide information. On larger incidents the public meetings were frequently webcasted live, which increased attendance by hundreds of individuals. Some meetings had thousands of views as the public could watch on-line after the live event. A homeowner working in

Norway was able to keep tabs on the Shovel Creek Fire and gave the technology and use of it a “big thumbs up”. Other technologies used included drones to ignite planned burnouts, watch for spot fires along fire lines using infrared cameras, and to scout fire line and provide real time situational awareness to firefighters.

While much of the division was very focused on the fire season, our mission to actively manage state forestlands was maintained, and 31 separate timber sales were sold this year representing about \$2.3 million in revenue. The second Good Neighbor Authority (GNA) timber sale was sold on Gravina Island near Ketchikan. This GNA authority allows the division to manage federal lands in the Tongass National Forest in conjunction with state land in the southern Southeast State Forest. The combined sale volume was 16 million board feet. Work is also progressing on the roadless rulemaking process, where the state is participating as a cooperating agency with the U.S. Forest Service to craft a state specific rule for the Tongass National Forest.

Our forest health program and other staff continue to address the large spruce beetle outbreak that is ongoing in Anchorage, the Mat-Su Valley, and Kenai Peninsula. Hazard tree reduction projects in several state parks and on other public lands are helping to reduce risk, but much work lays ahead to address this outbreak.

Once again, I want to express my personal appreciation for all our employees' efforts to provide the full range of services to the citizens and communities of Alaska. You are a dedicated and professional workforce that I'm proud to be part of.

Alaska State Forester



*State Forester Chris Maisch on stump near Vallenar Road on Gravina Island in the Southeast State Forest.
(Tim Dabney)*

RESOURCE MANAGEMENT & DEVELOPMENT



ADFG biologists Greg Albrecht (left) and Bill Kane at Icy Bay. Greg is flying a drone over a log unit and adjacent stream. (Joel Nudelman)

2019 FOREST PRACTICES IMPLEMENTATION ON PRIVATE, MUNICIPAL, AND TRUST LAND

Notifications and Inspections

In 2019, the Division of Forestry (DOF) received and reviewed 43 new harvest detailed plans of operation (DPOs), 12 new reforestation/timber stand improvement DPOs, one new road closure/maintenance DPO, and 15 renewals for private, municipal, and state trust lands. New DPOs covered 6,208 acres and 59.22 miles of new forest road. The division conducted 26 inspections (including variation inspections) on private, municipal, and trust land and 32 inspections on state timber sales.

The number of DPOs reviewed, acres notified, and inspections on non-state land operations increased from 2018 to 2019. Most of the FRPA activity on private land occurred in the Southeast Area on Sealaska operations associated with their recently-acquired land selections, University of Alaska timber sale activity in Edna Bay, and the beginning of a new operation on Mental Health Trust land at Naukati and continued operations on their land at Icy Bay. The number of inspections on southeast state land during 2019 was half of 2018 but still active, with operations winding down at North Hollis and commencing at Gravina. Future sales were being prepared at Thorne Bay, Sumez Island, Kosciusko, and Whale Pass. Significant new road construction activity on Gravina Island began in 2017 and provided open access to the northern and western portion of the island.

The number of notifications and acres notified decreased in the Kodiak-Afognak area, as did inspections. There was a slight increase in FRPA activity on non-state land in Regions II and III, with a total of five DPOs in the two regions. Inspections in Region III on both private land and state land increased slightly from 2018 to 2019.

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.

Variations and Enforcement

For the first time in many years, there were no requests for variation for harvesting in riparian buffers in 2019. There were also no violations issued.

Compliance Monitoring

During 2019, DOF conducted compliance monitoring on all FRPA inspections. A rating of 5 means the best management practice (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 implementa-

tion rates in all regions. Overall, Region I averaged 4.5 out of 5.0 on the ratings, Region II averaged 4.5, and Region III scored 4.7. In Region I, 90% of all scores exceeded 4.0, as did 93.5% and 94% in Regions II and III.

Region I compliance was good, although there were individual BMPs that required corrective action. In Southeast, those BMPs were related to road drainage and adequate number of drainage structures. Improvements were noted from 2018 to 2019 in the BMPs associated with yarding near surface waters and classification of surface waters. Operators were quick to rectify all deficiencies as they were discovered. Active road maintenance and BMPs related to timber harvest were excellent. One training session was held in Southeast. Operations at Afognak and Kodiak were good regarding most BMPs. BMPs related to bridges will improve with the addition of bull rails and securing filter fabric on log stringers.

Region II had some activity with nine inspections, a three-fold increase from 2018. Compliance was good in most categories. Low ratings were noted in road drainage and road maintenance on one operation in the Mat-Su. There were no issues of note on the Kenai.

Region III had 100% compliance in 2017 for the first time ever but dropped to 82% for 2018 and up to 94% for 2019. The weather in the interior was drier in 2019 than in 2018, which contributed to higher scores. Attention was given to the Delta road system in the Tanana Valley State Forest during 2019 with an added lift to 2,000 feet of road in West Delta. Good grading and overall maintenance were noted throughout the TVSF. Previous year’s work on the Cache Creek bridge and Standard Creek road system are holding up well. High quality work has been the norm with logging contractors as well as the DOF equipment operator. One ice bridge crossing was successful. As usual, the TVSF road system receives heavy public use.

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 was reconstituted, and representatives from DOF, U.S. Forest Service, Alaska Department of Fish & Game, U.S. Fish & Wildlife Service, and Sealaska Corporation met in October to discuss projects and priorities. While there is much less

2016-2019 FRPA ACTIVITIES
ON PRIVATE, MUNICIPAL AND TRUST LAND
NOTE: Forest practices actions are reported on a calendar year basis

	NEW NOTIFICATIONS (DPOS) for Commerical Operations			
	2016	2017	2018	2019
SSE	19	19	14	24
NSE	0	1	10	13
Mat-Su/SW	0	0	1	0
Kenai-Kodiak	7	2	3	5
COASTAL	26	22	28	42
Fairbanks	2	2	1	1
Delta	0	0	0	0
Tok	0	0	0	0
Copper River	0	0	0	0
NORTHERN	2	2	1	1
TOTAL	28	24	29	43

	HARVEST ACREAGE IN NEW NOTIFICATIONS			
	2016	2017	2018	2019
SSE	3,341	3,758	2,479	4,376
NSE	0	0	863	961
Mat-Su/SW	0	0	1,646	0
Kenai-Kodiak	2,387	691	1,460	841
COASTAL	5,728	4,449	6,448	6,178
Fairbanks	127	79	29	29
Delta	0	0	0	0
Tok	0	0	0	0
Copper River	0	0	0	0
NORTHERN	127	79	29	29
TOTAL	5,855	4,528	6,477	6,207

	ROAD MILES NOTIFIED			
	2016	2017	2018	2019
SSE	28	20	22	36
NSE	0	1	36	14
Mat-Su/SW	0	0	9	0
Kenai-Kodiak	15	6	31	6
COASTAL	43	27	98	56
Fairbanks	2	2	3	3
Delta	0	0	0	0
Tok	0	0	0	0
Copper River	0	0	0	0
NORTHERN	2	2	3	3
TOTAL	45	29	100	59

ALASKA BOARD OF FORESTRY
MEMBERS

Chris Maisch, Chair, State Forester, Fairbanks
Bill Morris, Non-Governmental Fish/ Wildlife Biology, Fairbanks
Denise Herzog, Mining Organization, Fairbanks
Chris Beck, Recreation, Anchorage
Will Putman, Non-Governmental Forester, Fairbanks
Eric Nichols, Forest Industry Trade Association, Ketchikan
Mark Vinsel, Commercial Fishery, Juneau
Nathan Lojewski, Native Corporation, Anchorage
Chris Stark, Environmental Organization, Fairbanks

funding available for new research projects than in previous years, the group agreed on several high priority projects, some of which have good prospects for funding and opportunities for agency collaboration. The group agreed to meet every six months to exchange information and progress reports.

2020 Effectiveness Monitoring Proposals

- Road condition surveys, east Icy Bay. Lead: Joel Nudelman, DOF.
- Windthrow prediction in SE Alaska. Lead: Greg Albrecht, ADFG.
- Reforestation projects in Interior Alaska. Lead: Jeremy Douse, DOF.
 - Variant for Forest Vegetation Simulator. Monitoring silvicultural prescriptions.
 - Evaluating success of non-native species plantations.
 - Site preparation techniques for reforestation.
- Fish passage mapping, incorporating federal and state data. Leads: Neil Stichert, USFS and Joel Nudelman, DOF.

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 2019, which was approved for 159 acres.

Board of Forestry

The Board of Forestry launched an initiative to partner working forests with recreation interests. 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, snow machiners, dog mushers, ATV users, and others.

DOF identified the scenic Rosie Creek forestry roads within the Tanana Valley State Forest as a good location for a pilot project and submitted a grant proposal to DNR’s Division of Parks and Outdoor Recreation (DPOR). If awarded, the grant would fund 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 held agency and public meetings to determine the scope of the project and to insure buy-in from the local community. If DPOR awards the grant to the project, DOF will work with the Interior Alaska Trails and Parks Foundation to complete the work.

FOREST MANAGEMENT

Good Neighbor Authority Projects

The Good Neighbor Authority (GNA) program, established in 2014, allows the U.S. Forest Service (USFS) to enter into cooperative agreements or contracts with states to restore watersheds and provide forest management on National Forest System lands. The Alaska Region of the USFS and the Division of Forestry signed a GNA master agreement in November 2016.

Kosciusko Island Sale

The first sale under the agreement was the 30 MMBF Kosciusko Island GNA timber sale sold to Alcan Timber, Inc. in September 2017. The contract is set to end on December 31, 2023.

In 2019, activity began in the third quarter when Unit 3 was cleared for cutting operations. Alcan Timber requested a reduction of the contractual stumpage rate to advertised rates of \$36.67/MBF spruce pursuant to the contract due to tariffs imposed by China on June 1. The tariffs are the act of a foreign government, were not foreseeable at the time purchaser entered into the contract, and are beyond the control of the purchaser. The contract was amended on August 22 lowering stumpage rates to advertised and base rates, and harvest operations began on August 23. Stumpage rates will remain at advertised and base rates until the tariffs are lifted.

Vallenar Bay Sale

The reoffer sale package was compiled and publicly noticed the first week of January. The state received one bid at the end of January and awarded the sale to Alcan Timber Inc. on February 6. The purchaser and the state signed the contract later in February; no activity has occurred on the timber sale since the contract was signed.

Tongass Young Growth Federal Grant Project

DOF and the U.S. Forest Service are collaborating with Southeast communities and other partners through a Challenge Cost Share Agreement, signed in June 2015, to gather young growth information and increase economic opportunities for communities in both the short- and long-term. DOF is the lead partner in this effort, coordinating over \$5 million in federally funded activities. Work continued in 2019.

In the first quarter of 2019, DOF:

- prepared advertisements for three long-term, non-permanent, seasonal field positions,
- selected sample stands/plots and alternates for inventory of state forest lands,
- edited state timber type GIS coverage,
- planned the 2019 field season including logistics and workforce training needs, and
- developed sample protocols for the 2019 field season.



Roy Josephson measures large birch in Haines.
(Greg Palmieri)

In the second quarter DOF:

- hired three long-term non-permanent seasonal field positions,
- reviewed protocol and trained all personnel including U.S. Forest Service quality assurance personnel in proper sampling techniques and use of the SuperACE cruise program parameters,
- began sampling and completed 56 stands containing 560 plots, and
- created a GIS web mapping site displaying sampled stand volumes and plot tree attributes.

In the third quarter DOF:

- continued sampling in the southern Southeast State Forest and completed 56 stands containing 559 plots,
- updated the web mapping application for plot tree attributes and stand volume displays,
- processed completed stands in the SuperACE cruise program and stored results in a database, and
- began growth projection analysis of second growth stands.

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 projects how forests are likely to appear 10 to 40 years from now. This is especially important in Alaska where significant changes in temperature, permafrost, and plants are occurring and expected to increase. A suite of information items is sampled at each plot including trees, soils, plants, and woody debris. The plots are re-measured at 10-year intervals.

State field crews have successfully conducted the Interior FIA program for four 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. The Tanana Valley unit was completed in 2018 and now work is focused in the Susitna-Copper Unit. It is expected that this unit will be completed in mid-2020 when work will tran-



Edna Bay sort yard and log transfer facility with Forester Mike Cooney. Mike helped train field foresters in SE under the cost share agreement with the USFS. (Greg Staunton)

sition to the Southwest Unit. Here logistics and planning will be more complex as all the field hubs will be located off the road system.

In 2019, staffing included six non-permanent crew leads, 14 non-permanent crew members, two permanent coordinators, and two non-permanent assistant crew leaders. Most plots required a helicopter to access.

Tongass Young Growth Inventory

A second inventory project is funded by a Challenge Cost Share Agreement between the USFS State & Private Forestry and DOF. State crews have completed field work for this multi-year project and successfully inventoried 30,000 acres of second growth timber on the Tongass National Forest. In 2019 DOF used funds in southern Southeast to install 1,247 plots on state forest and general use lands ranging from Petersburg to Ketchikan and on Prince of Wales Island. A four-person crew accessed sites by boat and road and sampled stands across all timber types including old growth and young growth. The compiled dataset provides volume by species, sort and grade by individual sampled stand and strata. Current second growth timber volumes were processed through software to project future growth.

DOF will use the inventory data to develop a more refined Five-Year Schedule of Timber Sales and to assist in old growth management. Reconnaissance of future timber sales will be more targeted with a focus on volume metrics, quality, and operability. A web mapping application will be created that holds the new data and will be available to industry and the public to query the timber resources within this area of Southeast.

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.

DOF began work on the new State Forest Action Plan in late 2019 and it is due to be completed in June 2020. The first State Forest Action Plan was completed in 2010 and revised in 2016. A current plan 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 State 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 pulls 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.

ALASKA'S STATE FORESTS

Alaska's three state forests are managed for a sustained yield of a variety of resources.

Haines State Forest

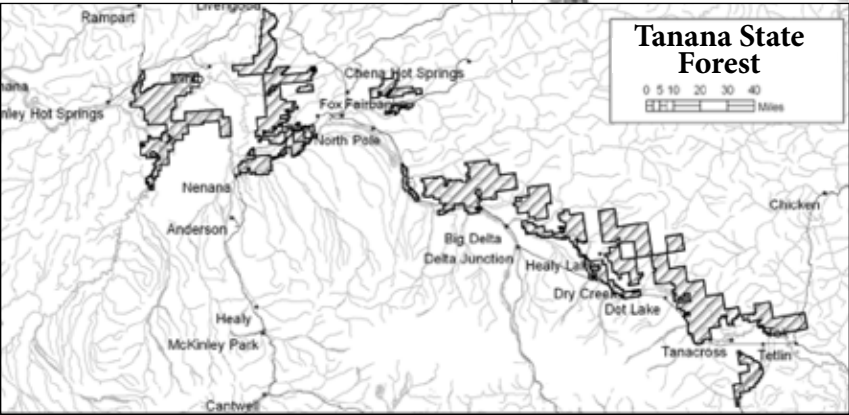
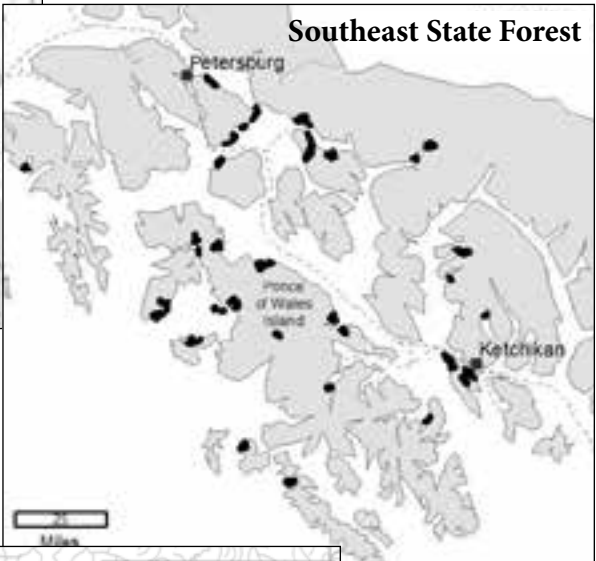
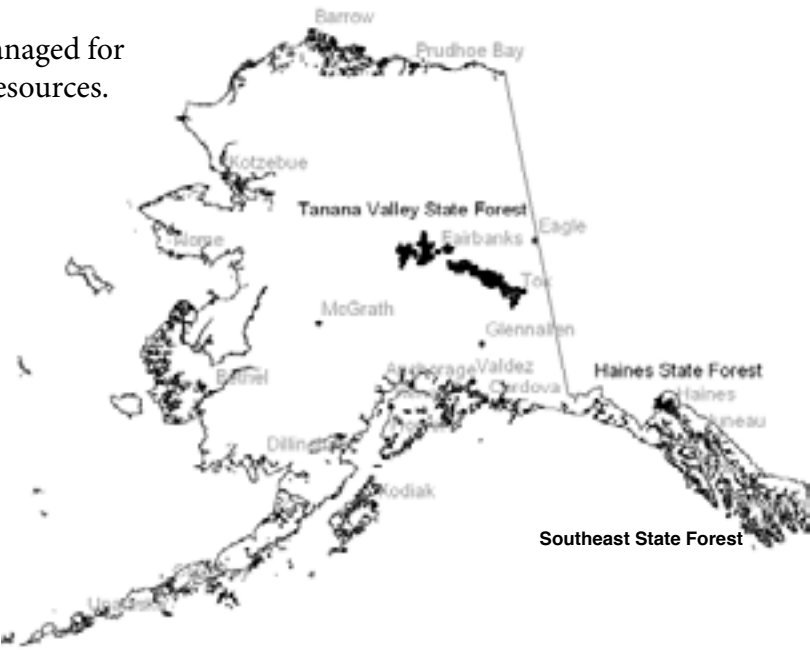
Established in 1982
286,208 acres

Tanana Valley State Forest

Established in 1983
1.78 million acres

Southeast State Forest

Established in 2010
48,472 acres



STATE LAND COMMERICAL TIMBER SALES
(MBF = 1,000 BOARD FEET, FISCAL YEAR 2019)

	Sales	Acres	Vol (MBF)	Sale Value
SSE	3	416.25	13,438.64	2,104,780.34
NSE	4	53.00	233.64	14,435.00
Kenai-Kodiak	4	43.00	152.33	8,150.00
Mat-Su/SW	0	0.00	0.00	0.00
COASTAL	11	512.25	13,824.61	2,127,365.34
Fairbanks	7	48.20	376.09	22,572.56
Delta	9	205.90	1,494.61	97,161.80
Tok	4	107.50	294.74	9,786.40
Copper River	0	0.00	0.00	0.00
NORTHERN	20	361.60	2,165.44	129,520.76
TOTAL	31	873.85	15,990.06	2,256,886.10



Birch firewood in the Mat-Su. (Patricia Joyner)

TEN-YEAR RECORD OF TIMBER VOLUME SOLD (MBF)

	Coastal: Southeast	Coastal: Southcentral	Northern Region	State Total	# Sales Sold Statewide
FY 10	4,626	2,460	5,445	12,531	69
FY 11	12,865	3,913	7,281	24,053	71
FY 12	8,556	1,260	7,739	17,555	50
FY 13	4,976	1,918	2,662	9,556	50
FY 14	8,512	379	19,621	28,512	58
FY 15	6,171	438	14,305	20,914	39
FY 16	401	50	7,864	8,315	34
FY 17	8,196	378	2,749	11,323	38
FY 18	5,269	206	2,477	7,952	22
FY 19	13,673	152	2,165	15,990	31

NUMBER OF
PERSONAL USE PERMITS

FY 16	911
FY 17	1070
FY 18	674
FY 19	890

TIMBER SALE REVENUE
(IN THOUSAND DOLLARS)

FY 10	249.8	FY 15	1,917.0
FY 11	461.6	FY 16	212.8
FY 12	555.3	FY 17	688.5
FY 13	682.3	FY 18	477.4
FY 14	354.0	FY 19	464.3

Note: Some sales are offered in cords, cubic feet (CCF), or tons rather than board feet. For comparison in these charts, all volumes have been converted to board feet using 1 cord = .9 CCF and 1.0 CCF = .42 MBF. Therefore, the total volume figures are approximate.

Units of measurement:
One board foot = the volume of a board 12 inches by 12 inches by one inch.
MBF = thousand board feet
MMBF = million board feet

HARVEST ACTIVITY ON STATE LAND (FISCAL YEAR 2019)

	Sales	Acres	Vol (MBF)	Stumpage Receipts
SSE	2	80.25	3,888.32	289,422.76
NSE	6	101.00	290.01	16,178.70
Kenai-Kodiak	4	43.00	152.33	8,150.00
Mat-Su/SW	0	0.00	0.00	0.00
COASTAL	12	224.25	4,330.67	313,751.46
Fairbanks	8	352.90	3,146.22	143,881.63
Delta	5	52.90	91.48	4,524.74
Tok	2	20.00	55.94	2,136.00
Copper River	0	0.00	0.00	0.00
NORTHERN	15	425.80	3,293.65	150,542.37
TOTAL	27	650.05	7,624.31	464,293.83



Coastal Region Forest Management

Southeast Area

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

The division completed the field work for inventorying the Southeast State Forest in 2019. The work was funded by a U.S. Forest Service State & Private Forestry grant through a Challenge Cost Share Agreement.

Most of the timber harvest activity on state land occurred early in the year on Prince of Wales Island associated with the Viking Mill in Klawock. The Area administered one large timber sale near Hollis and several smaller sales on the northern part of the island. Local small mill uses of the Haines State Forest timber remained strong.

DOF sold a 16-million board foot joint timber sale under the Good Neighbor Authority with the U.S. Forest Service on Gravina Island near Ketchikan. The sale, a combination of young and old growth timber, was made possible due to the access provided by the Vallenar Bay Road, which the state financed.

Declining activity and increased anxiety in the industry was reflected in Forest Practices notifications on public and private land as export markets weakened. For most of the year uncertainty associated with tariffs implemented by China depressed the market. This encouraged other suppliers in the Pacific Rim to displace U.S. suppliers and forced a surplus of third-party material into other markets, driving prices down. Tariffs directly affected the economics of hemlock and spruce. The most dramatic adjustment was in the young growth spruce market that was seeing growth prior to the end of 2018. Timber sales containing red cedar remained in relatively high demand.

The Southeast Area had another dry summer that led to drought conditions. There was noticeable mortality in the forest related to the cumulative environmental stress. A higher number of fires than normal was reported in this traditionally wet and fire-resistant area of the state.



*Top: Log decks at 39 Mile Haines. (Greg Palmieri)
Middle: Log processing at Icy Bay. (Greg Palmieri)
Bottom: Log processor on small sale in Coffman Cove. (Trevor Kauffman)*

Mat-Su & 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 Forestry's 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, while lands in Southwest Alaska are among the least populated and most remote.

There are currently two active state commercial timber sales and operators on a total of 105 acres in the Mat-Su. The area office sold a 45-acre sale this spring, 310 cords of personal-use firewood through online permits, and 64 negotiated personal use contracts for remote landowners in the Mat-Su Valley and Southwest Alaska.

A spruce beetle epidemic has killed significant numbers of mature white spruce throughout the Mat-Su Valley, from Anchorage north past Denali State Park. Two popular state park campgrounds, Byers Lake and South Rolly, were closed in 2019 due to the danger to users posed by the dead and decaying trees.

Mat-Su Fuel Reduction

Nancy Lake State Recreation Area: Work began on May 23 and continued as fire danger allowed through the fire season and into December. Mat-Su Area wildland fire & resource technicians and Gannett Glacier Initial Attack and Pioneer Peak Interagency Hotshot crews removed hazardous trees and burned slash for a total of 46 days, felling approximately 800 trees and disposing of 176.3 tons of biomass. Mitigation work focused on the South Rolly Campground loops, Redshirt Lake public use trail, and along Nancy Lake Parkway.

State Parks Hazardous Tree Mitigation: The Mat-Su Area used funds provided by the U.S. Forest Service to work with Alaska State Parks to prioritize areas for treatment and began work to reduce hazardous fuels and beetle killed spruce in three campgrounds. Contractors worked in Byers Lake, South Rolly and Montana Creek, and Mat-Su fire staff worked in Byers Lake and South Rolly before and after the busy fire season. They cut spruce and piled and burned slash in both campgrounds and at the Veterans Memorial near Byers Lake. The wood was offered for free to the public for firewood, likely contributing to the slightly reduced numbers of personal use firewood permits sold compared to last year.

For the year, state fire technicians at Byers Lake logged 390 work hours, burned 110 piles of slash (28.6 tons of biomass), and removed five hazardous trees from the Byers Lake Public Use Cabin #3.

Other fuel reduction projects are described on page 58 under National Fire Plan & Wildland Urban Interface Projects.



Brian Carver tends a burning slash pile at South Rolly Campground. Fire personnel removed hazardous trees and other fuels at South Rolly and Byers Lake campgrounds after a busy fire season. (Stephen Nickel)

Joint Base Elmendorf-Richardson Prescribed Burn

Ignition operations on the base were completed between April 29 and May 4, although they could have begun 30 days earlier due to an unseasonably dry spring; the ranges were snow-free by March 30. Seven ranges, totaling 1,554 acres, were burned.

Before the burn, representatives from all agencies attended an unexploded ordnance briefing. DOF facilitated the 72-hour, 24-hour, and day-of notifications and issued a public service announcement distributed on base by JBER Fire & Emergency Services.

DOF provided two type 6 engines staffed with firefighters, a utility terrain vehicle equipped with a fire suppression tank, suppression pumps, fuel, and other equipment. A DOF public information officer coordinated with the JBER public affairs officer. Having unified information staff on site to facilitate media needs and interviews allowed operations to continue without interruption. No accidents or injuries were reported, and training was provided for 10 JBER fire and emergency services personnel.



Top: Loading logs on Afognak Island. (Hans Rinke)
Bottom: Timber harvest on Afognak Island.
(Hans Rinke)

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 four timber sales in 2019. 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. Five Detailed Plans of Operations (DPOs) were submitted by operators for a total of 988 acres of proposed harvest in Region 2 (Kenai Peninsula).

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 about 35 million board feet in 2019 and operations are ongoing. The division processed two DPOs totaling 353 acres of proposed harvest, and two DPOs totaling 757 acres for pre-commercial thinning activities. The Area office makes field inspections on Kodiak and Afognak islands ensuring reforestation and ongoing operations meet Forest Practices Act requirements.

Kenai Peninsula Fuels Treatment

Funny River State Park Recreation Site: DOF seasonal staff worked on a grant-funded project to remove black spruce within frequently used State Park units on the central Kenai Peninsula. Work consisted of felling to a spacing of approximately 10 feet between trees and removing lower limbs. Slash was chipped and burned to improve access to developed sites for wildland fire response.

Izaak Walton State Park Recreation Site: This mitigation project focused on removing hazardous trees killed by spruce beetles in high traffic areas to increase safety for the public and reduce the fire hazard around the boat launch, campsites, and parking areas. Four wildland fire and resource technicians worked with State Parks employees through November.

Cooper Landing Quartz Creek Project: Late in the fall, three wildland fire and resource technicians worked for two weeks on a fuel reduction project designed by DOF's Forest Stewardship Program. The project focused on thinning and pruning lower limbs of mountain hemlock in a shaded fuel break southeast of Cooper Landing.

Northern Region Forest Management

The Division of Forestry supports and develops new opportunities and maintains the flow of timber to sustain the industry in interior Alaska. DOF also supports local value-added wood processors and jobs in its timber sale program. The division continues to identify and offer timber damaged by insects, floods, fires, and windstorms for salvage and sale. These sales are available for purchase in the Fairbanks, Delta, Tok, and Copper River areas, with access for harvesting year-round.

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 continue to produce wood pellets and pellet logs, which they distribute statewide. The Fairbanks-Delta Area produces the highest revenue and volume in the state 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.

Most saw log spruce goes 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. Pole and pulp timber go to Superior Pellet Fuels, the largest purchaser in the Interior, and newly opened Tok Biofuels, which has been producing compressed fire logs for nearly a year.

The division and other agencies provide information to communities 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 from burning wood.



Northern Region Forester Paul Keech
retired in December 2019.

The year ended with a major change in the region as Northern Regional Forester Paul Keech retired. Paul began his career with the division as an emergency firefighter in Tok and member of the Tazlina Hotshots in the 1990s. He was hired in a permanent position as a wildland fire and resource technician in 1997. Paul also held jobs as a dispatcher, an inventory forester, and the Fairbanks-Delta Area Forester. Paul's commitment to quality and personal and professional integrity over the years will be missed.

Fairbanks-Delta Area

Commercial timber continues to be sustainably harvested throughout the Fairbanks and Delta areas and there are over 70 active timber contracts with 25+ operators on state land. Demand for saw logs remains stable and Northland Wood Products remains the primary purchaser, processing approximately three million board feet annually. Superior Pellet Fuels leads in the purchase of pole timber and fuelwood, producing about 3,000 tons of pellets annually.

Personal use firewood sales declined in 2019. The Fairbanks Area sold 206 permits for a total of 758 cords and Delta Area sold 26 permits for a total of 96 cords.

Regeneration surveys continue every spring in the Fairbanks-Delta Area. In 2019, 40,000 seedlings were planted in the Rosie Creek and Standard Creek areas of the Tanana Valley State Forest. Scarification is a common post-harvest treatment to promote natural regeneration.

Road work and maintenance are an ongoing need and operators and Forestry staff work on road projects annually to ensure access to the state forest. In 2019 the Cache Creek bridge abutments were replaced, approaches were modified, and rip rap was installed to reduce scour in the future. The Area plans to repair the Fortune Creek bridge next year and upgrade Standard Creek roads through a reimbursable services agreement with ADF&G. In Delta a new material site was developed on the west side of the Delta River to support road upgrades on the Delta West and Delta Creek forest roads.



Tanana Valley Watershed Assn., Fairbanks North Star Borough Parks & Recreation Department, Fairbanks Arbor Day Committee and Fairbanks Soil & Water Conservation District representatives pose with a cherry tree in the future home of Tanana Valley Orchard in May, outside the Carlson Center in Fairbanks. (Tim Mowry)

Tok-Copper River Area

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

Nick Carter was hired as Tok Area Forester and started work on May 30. During the first few months he was engaged in the above-average fire season, but as the fire season slowed, he turned to timber sales and to learning more about the policies and procedures of the division.

The highest demand for raw materials from state lands remains fuel wood, 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 fuel wood is the top requested resource there as well. Six operators harvested primarily fire-killed spruce for fuel wood with some value-added products in the Tok area. The value-added products were primarily for cabin kits.

The Tok Area Five-Year Schedule of Timber Sales was revised and adopted this year. The Alaska Gateway School District purchased one of the hazardous fuel reduction sales in the schedule. The sale was originally offered at auction but not sold, then offered over the counter where the district purchased it to ensure a continuous supply of chips for the school's boiler. Previously, chips came from hazardous fuels reduction grants and other private sources, which are sporadic with no guarantee of an ongoing supply. The school district plans to harvest 20 acres a year from the sale and evaluate this option for future resource needs.

Area staff responded to interest in timber sales and personal use firewood in the McCarthy area and visited last summer. DOF will work with individuals and other DNR divisions to accommodate these requests per state policy.



Top: Children from Tetlin pose with Smokey Bear and DOF Prevention Technician Jenny Moser in May. (Ted Morris)
Bottom: White spruce seedlings ready to be planted. (Patricia Joyner)



Top: Extensive birch leafminer damage (brown leaves) visible across the lower Matanuska-Susitna Valley. Damage occurs late in growing season and is primarily aesthetic. (Jason Moan)
Bottom: Forest Health Forester Martin Schoofs measures diameter on potential study tree for tree protection research trial in Denali State Park. SPLAT-MCH is being tested as potential tool to protect trees from spruce beetle attack. (Trevor DoBell-Carlsson)

COOPERATIVE FORESTRY PROGRAMS

The Community Forestry, Forest Health, and Forest Stewardship programs provide technical and financial assistance to diverse landowners and managers through cost-effective, non-regulatory partnerships. The programs are 100% federally-funded through grants from the U.S. Forest Service.

Economic impact

Over one million dollars in federal funds are infused annually into the state economy through these programs. In addition, local governments, agencies, and nonprofits contribute matching funds to projects. The economic impact of the technical and financial assistance to Alaska Native corporations, other private forest land owners and businesses, boroughs, local governments, and college campuses is difficult to quantify but is substantial.

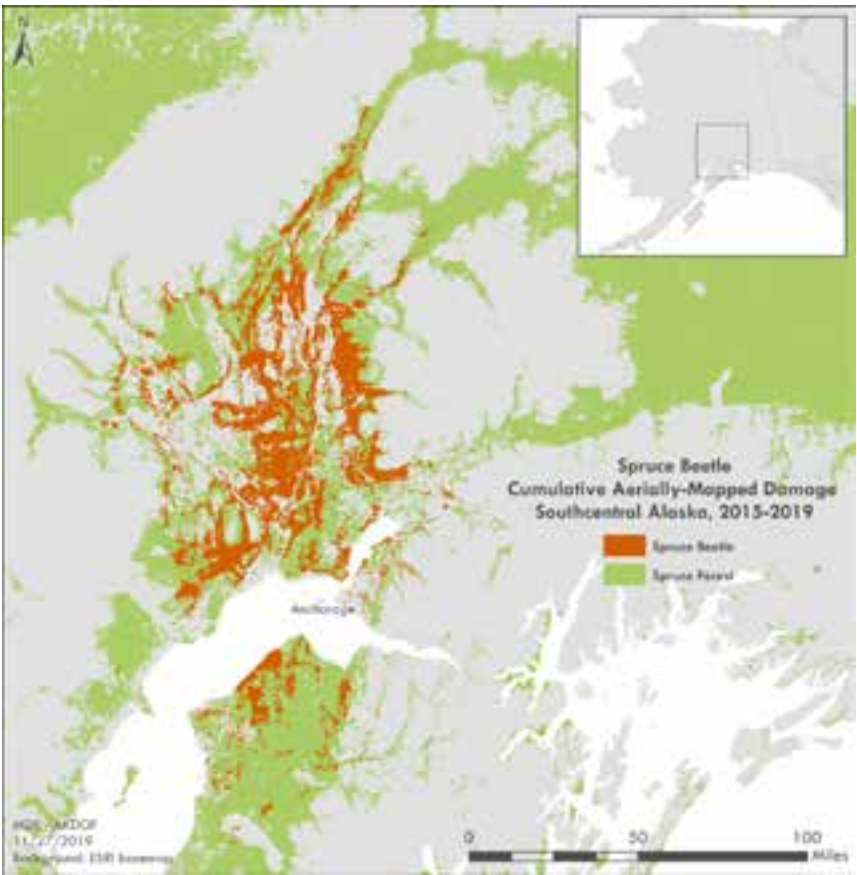
Forest Health Program

The Division’s Forest Health Program, in cooperation with U.S. Forest Service Forest Health Protection (USFS-FHP), is a key component of the forest health protection strategy in Alaska and includes both aerial and ground surveys. Aerial detection surveys occur across all land ownerships and cover about 15% of forested areas in the state each year. Aerial detection surveys are an indispensable tool in documenting the location and extent of many active forest insect infestations, abiotic damage events, and some disease damage. The data recorded from these surveys offer a snapshot of statewide conditions though they generally do not represent the acres affected by pathogens, many of which are not readily visible by aerial survey.

Although DOF Forest Health personnel are involved in all facets of forest health in the state, the focus is on forest insects and aerial detection surveys. More detailed information pertaining to surveys and monitoring efforts for forest insects, tree diseases, invasive plants, and abiotic disorders is included in the annual report, Forest Health Conditions in Alaska, published by USFS-FHP in collaboration with DOF and others.

Outreach

In 2019, DOF Forest Health staff connected with an estimated 800 individuals to provide forest health assistance or information. The number of requests continues to grow, mainly due to the ongoing spruce beetle outbreak in Southcentral Alaska. These numbers include Forest Health staff participation in six news media interviews related



Map of the area impacted by spruce beetles in Southcentral Alaska, 2015-2019, as observed during annual aerial forest health detection survey. Surveys cover a portion of the state’s forests and it is likely that additional spruce beetle damage exists adjacent to the mapped areas.

to the spruce beetle outbreak, spanning on-camera, radio, digital, and print media.

Forest Health staff also co-hosted public workshops in Palmer and Cooper Landing and presented in a public workshop led by the University of Alaska Fairbanks Cooperative Extension in Anchorage. The workshops addressed spruce beetle biology, status, mitigation, and damage restoration. DOF Forest Health, Forest Stewardship, and Area staff participated in the events. Additional workshops are in development.

Research

Forest Health staff have been heavily involved over the last two years in projects to evaluate potential new tools to assist residents in protecting their trees from spruce beetle-caused tree mortality. Two such research efforts occurred in 2019: a systemic pesticide trial and an anti-aggregation pheromone (MCH) trial evaluating SPLAT-MCH (ISCA Technologies, Inc), a biodegradable paste impregnated with spruce beetle anti-aggregation pheromones. Both projects are being conducted in partnership with the USFS Pacific Southwest Research Station and USFS-FHP.

Systemic pesticides are those that move throughout the tree via the tree’s vascular system; in the research project listed, the chemicals were injected directly into the tree. Pheromones, on the other hand, are a form of chemical communication employed by insects and other animals. Spruce beetle anti-aggregation pheromones are those that the beetles emit to suggest to other beetles that a given tree is essentially “full”, causing incoming beetles to go elsewhere. In some forest systems, synthetic bark beetle anti-aggregation pheromones have been shown to repel beetles from treated trees.

The systemic insecticide trial is a three-year project that began in 2018 with the study trees initially challenged by beetles in 2019. The success of the treatments will be assessed in the spring of 2020. The SPLAT-MCH trial is a one-year project initiated in 2019 as part of a larger effort testing this product against spruce beetles in both white spruce and Engelmann spruce forest systems in the Lower 48. Treatments in Alaska were applied in early May 2019 and results will be determined in the spring of 2020.

The results from a separate MCH-based tree protection research project completed in 2018, in partnership with the USFS Rocky Mountain Research Station, were published in the Journal of Economic Entomology in 2019. The publication is available online and by request; the MCH-based treatments tested in this study were not found to effectively protect white spruce from spruce beetle attack in Alaska.

Surveys Overview

In 2019, DOF and USFS-FHP staff mapped about 1.14 million acres of forest damage on the 24.42 million acres surveyed. (see table on page NUMBER) The area of damage observed in 2019 was nearly equivalent to that observed in 2018, though on considerably fewer acres surveyed (28 million in 2018). It includes damage from insects, diseases, and abiotic agents.

State Forest Survey Summaries

Each year, aerial detection surveys cover portions of the Tanana Valley, Haines, and Southeast state forests. In 2019, about 46,500 acres of damage were noted within or partially within the three forests, with the majority occurring within the Tanana Valley State Forest (~37,600 acres). The top three damage types, in terms of acres affected, for each forest are listed below; all acreages are rounded:

Tanana Valley State Forest (approximately 34% surveyed): Aspen leafminer (33,600 acres), willow leafblotch miner (2,100 acres), and spruce beetle (1,200 acres). Northern spruce engraver activity observed within the state forest has continued to drop from previous years, as did acres affected by spruce beetles.

Haines State Forest (approximately 41% surveyed): Unknown hardwood defoliation (3,000 acres), flooding-related tree mortality (85 acres), porcupine-caused damage (40 acres). Scattered spruce beetle activity has been ongoing for several years around Haines, though none was mapped this year (120 acres in 2018).

Southeast State Forest (approximately 55% surveyed): Hemlock sawfly (5,400), yellow-cedar decline (275 acres), porcupine-caused damage (50 acres).

Bark Beetles

Spruce beetles: Spruce beetle activity was observed on about 139,500 acres in 2019, a 76.4% decrease from that observed in 2018 (590,000 acres). However, the ongoing spruce beetle outbreak in Southcentral Alaska, first detected in 2016, continued to expand outward from its previous extent. The cumulative area impacted by spruce beetle in Southcentral Alaska since the outbreak began is estimated at 1.1 million acres. (See map of cumulative damage 2015-2019). As the outbreak has progressed and the most severely affected areas approach near exhaustion of susceptible white spruce, beetle attacks have shifted more heavily into black spruce. In the Matanuska-Susitna Borough,

the most heavily affected area in the current outbreak, spruce beetle activity was documented within roughly 20,000 acres of black spruce forests in 2019.

In the Matanuska-Susitna Borough, notably in the Susitna River valley and adjacent drainages, 113,418 acres of spruce beetle damage was mapped. The northwestern Kenai Peninsula continues to see notable spruce beetle damage, though substantially less than in 2018 (7,500 acres in 2019 and 52,000 acres in 2018). Mapped spruce beetle damage increased considerably in the Municipality of Anchorage (5,200 acres).

DOF Forest Health surveyors partnered with Joint Base Elmendorf-Richardson (JBER) to conduct a comprehensive aerial survey of spruce beetle damage on the forested portions of the base. Lands on JBER are not typically included in the annual aerial surveys and as such, adding the survey this year resulted in more extensive survey coverage within the Municipality of Anchorage than in previous years.

Northern spruce engraver: NSE-caused mortality was mapped on 1,100 acres, down from 1,600 acres in 2018. This marks the lowest observed NSE damage since 2003.

Defoliating Insects

In 2019, approximately 839,000 acres of damage observed during the aerial detection surveys was attributed to defoliating insects. Approximately 93% of these defoliation acres can be attributed to three insects/insect groups: hemlock sawfly (381,000 acres), birch leafminers (282,000 acres), and aspen leafminers (132,000 acres). Fortunately, these defoliating insects are not typically tree killers.

Southeast Alaska experienced the second year of a hemlock sawfly outbreak, which increased in intensity and extent since 2018. Areas of intense defoliation include Prince of Wales, Mitkof, and Kupreanof islands. Generally, outbreaks of this native insect are sporadic and limited in duration.

A special late season aerial survey was conducted to document the extent of birch leafminer activity in the state as the damage is not readily visible during the typical aerial survey timeframe. As a result of the special survey, outbreaks of birch leafminers, which consist of two non-native sawfly species, were confirmed in several parts of Southcentral and in and near Fairbanks. Aspen leafminer activity was down considerably from previous years (240,000 acres in 2018).

Other Forest Damage

Spruce needle rust damage was prevalent in many areas of the state this year (116,250 acres). Most notably, an extensive outbreak along the Nushagak River west into parts of Wood-Tikchik State Park was documented in Southwest Alaska during aerial surveys. This tree disease rarely causes mortality.

Additionally, the invasive balsam woolly adelgid (BWA) was detected in Juneau, marking the first detection in Alaska of this damaging pest of true firs. A delimiting survey to determine the extent of BWA in Juneau was conducted jointly by DOF Forest Health, Alaska DNR Division of Agriculture, and USFS-FHP in late fall. DOF Forest Health has obtained funding for eradication efforts.

Table 1. Forest insect and disease activity detected during aerial surveys in Alaska in 2019 by land ownership and agent. All values are in acres¹.

Category	Agent	Total Acres	National Forest	Native	Other Federal	State & Private
Diseases	Spruce needle rust	116,232	76	6,478	380	109,298
	Alder dieback	1,222	0	121	386	715
	Spruce broom rust	559	0	203	95	262
	Dothistroma needle blight	346	65	0	184	97
Defoliators	Hemlock sawfly	381,034	322,895	13,596	1,469	43,075
	Birch leafminer	281,888	1,584	13,313	77,677	189,314
	Aspen leafminer	132,084	0	25,664	19,316	87,104
	Willow leafblotch miner	31,761	0	11,845	10,556	9,360
	Hardwood defoliation	3,890	41	419	825	2,605
	Alder defoliation	2,597	270	68	467	1,792
	Birch defoliation	1,526	18	2	170	1,337
	Cottonwood defoliation	1,180	277	6	37	861
	Spruce aphid	976	509	217	0	250
	Willow defoliation	895	0	98	74	724
	Cottonwood leaf beetle	473	2	0	387	84
	Aspen defoliation	364	0	26	114	223
	Spruce defoliation	58	0	0	58	0
Mortality	Spruce beetle	139,502	235	6,001	19,058	114,208
	Northern spruce engraver	1,071	0	99	24	948
	Western balsam bark beetle	106	22	0	3	81
	Aspen running canker	71	0	11	4	56
Noninfectious and Miscellaneous Damage	Yellow-cedar decline	19,995	17,542	985	90	1,379
	Winter damage	8,655	0	0	8,655	0
	Drought	2,596	0	5	2,137	454
	Porcupine damage	1,858	226	1,489	0	143
	Flooding/high-water damage	1,578	43	2	1,302	231
	Willow dieback	550	0	161	218	171
	Windthrow/blowdown	431	184	31	206	10
	Hemlock flagging	289	283	0	0	6
	Western redcedar topkill	99	38	43	0	19
	Landslide/avalanche	13	0	0	0	13

Forest Stewardship Program

The goal of the Forest Stewardship Program is to provide landowners with professional technical forestry assistance to help guide their decisions about how to manage their forest land. Landowners have a variety of goals for their land, including wildlife habitat improvement, privacy, scenery, firewood production, and leaving a legacy for future generations.

Funded by the U.S. Forest Service State & Private Forestry, the program responds to the requests of landowners to prepare forest stewardship plans and includes field visits and the latest technical forestry advice. Forest stewardship plans often address forest health issues, reforestation, timber stand improvement, and defensible space from wildfire.

Alaska Native Corporations are the largest private landowners in Alaska and are provided sub-grants to allow them to hire private consulting foresters who prepare the plans. Individual private landowners receive plans written primarily by DOF stewardship foresters.

The Forest Stewardship Program receives guidance from the Forest Stewardship Committee, which is comprised of representatives from a broad range of Alaska private landowner and land management interests. Areas of discussion include grant and cost-share rates, eligibility criteria, outreach methods, and forest stewardship plan requirements. The committee was convened via email once in 2019 to vote on an issue and will be convened in person in 2020.

2019 Highlights

- Two Alaska Native corporations were awarded sub-grants to begin developing forest stewardship plans that will cover more than 86,000 acres.
- Five Native corporations completed work on plans covering more than 216,000 acres.
- Four other Native corporations are in the process of developing forest stewardship plans.
- 71 forest stewardship plans, covering more than 1,600 acres, were prepared for individual forest landowners.
- More than 110 homeowners completed wildfire fuel reduction projects using cost-share grants.
- Forest Stewardship personnel provided Firewise education and information to more than 200 homeowners.

Planning by Alaska Native Corporations

Alaska Native corporations are the largest private landowners in Alaska and an important part of the Alaska Forest Stewardship Program is to provide planning sub-grants to these corporations. Important goals of Alaska Native corporations in 2019 were biomass energy development, commercial timber production, enhancing forest health, forest resilience, wildlife habitat, and reforestation.



Smoke during the Deshka Landing fire. Forest Stewardship Program Manager served as resource advisor to create plan to repair damage caused by heavy equipment during fire suppression. (Trevor DoBell-Carlsson)

¹ Acre values are only relative to survey transects and do not represent the total possible area affected. Table entries do not include many diseases (e.g. decays and dwarf mistletoe), which are not detectable in aerial surveys.



Cabin perched above Willow Creek on a 96-acre property that has a Forest Stewardship Plan to help mitigate the spruce beetle outbreak. Dead white spruce can be seen on the hillside. Over 90% of white spruce in this area, leading up to Hatcher Pass, died. (Trevor DoBell-Carlsson)

Since the inception of the Stewardship Program in 1992, 66 forest stewardship plans covering 7,248,413 acres have been written for Alaska Native corporations; plans expire after 10 years, meaning that 3.3 million forested acres are currently being sustainably managed with guidance from a professionally written forest management plan. These stewardship plans help guide sustainable timber development and commercial operations, bringing economic benefits to Native villages in addition to helping restore logged areas for traditional land values.

Planning by Individual Landowners

Stewardship plans covering more than 1,600 acres were prepared for 71 private landowners in 2019. Wildfire defensible space, spruce beetle mitigation, and reforestation were primary goals for individual landowners.

Since 1992, 1,046 individual landowners have adopted forest stewardship plans covering a total of 52,831 acres. Most stewardship plans are for landowners in the Matanuska-Susitna and Kenai Peninsula boroughs.

Cost-Share Assistance

The Forest Stewardship Program advises on ways to mitigate the risk of wildfires to private forest landowners. Cost-share funding for hazardous fuel reduction practices comes from the Council of Western State Foresters wildland urban interface (WUI) fuels reduction grants. In 2019, DOF staff performed final inspections for more than 110 homeowners with grant payments of over \$120,000 to reduce hazards through the strategic removal or pruning of spruce near structures. More than 200 additional homeowners received education and literature about the importance of defensible space. Program personnel attended multiple outreach and community events to educate the public on wildfire preparedness and forest management.

WUI grants are an important outreach method for increasing participation in the Forest Stewardship Program and are used to increase the conservation education delivered by the Division of Forestry.

Competitive Grant Projects

The Forest Stewardship Program applies yearly for USFS Wildland Urban Interface Grants. In 2019, the Forest Stewardship Program began implementing a WUI grant aimed specifically at the Matanuska-Susitna Borough that allows for pass-through grants to a small number of homeowners to incentivize hazardous fuel reduction to protect communities from wildfire. This increases the ability of Program personnel to contact private forest landowners and deliver educational programs and outreach in an area with a high risk of wildfire. In addition to reducing hazardous fuels, these grants allow DOF to provide community outreach programs, forest stewardship plans, and wildfire preparedness and prevention education.

John Winters, the Stewardship Forester for the Kenai Peninsula, Kodiak Island, and surrounding remote communities, oversees a similar grant specifically for Cooper Landing, and has had success with federally funded WUI grants for the broader Kenai Peninsula as well. John has done extensive work under these grants to help homeowners understand the importance of hazardous fuel reduction and spruce beetle mitigation. The spruce beetle outbreak that is plaguing the Matanuska-Susitna Borough and Municipality of Anchorage is also affecting the Kenai Peninsula, and some of John’s funding is aimed at improving the health of the residual forest on private properties following the spruce mortality caused by the insect.

WUI grants are currently helping DOF staff set up cost-sharing grants with homeowners in Fairbanks and Delta Junction. Alaskan landowners from the Kenai to the Interior are receiving cost-sharing assistance to help reduce hazardous fuels and protect homes.

Forest Stewardship Staff

The Forest Stewardship Program manager statewide is Trevor DoBell-Carlsson. Trevor assists Native corporations statewide with their forest stewardship goals, and, as time allows, assists individual landowners in the Matanuska-Susitna Borough and the Municipality of Anchorage. Jim Smith is the Stewardship Forester for Fairbanks, and John Winters is the Stewardship Forester for the Kenai Peninsula, Kodiak Island, and remote villages in the vicinity. Stewardship Foresters also participated in various wildfire assignments in 2019, for a total of more than 50 days of staff time.

Community Forestry Program

Trees and greenspaces confer many health, social, economic, and environmental benefits and the Community Forestry Program helps communities enhance these benefits through effective management. Supporting community forestry is an important role for state government because:

- Community forests provide essential services and benefits that we cannot live without;
- A healthy community forest is the result of proper planning, management and community investment;
- Healthy community forests can help solve community problems; and
- Community forests and rural forests are connected and good management of one helps the other.

Two program staff, funded through a partnership with the U.S. Forest Service, offer technical and educational assistance to local governments, state and federal agencies, tree care professionals, and nonprofit organizations. The Alaska Community Forest

2019 FOREST STEWARDSHIP COMMITTEE MEMBERS

Clare Doig
Consulting Forester, Anchorage
Dan Parrent
USDA Forest Service State & Private Forestry, Anchorage
Tom Dearlove
Kenai Peninsula Borough, Soldotna
Will Putman
Tanana Chiefs Conference, Fairbanks
Conor Reynolds
The Nature Conservancy, Juneau
Jeff Curry
Farm Service Agency, Palmer
Jeff Smeenk
Palmer Soil & Water Conservation District, Palmer
Sue Rodman
Alaska Department of Fish & Game, Anchorage
Lee Hecimovich
Mat-Su/Copper River Cooperative Extension Service, Palmer

Council helps set program priorities and provides expertise and advice to the division. The fifteen-member council represents the diversity and broad spectrum of interests and experiences in the state, and the members are valuable partners in local community forestry efforts.

Staff Changes

In 2019 the Community Forestry Program said goodbye to Stephen Nickel who, fortunately, didn't go far. After many years as the Community Assistance Forester Stephen accepted the position of DOF's Mat-Su/Southwest Area Forester. He will be missed in communities around the state.

Bryan Quimby with the Gannet Glacier fire crew assisted in January and February and Janice Nyman stepped in from April to June. On October 1, the division welcomed Josh Hightower as the new Community Forestry Assistant. Josh had worked at the Center for Environmental Management of Military Lands at Joint Base Elmendorf Richardson. He's a graduate of the University of Idaho where he earned a degree in Ecology and Conservation Biology.



Opportunities for Lifelong Education (OLE) learners participate in tree planting class led by arborist Patricia Joyner at UAA in June. The three trees planted were donated by arborist and former Alaska Community Forest Council member Pat Leary. UAA students and employees also attended the planting celebration.

Community Assistance

Community Orchard and Food Forest Grants: The Community Forestry Program (CFP) provided seven grants for the testing and demonstration of fruit trees that can be grown in Alaska. Grantees are the Port Graham Village Council, Nondalton Tribal Council, Palmer Future Farmers of America, Metlakatla Indian Community, Delta Junction Future Farmers of America and Salcha Delta Soil and Water Conservation District, Government Hill Commons in Anchorage, and the Tanana Valley Watershed Association in Fairbanks.

Anchorage: In 2018 the Municipality of Anchorage and the University of Alaska invited the CFP to participate in developing the Anchorage Climate Action Plan. Staff assisted the Urban Forest and Watersheds working group to develop objectives, action items, and potential project partners to protect and enhance Anchorage's urban

forests and watersheds. Recommended actions included hiring a municipal forester, developing an urban forest management plan, regular updates to the Anchorage tree canopy cover assessment, and conducting a priority planting analysis. The Anchorage Climate Action Plan was adopted by the Municipal Assembly in May.

Program staff continued to implement a U.S. Forest Service Landscape Scale Restoration grant project, Fish Need a Forest: Restoring Campbell Creek Using Green Infrastructure. This project is restoring a seven-mile stretch of Campbell Creek where it runs through a highly developed area in Anchorage. Project partners, including the Anchorage Park Foundation and Anchorage's Youth Employment in Parks program, continued work to restore riparian forest functions, improve habitat and water quality, create low impact pedestrian routes at prioritized sites, and engage the community in education and stewardship. The Park Foundation completed three tree planting events and five school field trips.

Staff assisted the Society of American Foresters Cook Inlet Chapter in donating 10 flowering crabapples for a drawing at the annual Alaska Run for Women in June. Crabapples were chosen because the blossoms are pink, the color of breast cancer awareness and the Run. The Alaska Run for Women often draws over 5,000 participants, making it one of the top 10 running events for women in the country. The trees were a big hit and the CFP hopes to expand the giveaway in 2020.

Fairbanks: Program staff continued working with project partners to complete a USFS Landscape Scale Restoration grant project, Restoring the Chena Watershed Using Green Infrastructure. The project demonstrates green infrastructure designs as cost effective solutions to decrease runoff and improve water quality for a healthy and sustainable fishery. Project partner Fairbanks Soil and Water Conservation District completed installing green infrastructure at the North Pole City Hall and the North Pole Memorial Park.

The Tanana Valley Watershed Association (TVWA) submitted their final report, Green Infrastructure for Interior Alaska, which the U.S. Forest Service said was one of the best they had ever seen. The Department of Environmental Conservation contributed technical content and Alaska State Parks provided design and layout for the colorful and informative document.

Palmer: An Alaska Community Forest Council member inspected two historic crabapple trees that were transplanted in 2018 from the Kertulla Homestead to the Mat-Su Community College. One tree appears to be doing well, the other fair.

Invasive Species

The U.S. Forest Service gave the CFP a substantial grant to address ongoing concerns about two invasive tree species, *Prunus padus* (European bird cherry or mayday trees) and *Prunus virginiana* (chokecherry). The trees have spread rapidly and greatly affected native ecosystems such as riparian streams and forest lands.

Project goals are to detect, respond, treat, and remove new or isolated trees and to train additional certified pesticide management consultants and applicators. Grants will be made to local governments and non-profits to address the challenge in the 2020 field season.

In August the Alaska Community Forest Council passed a resolution supporting a statewide ban of the sale of *Prunus padus* and *Prunus virginiana*. The Division of Agriculture is working on a statewide ban.



Instructor Jim Flott demonstrates using an air spade to save tree in decline due to being planted too deeply. The class, held on the UAA campus in September, was attended by 27 people. (Jim Renkert)

Ursa Minor Elementary School students on Joint Base Elmendorf-Richardson with birch tree planted to celebrate Arbor Day and the base's 22nd year as Tree City USA.
(Charlene Johnson, JBER)



Education

The Community Forestry Program provided training or technical assistance for 118 people from 11 communities in 2019: Anchorage, Fairbanks, Joint Base Elmendorf-Richardson, Soldotna, Juneau, Ketchikan, North Pole, Palmer, Nenana, Talkeetna, and Wasilla.

Jim Flott, of Community Forestry Consultants in Spokane and an International Society of Arboriculture Consulting and Master Arborist, taught two classes in Anchorage in April: 18 students attended “A Systematic Approach to Tree Disorder Diagnosis”, and 15 attended “Why Trees Fail”.

In September Flott taught three classes in Anchorage: 26 attended “Tree Biology”, and “Using an Air-spade for Soil Exploration, Remediation and Transplanting”; 27 attended “Tree and Shrub Pruning”. He also taught the “Tree Risk Assessment Course” and six arborists completed the course and exam to renew their Tree Risk Assessment Qualification. All classes provided ISA continuing education credits for certified arborists who attended.

Community Forestry Organizations

In 2019, volunteers donated 375 hours to community forestry in Alaska. Groups included the Alaska Community Forest Council, Fairbanks Arbor Day Committee, and the Juneau Urban Forestry Partnership.

CFP staff were involved with the Fairbanks Green Infrastructure Group, UAA Tree Campus USA Committee, the Anchorage Cooperative Weed Management Association, and the Society of American Foresters Cook Inlet Chapter. Staff also engaged with the following organizations:

- Alaska Pioneer Fruit Growers Association
- Alaska Botanical Gardens
- Fairbanks Soil and Water Conservation District
- Government Hill Commons
- Rogers Park Community Council
- MOA Watershed & Natural Resources Advisory Commission

The Alaska Community Forest Council met in Anchorage in April and August and held additional meetings via teleconference. Chugach Electric Association, Paul’s Tree Service and the Society of American Foresters Cook Inlet Chapter donated \$1,000 each to the council to support its mission.

National Association of State Foresters

In 2020 the National Association of State Foresters (NASF) will celebrate its 100th Anniversary. To commemorate its founding the NASF issued a Centennial Challenge with a “100” theme. State Forester Chris Maisch has encouraged Alaska school superintendents to plant a tree on Arbor Day 2020. The U.S. Forest Service will fund the grants and the CFP hopes to fund 100 projects with a focus on Title I designated schools.

Arbor Day May 20

Nine communities and one Alaska State Park campground held Alaska Arbor Day events in May. There were seedling giveaways and tree plantings at a university and elementary and middle schools. A utility gave away bare-root flowering shrubs, and a community orchard was established.

Arbor Day Foundation

Tree Cities USA: The City of Wasilla, Ketchikan Gateway Borough, Joint Base Elmendorf-Richardson, Eielson Air Force Base, Fort Wainwright, and the Municipality of Anchorage maintained Tree City USA status. Alaska’s first Tree City USA, Eielson Air Force Base, nearly lost its Tree City status but thanks to a late inning effort by Eielson staff, it continues to hold the title of Alaska’s first and oldest Tree City USA.

Tree Lines USA: Chugach Electric Association, Golden Valley Electric Association, and Matanuska Electric Association.

Tree Campus USA: University of Alaska Anchorage. The Arbor Day Foundation is expanding this program beyond university campuses to include K-12 schools. CFP staff looks forward to Alaska’s first K-12 Tree Campus in 2020.

Tree Campus Health Care: The ADF has implemented a new program entitled Tree Campus Health Care to recognize health institutions with a mission to align the impact of tree education, investment and community engagement on community wellness. Staff met with Providence Hospital, the largest private employer in the state, to pitch the idea of becoming Alaska’s first Tree Campus Health Care facility.

Community Recovery Program: ADF helps communities and homeowners that have lost trees from natural disasters. CFP staff contacted the ADF regarding the 2019 wildfires and spruce beetle outbreak. CFP staff and Anchorage Parks and Recreation will apply for funds to hold an Anchorage tree planting event(s) and to distribute trees to homeowners. The ADF works with corporate partners to obtain trees and sponsor events.

ALASKA COMMUNITY
FOREST COUNCIL

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(3 seats are vacant)

*Burnout operation along
dozer line constructed
from Old Murphy Dome
Road to Murphy Creek
during Shovel Creek Fire.
(Ken Gregor)*



FIRE & AVIATION

2019 WILDLAND FIRE SEASON

State Forester Chris Maisch might have summed up Alaska’s 2019 wildland fire season best when he addressed DOF fire personnel at the Fall Fire Review in October. “It wasn’t the biggest fire season on record, but it may have been the busiest,” Maisch said.

For the record, 719 wildfires burned 2,589,893 acres in Alaska in 2019. That was more than half the total acres burned nationally, 4,683,606, and 2.2 million acres more than the state with the second-most acres burned (Arizona at 378,798 acres).

And while that ranks only eleventh on the list of Alaska’s biggest fire seasons in terms of acres burned dating back to 1939, and doesn’t come close to the record of nearly 6.6 million acres burned in 2004, the 2019 fire season will be remembered for its magnitude, severity, and duration.

The wildfire season was the second-most destructive on record in Alaska, with a total of 59 primary residences and 99 other structures destroyed. Most of the losses were in the late-season McKinley Fire in the Willow area, which destroyed 52 homes, three commercial buildings, and 84 other structures. This was second only to the 366 structures destroyed in the Miller’s Reach 2 Fire in 1996.

On the positive side, there were no deaths or serious injuries to firefighters or the public, reflecting the number one priority for the division that the safety of firefighters and the public always come first when responding to and fighting wildfires.

The fire season was really two fire seasons in one. While fire season fizzled out in the Interior and northern Alaska with heavy rainfall in late July, as is usually the case, hot, dry conditions and extreme fire danger persisted in the southern half of the state. The dry conditions combined with a mid-August wind event sparked two project fires in the Mat-Su Valley near Willow (Deshka Landing and McKinley) and caused a major blow up on the Swan Lake Fire that required bringing in two additional Incident Management Teams (IMT). The dry conditions also produced several late-season fires in Southwest Alaska where fires at that time of the year are rare.

“Fire Season 2.0,” as it was dubbed by some, continued well into mid-September and required a second mobilization of Lower 48 resources and IMTs to Alaska at a time when Alaskan firefighters are usually helping fight fires in the western United States.

Alaska was fortunate that the Lower 48 fire season was practically non-existent, allowing Alaska to order all the resources needed. Had there been normal fire activity in other states during July and August, the situation in Alaska would have been much more dire.

Early Start

A record warm and dry spring set the stage for the 2019 season. Many parts of Alaska, especially north and west of the Alaska Range, experienced the warmest March on record. Bethel, Bettles, Fairbanks, Kotzebue, McGrath, and Nome all had their warmest March on record, and it was the third-warmest March ever recorded in Anchorage. The warm spring led to the earliest breakup on record for the Tanana River in Nenana. The ice went out on April 14, six days earlier than the previous record.

The record-warm temperatures erased the snowpack across much of the state by the end of March, priming the pump for an early fire season. The first fire reported in DOF protection areas was a 3.5-acre fire on March 30 near Port Heiden in the Southwest Area.

As is usually the case, human-caused fires dominated fire activity in April and the first half of May. A rash of 11 human-caused fires on the Kenai Peninsula and in the Mat-Su Valley on the weekend of April 27-28 ushered in the real start to the fire season and illustrated the volatile conditions. One of those fires, the Bluff Drive Fire near Ninilchik on April 27, prompted the evacuation of four homes as DOF firefighters helped fire departments extinguish the blaze. One fire in the Mat-Su Valley damaged a trailer home and another destroyed a shed.

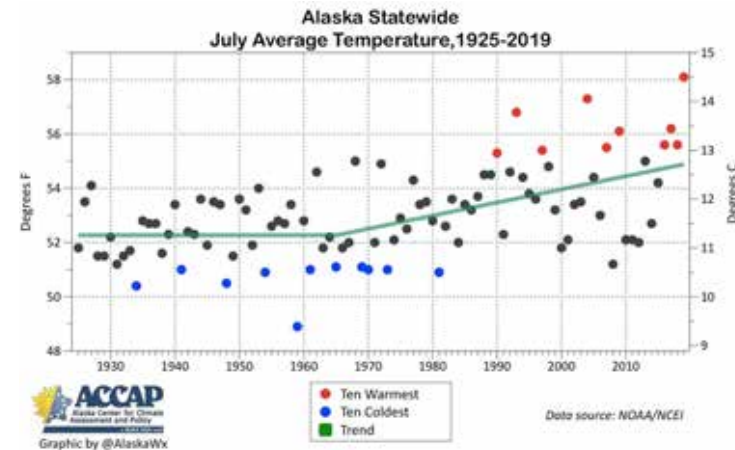
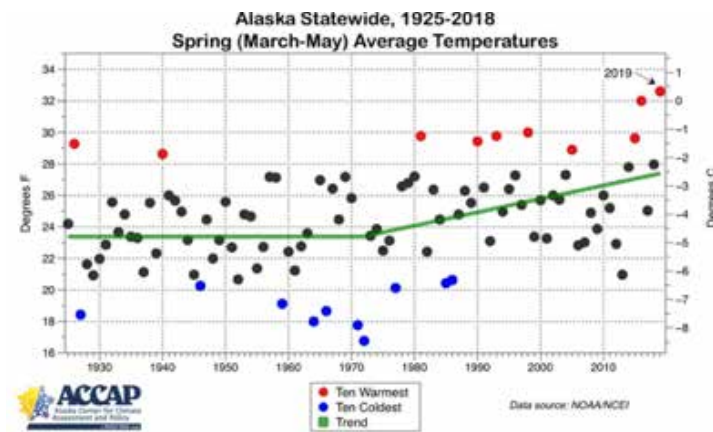
The first major fire of the season was the Oregon Lakes Fire on military land southwest of Delta Junction on April 30. It was one of the earliest project fires in memory and the Alaska Type 2 Green Team, led by Incident Commander Norm McDonald, was deployed to the fire on May 6.

Hot and Dry

The summer of 2019 went down as one of the hottest and driest on record, with record-high fire indices in many parts of the state contributing to a high level of fire activity and extensive mop-up operations on many fires due to the depth of burning. Anchorage experienced its hottest, driest summer on record. The months of June, July, and August were the warmest ever recorded in Alaska’s largest city. July, with an average temperature of 65.3 degrees, was the warmest month in Anchorage history. On July 4, the temperature climbed to 90 degrees, the highest ever recorded there and one



*The Swan Lake Fire burns through black spruce on
June 15. (Division of Forestry)*



of 17 new record highs set in Anchorage. There were a record 49 days on which the temperature reached 70 degrees or warmer and 12 consecutive days with temperatures of 75 degrees or higher.

The hot temperatures were accompanied by the driest conditions ever recorded in Southcentral Alaska, resulting in extreme drought for the Mat-Su Valley and Kenai Peninsula. Only nine-tenths of an inch of rain fell between June 1 and August 31 in Anchorage, an inch less than the previous record in 1976. August, which is typically the wettest month for Anchorage, saw only .04 inches of rain.

The hot, dry conditions in June and July contributed to extreme fire activity in July, which was by far the busiest month of the season with 248 fires. The burned acreage total jumped from 533,267 acres on June 30 to 2,384,062 acres on July 31, an increase of nearly 1.9 million acres. Much of that acreage was associated with fires that started in June and grew in July due to the fire-friendly conditions.

Several late-season fires and persistent hot, dry conditions in the southern half of the state prompted Department of Natural Resources Commissioner Corri Feige to extend the end of Alaska's fire season from August 31 to September 30 to ensure public safety. It marked the first time that Alaska's wildfire season was officially extended.

“Unprecedented fire risk conditions for the Southcentral and Kenai Peninsula regions and the ongoing large project fires in these areas have created statewide challenges for wildland fire response agencies,” Feige wrote. “Any new fires will further stress the overall statewide response capabilities.”

The word “unprecedented” was used repeatedly over the course of the summer to describe everything from the hot, dry conditions to extreme fire behavior to the massive mobilization of resources from the Lower 48 to the duration of incidents.

Lower 48 Mobilizations

Alaska imported nearly 5,200 firefighting personnel from the Lower 48 to assist with suppression efforts, including 27 jet loads of crews (five crews per jet load) from the



*A water scooping airplane drops water on the Montana Creek Fire on July 7.
(Division of Forestry)*

National Interagency Coordination Center, and more than 140 smokejumpers. Fire-fighting personnel from every state except Connecticut worked in Alaska in 2019.

A record number of smokejumpers were deployed in 2019. On July 14, there were 206 smokejumpers working in Alaska, which was more than half of all the smokejumpers rostered in the U.S. That broke the old record of 202 in 1990. DOF and AFS used a record 18 Incident Management Teams – two Type 1, ten Type 2, five Type 3 and one National Incident Management Organization – on 30 assignments. Alaska's two Type 2 IMTs were deployed seven times during the season. Alaska spent a total of 39 days at Preparedness Levels 4 and 5, including 19 straight days at PL5 from July 8-26.

In response to the extreme fire activity, the Alaska Multi-Agency Coordinating Group was activated when Alaska moved to Preparedness Level 4 on June 22. The AMAC met daily through July 29 to assist with prioritization of fires and the resources assigned to those fires.

Project Wildland Urban Interface Fires

In 2019 there were several fires that people will be talking about for years to come, including the Chalkyitsik Complex, Shovel Creek, Swan Lake, and McKinley fires.

The season was notable for the high number of fires in the Wildland Urban Interface. Evacuation notices, alerts, and orders were issued for 12 fires in DOF protection areas: the Bluff Drive, Swan Lake, Shovel Creek, Montana Creek, Malaspina, Kobe, Smith Creek, Rainy Pass, Deshka Landing, McKinley, North Fork, and Levelock fires.

The Swan Lake Fire garnered the most attention of any fire in Alaska – and the country – in 2019. The lightning-caused fire burned 167,164 acres on the Kenai National Wildlife Refuge and in the Chugach National Forest. It was the longest duration wildfire in Alaska history, with personnel assigned to the fire for months. During the fire eight IMTs – one T1, five T2, and two T3 teams were used. At an

estimated cost of \$49 million, it was also the most expensive fire in the country in 2019. While no structures were burned, it was a very political fire due to the long duration, closures and delays on the Sterling Highway, and the resulting economic impact to the local economy.

Three fires in DOF's protection area – Shovel Creek, McKinley and Deshka Landing – qualified for Federal Emergency Management Assistance grants, which will allow the state to collect up to 75% of the suppression costs for those fires.

Alaska had the most acres burned of any state landowner – 879,287– followed by the U.S. Fish and Wildlife Service with 783,024 acres, the Bureau of Land Management with 419,317 acres, and Alaska Native Claims Settlement Act Lands with 299,625 acres.

Lots of Lightning

There were more lightning-caused fires (368) than human-caused fires (346), for the first time since 2015. There were five fires with an “undetermined” cause or still under investigation at press time. The first reported lightning fire was on May 10, but it was in early June that lightning really came into play. Approximately 20,000 lightning strikes were recorded across Alaska between June 4 and 13, sparking dozens of fires. A cluster of lightning strikes on the Kenai Peninsula on June 5 ignited several fires, one of which was the Swan Lake Fire.

Lightning activity persisted through June and July. On June 1, there were only 12 fires that had been started by lightning. By June 30, that number had climbed to 183 and was still climbing as fire managers discovered fires that were started by lightning days or weeks before they were detected. In July, another 179 lightning-caused fires were detected, several of which had been started by lightning strikes in June but were not discovered until sometime in July.

All but one of the 20 largest fires in Alaska in 2019 were started by lightning. As is always the case, the acres burned by lightning-caused fires (2,544,969) far outnumbered the 41,613 acres burned in human-caused fires. Fires with an undetermined cause burned 3,311 acres.

Deep Burning

Due to extreme drought conditions around the state, particularly in Southcentral Alaska late into the summer, many fires burned deep into the lower level organic duff layers, resulting in a high percentage of tree mortality, acres of fallen trees, and deep-burning ash pits. In some situations, live trees fell due to lack of stability in the root systems caused by the dry conditions.

Snags and ash pits were significant incident hazards, particularly on the McKinley and Swan Lake fires. Firefighters on the McKinley Fire sustained 13 burns related to ash pits and at least two civilians also suffered burns as result of stepping into ash pits. Several firefighters on the Swan Lake Fire also suffered burns from stepping or falling into ash pits, some of which were nearly two feet deep.

Fire managers responded by using non-standard mop-up specifications and a variety of tools to mitigate risks and minimize exposure to firefighters. Heavy equipment was the primary tool used to remove trees and mop up ash pits. Numerous infrared platforms were also used to identify ash pits and hot spots as opposed to traditional gridding by crews.

The information office for the Northern Rockies IMT assigned to the McKinley Fire produced a short, informative video about the ash pit problem to help explain to the public why they are so difficult to detect and techniques firefighters used to identify them, such as probing with Pulaski and shovel handles.

A Rapid Lesson Sharing (RLS) was produced for the Wildland Fire Lessons Learned Center in Boise, Idaho and shared with firefighters and suppression agencies around the country to educate firefighters about the dangers of ash pits on fires in Southcentral Alaska. It took firefighters longer to identify and mop up hot spots because they had to dig deeper into the duff layer to find heat.

Fire Closures

Due to record dry conditions and to prevent any additional human-caused fires at a time when available resources were limited, State Forester Chris Maisch issued fire closures two times in 2019, the first time since 2015 that the State Forester has issued any kind of emergency burn closures.

DOF issued a campfire closure on July 9, prohibiting the use of all campfires in the Denali, Fairbanks North Star, Kenai Peninsula, and Matanuska-Susitna boroughs, the Municipality of Anchorage, Copper River Valley, and Tanana Valley. The campfire closure remained in effect through July 14 north of the Alaska Range and through July 18 in Southcentral Alaska until cooler, moister weather moderated conditions.

A second emergency closure was issued for the Matanuska-Susitna and Kenai Peninsula boroughs on August 21 after the McKinley and Deshka Landing fires started and the Swan Lake Fire flared up again. That closure prohibited all types of burning and remained in effect until September 4.

In addition to the two burn closures, DNR and ADF&G also closed a small area in Game Management Unit 14A to hunting and public access due to safety concerns posed by the Deshka Landing Fire. The two agencies worked together to close the Willow Swamp area on August 23. The area was in the middle of the 2,217-acre Deshka Landing Fire west of Nancy Lake Recreation Area and Maisch concluded that leaving it open could pose a risk to the public and firefighting personnel. The closure was lifted on September 11 after firefighting personnel had completed work on the fire.



A hotshot monitors the Swan Lake Fire from the Sterling Highway on August 26. (Division of Forestry)

2019 Fire Statistics



Department of Natural Resources Commission Corri Feige, right, points toward Shovel Creek Fire on June 27 as she discusses fire management with State Forester Chris Maisch, left, and Incident Commander Norm McDonald with Type 2 Alaska Green Incident Management Team. (Sarah Saarloos)



Governor Mike Dunleavy, right, talks to Deputy Incident Commander Tom Kurth, center, with the Alaska Green Type 2 Incident Management Team during McKinley Fire press conference at Mat-Su Area Forestry Office on August 24. (Mike McMillan)

10 LARGEST FIRE SEASONS ON RECORD

Year	Fires	Acres
2004	701	6,590,140
2015	768	5,111,452
1957	391	5,049,661
1939	200	5,000,000
2005	624	4,649,597
1940	130	4,500,000
1969	685	4,231,820
1941	138	3,654,774
1990	750	3,189,079
2009	516	2,934,608

WILDFIRES BY CAUSE

Cause	All	AFS	State	USFS
Campfire	64	2	41	21
Children	2	-	2	-
Coal Seam	4	1	3	-
Debris Burning	64	1	55	8
Equipment	33	1	30	2
Incendiary	2	-	2	-
Investigated, but Undetermined	59	-	52	7
Lightning	368	197	170	1
Miscellaneous	113	47	61	5
Railroad	-	-	-	-
Smoking	5	-	4	1
Under Investigation	2	-	1	1
Undetermined	3	-	3	-
Totals	719	249	424	46

*Data current as of December 5, 2019

FIRES & ACRES BURNED
BY STATE IN 2019

State	Fires	Acres
Alaska	719	2,589,893
Arizona	1,852	378,798
Idaho	956	283,083
California	8,092	258,731
Texas	5,925	201,363

ACRES BURNED BY LANDOWNERSHIP

Landowner	Fires	Acres
Alaska Native Claims Act Lands	92	299,625
Borough	20	3,176
Buerau of Indian Affairs	10	2,215
Bureau of Land Management	63	479,317
City	10	3
Department of Defense	46	51,332
National Park Service	24	76,872
Other Federal Lands	2	553
Private	142	2,752
State	216	879,287
U.S. Fish & Wildlife Service	79	783,204
U.S. Forest Service	15	11,557

*Number of fires reflects land ownership at origin. These are acre totals burned by landowner. Data compiled from fire perimeters - subject to change.

FIRE ACTIVITY BY PROTECTING AGENCY

Agency	Fires	Acres
AFS	249	1,692,755
STATE	424	897,124
USFS	46	14

LARGEST ALASKA FIRES OF 2019
The ten largest fires were all started by lightning and were in Limited Protection Areas.

- 1. Old Grouch Top #174
(Southwest Area) – 308,923 acres, started June 5
- 2. Frozen Calf #367
(Upper Yukon Zone) – 237,494 acres, started June 24
- 3. Hess Creek #324
(Upper Yukon Zone) – 182,908 acres, started June 21
- 4. Swan Lake #181
(Kenai/Kodiak Area) – 163,714 acres, started June 5
- 5. Bearnose Hill #407
(Upper Yukon Zone) – 130,959 acres, started June 29
- 6. Black River
(Upper Yukon Zone) – 103,268 acres, started June 18
- 7. Little Mud River #316
(Tanana Zone) – 97,568 acres, started June 21
- 8. Tractor Trail 2 #348
(Upper Yukon Zone) – 96,784 acres, started June 22
- 9. Little Crazy Mountain #321
(Upper Yukon Zone) – 78,132 acres, started June 21
- 10. Smith Creek #534
(Southwest Area) – 72,451 acres, started July 12

Fire Season at a Glance

- For the 15th time since record keeping began in 1939, Alaska surpassed the two-million-acre mark for acres burned in a season (2,589,283 acres), six of which have occurred since 2000.
- There were more lightning-caused fires (368) than human-caused fires (346), for the first time since 2015. As of press time, there were still five fires of undetermined origin or still under investigation.
- The Swan Lake Fire on the Kenai Peninsula was the most expensive fire in the nation in 2019 at nearly \$49 million. This fire had warehouse support for 3½ months, the longest duration for any incident in DOF history.
- The State Fire Warehouse in Fairbanks issued more supplies to the Shovel Creek Fire over a three-week period than to any DOF fire: 300 pumps, 210 folding tanks, 12,000 lengths of hose and 1,500 sprinklers.
- State fire warehouses in Fairbanks and Palmer issued 950 miles of hose (50,000 lengths) and 1,934 pumps to incidents, nearly doubling the amount of hose and pumps issued during the 2015 season, which ranks as Number 2 of all time in acres burned.
- Alaska’s two Type 2 Incident Management Teams were deployed seven times and 18 Incident Management Teams were assigned to fires in Alaska.
- All 27 Alaska crews and 122 from the Lower 48 were assigned to fires in Alaska.
- The State had more acres burned – 875,426 – than any other landowner in Alaska. The U.S. Fish and Wildlife Service was next with 783,299 acres, followed by the Bureau of Land Management with 479,330 acres.
- Twelve fires warranted evacuation alerts or orders.
- Six fires burned over 100,000 acres and 21 fires burned more than 30,000 acres.
- At 307,923 acres, the Old Grouch Top Fire in the Southwest Area was the largest fire in both Alaska and the U.S.
- Mobilization centers were activated at UAA and UAF for crews and overhead from the Lower 48. The UAA mobilization center was activated a second time in August for the McKinley, Deshka Landing, and Swan Lake fires.
- The Alaska Multi-Agency Coordinating Group met daily from June 22-July 29 to help prioritize fires and the resources assigned to those fires.

Fire Summaries by Area

Kenai/Kodiak Area: 72 fires, 168,318 acres

The Swan Lake Fire may have garnered the most headlines of any fire in Alaska, and even in the U.S., but other fires on the Kenai Peninsula required considerable attention, including the Tustumena Lake, North Fork, and Caribou Lake fires.

Kenai/Kodiak Area staff responded to more than 190 calls with 72 of those being wildland fires that burned a total of 168,318 acres. Of the fires in Critical and Full Protection Areas, 94% were held to 10 acres or less and 91% of all fires were held to under 10 acres. Most of the fires occurred during June (23 fires) and August (19 fires). The Area hosted 10 Incident Management Teams (IMTs), nine of which were assigned to the Swan Lake Fire and one to the Caribou Lake Fire.

April saw both above average temperatures and numbers of wildland fire starts with the first fire igniting on Kodiak Island on April 2. The Kenai Peninsula experienced record levels of rainfall in May, followed in June, July, August, and September by record setting hot and dry weather, resulting in record level extremes in fire indices.

The 167,181-acre **Swan Lake Fire** accounted for most of the Area’s total acreage burned. It was one of 10 fires started by lightning that passed through the northern Kenai Peninsula on June 5. Because of their proximity to homes and other values at risk, those other fires, including the 126-acre Tustumena Lake Fire, were deemed higher priority fires than the Swan Lake Fire and received initial attack responses. All those fires were successfully suppressed with no homes damaged or destroyed.

The Swan Lake Fire, meanwhile, started in the Kenai National Wildlife Refuge about eight miles northeast of Sterling and seven miles north of the Sterling Highway. Aviation resources were used that same evening to gather information and the jurisdictional and protection agencies met to discuss options and a course of action. With the fire in a Limited Fire Management Option Area, the initial decision was to allow the fire to take its natural course but to monitor closely and plan for suppression strategies using the PACE (Primary, Alternate, Contingency and Emergency) model.

The fire grew to 200 acres within the first 24 hours and by the end of the second shift the fire had grown to 471 acres. On the third day, the decision was made to assemble a Type 3 incident management team to carry out strategic suppression actions on the western and southern portions of the fire, closest to values at risk. Although the Type 3 IMT was making good progress on the fire during the first six operational periods, it was soon clear that the fire was quickly moving to a Type 2 IMT due to the rapid increase in fire behavior and other environmental and political factors. On the 13th day following discovery of the fire, the Alaska Type 2 IMT (Black Team – Kurth) was brought in to take command of the fire, which had reached 15,000 acres.



A smoke plume from the Swan Lake Fire as seen on June 17. (Division of Forestry)

Three additional Type 2 IMTs, three Type 3 IMTs, and one Type 1 IMT were also brought in to assist with suppression efforts lasting from June 5 through October 2, making it the longest-recorded, staffed wildland fire in Alaska history.

Drones were used to scout the fire perimeter to determine best areas for fire line construction and location, and terrain challenges and hazards for fire personnel on the ground. Drones were also used for infrared surveillance missions during times of heavy smoke when other aircraft could not fly, and to survey powerline rights-of-way along the Sterling Highway. A larger drone conducted aerial firing operations.

No structures were lost due to the Swan Lake Fire and the only significant damage to infrastructure was a stretch of powerlines and power poles spanning about five miles, near Jean Lake, on the southeastern side of the fire. Several firefighters experienced allergic reactions to bee stings during the fire. There were also burn as a result of deep burning organic material, which created ash pits. One firefighter was struck by a falling tree resulting in minor injuries.

The 59-acre **North Fork Fire** ignited on August 18 during a strong north wind. Kenai/Kodiak Area initial attack engine crews and helitack personnel along with apparatus and personnel from Homer, Kachemak Emergency Services, and Anchor Point fire departments, and one retardant air tanker, two fire bosses, two helicopters, two dozers, and two 20-person hand crews stopped the fire before it reached the Diamond Ridge Subdivision, six miles northwest of Homer. Firefighting personnel worked on the fire for 10 operational periods to extinguish heavy fuels and to mop up deep duff layers and ash pits caused by extensive drought conditions.

The **Caribou Lake Fire** started on August 19, about 25 miles northeast of Homer. One air attack, one retardant air tanker, two fire bosses, two dozers, one load of smokejumpers and the Kachemak Emergency Services Area Fire Department responded to the fire. The fire grew to more than 100 acres within the first four hours of ignition and additional firefighting crews were ordered. By the end of the second operational period the fire had consumed 700 acres. Aviation and ground resources continued to make progress on the perimeter of the fire during the first four operational periods. On the fifth day of the incident the Great Basin Type 1 IMT assumed operational control of the fire, along with the Swan Lake Fire that they were initially brought in to manage. The Caribou Lake Fire was contained at 871 acres with no reported injuries.

The Kenai Interagency Dispatch Center processed 4,305 resource orders during the season. In the early stages of the Swan Lake fire, Lead Dispatcher Diane Campbell also set up and oversaw the expanded dispatch operation at the Kenai/Kodiak Area Office. This was a major workload, but the benefits and efficiencies gained were worth the effort, especially from a financial standpoint. Campbell also worked with three separate buying teams, which added to the smooth coordination of getting firefighters the supplies, equipment, and tools necessary to complete objectives in the field.

Training and Aviation Officer Steve Scales retired in August after working 20 seasons for the Division of Forestry. Steve started his career on the Type 2 Kenai Crew and

soon after became a wildland fire resource technician with the Kenai/Kodiak Area Office. Steve was later promoted to suppression foreman and then accepted the Area's training and aviation officer position, where he finished his career. He and other Area personnel led 24 wildland fire training sessions for 278 personnel during the fire season, of which 166 were members of local fire departments.

Mat-Su Area: 124 fires, 5,209 acres

The Mat-Su Area had the most fires and the fewest acres burned of any DOF Area during the 2019 season. However, the area may have seen the most action. In addition to the devastating McKinley Fire, the Area managed several other high-profile incidents in the wildland urban interface, including the Deshka Landing, Malaspina, M.L.K., Montana Creek, and Rainy Pass fires.

The season began with a transition in management. Ed Soto accepted the coastal region forester position, Stephen Nickel accepted the MS/SW area forester position, fire management officer Norm McDonald filled in for the statewide support forester and was named chief of the Fire and Aviation Program on May 1. Phil Blydenburgh was acting fire management officer during the busy fire season and accepted the position permanently in October. The Area had five employees in acting status, and 10 new employees over the course of the year.

The fire season began early, with the first fire on April 3. Spring was drier than average and fire weather indices built well into September, reaching record highs in the Build Up Index and Drought Code indices.

Mat-Su Area fire staff responded to over 475 calls with 124 being fires that burned 5,209 acres. Most of the area's fires occurred in August, with the two largest fires being the McKinley at 3,288 acres and Deshka Landing at 1,314 acres. The Mat-Su area hosted four Type 2 Incident Management Teams, the first ordered for the Montana Creek and Malaspina fires in the Willow/Caswell area, followed by the Deshka Landing and McKinley fires.



*Smokejumpers haul hose to fire line on the Malaspina Fire on July 8.
(Mike McMillan)*



Smoke column from the early stages of the M.L.K. Fire in east Anchorage as seen on July 2 from the 14th floor the Atwood Building in downtown Anchorage. (Cindy Forrest-Elkins)

The 25-acre **M.L.K. Fire** was the first major incident the Area responded to in 2019. The fire was reported on July 2 at 4:45 p.m. near the Campbell Creek Science Center in East Anchorage. The initial report estimated the fire at 10 acres and growing. The fire produced 60-foot flame lengths and a large smoke column that was visible throughout Anchorage, an alarming sight in the middle of Alaska's largest city.

The Campbell Creek Science Center and a mobile home park were evacuated, and Anchorage police closed Lake Otis Parkway at Dowling Road. Air tankers were immediately called in and dropped three loads of retardant, encircling the fire. Mat-Su Area engines and personnel and the Anchorage Fire Department responded quickly, and eight smokejumpers were called in.

The spread of the fire slowed as it moved into hardwoods while retardant and water drops proved effective at knocking down the flames. Two crews were called in and the fire was 30% contained by the end of the shift. Firefighters began mopping up the next day and the fire was declared fully contained at 25 acres on July 11.

Mat-Su's firefighting personnel barely had time to catch their breath when the **Montana Creek Fire** was started by lightning on July 3 about 2½ miles east of the Parks Highway near Mile 98. The fire was reported at about three acres at 3 p.m. and grew to 200-300 acres by 7:30 p.m. An aggressive initial attack that included four air tankers, two water-scooping aircraft, eight smokejumpers, a task force of engines, and a hotshot crew helped keep the fire in check.

A Level 1: Ready evacuation alert was issued for residents in the area and was raised to a Level 2: Set notice on July 4 when the fire changed directions and moved toward homes, prompting a response from multiple Matanuska-Susitna Borough fire departments to protect structures. Additional crews joined the fight on July 5 and completed a control line around the fire perimeter on July 5. Crews were working to strengthen the control line when the **Malaspina Fire** was ignited by lightning on July 7 about one mile north of the Montana Creek Fire.

Due to dry conditions, the Malaspina Fire grew rapidly and drew a vigorous aerial response that included air tankers, water-scooping aircraft, and UH-60 Blackhawk helicopters from the Alaska Air National Guard. The fire was in a residential area, prompting a Level 3: Go evacuation order for two homes and a "Level 2: Set" alert for other residences. Two crews were diverted from the Montana Creek Fire for initial attack on the Malaspina Fire.

A Type 2 Incident Management Team from the Pacific Northwest that was prepositioned in Fairbanks took over management of both the Montana Creek and Malaspina fires on July 10 and strengthened containment lines. The IMT remained in place until July 14 when the fires were turned over to the Mat-Su Area.

No structures were lost in the 368-acre Montana Creek Fire; one home and one outbuilding were destroyed in the 85-acre Malaspina Fire. The peak number of personnel assigned to both fires was about 220.

On July 23, a lightning strike ignited a wildfire near Rainy Pass Lodge, about 125 miles north of Anchorage, that forced the evacuation of the historic hunting lodge that also serves as a checkpoint on the Iditarod Trail Sled Dog Race. The **Rainy Pass Fire** was reported just after 8 p.m. Air attack personnel responded and reported the fire to be about five acres and one mile from the lodge. Air tankers and smokejumpers were ordered to the fire but could not reach it due to weather conditions.

Due to the rapid advancement of the fire and proximity to the lodge, 26 employees and guests were evacuated via a UH-60 Blackhawk helicopter from the Alaska Rescue Coordination Center in Anchorage. Three Mat-Su Area firefighters were flown in by helicopter and spent the night protecting the lodge and a fuel cache at the runway. The fire size had increased by morning, but bad weather hindered efforts to get more firefighters in and the few personnel on the ground continued efforts to contain the fire. Additional firefighters were flown in on July 25, bringing the number working on it to 41. With the help of rain on July 26, firefighters were able to contain the fire at 51 acres. All personnel were demobilized by July 29.

Two weeks later, Mat-Su Area fuel indices had reached record levels when the **Deshka Landing** and **McKinley Fires** ignited within hours of each other near Willow. The Deshka Landing Fire started on August 17 about one mile south of Deshka Landing and four miles west of the Parks Highway in Nancy Lake State Recreation Area near Mile 68 of the Parks Highway. Initial attack suppression resources included Mat-Su helitack, a Mat-Su engine crew, 16 smokejumpers, and air resources. The fire exhibited crown fire runs and torching, even in birch trees, which typically slow fire spread. Smokejumpers began



Top: Firefighter Adam Paskvan of the UAF Nanooks Wildland Fire Crew hoses a hot spot on Montana Creek Fire. (Josh Turnbow, UAF Nanooks Wildland Fire Crew)

Bottom: Helicopter drops water on the Montana Creek Fire on July 3. (Division of Forestry)

An excavator assists firefighters from Umpqua North Type 2 Initial Attack Crew to extinguish an ash pit on McKinley Fire on September 2. (Mike McMillan)



evacuating cabin owners on Red Shirt Lake and campers at the South Rolly Campground as the fire grew to an estimated 600 acres in the first operational shift.

The McKinley Fire, the largest in the Mat-Su Area in 2019, also started on August 17 near Mile 91 of the Parks Highway. The fire grew rapidly, and evacuation notices were issued for residents in the immediate area. Aggressive initial attack kept the fire contained to approximately 150 acres and Mat-Su Borough fire departments assisted with structure protection.

On August 18, 20 mph gusts out of the north increased fire activity on both the Deshka Landing and McKinley fires. The McKinley Fire crossed, and forced the closure of, the Parks Highway from Miles 82-91. An evacuation order was issued for residences along both sides of the highway as the fire pushed south into densely populated areas.

Despite valiant efforts by firefighters, the McKinley Fire destroyed 52 primary homes, three commercial buildings, and 84 outbuildings on the second day of the fire, making it Alaska's second-most destructive wildfire behind the Miller's Reach 2 Fire of 1996. The Alaska Type 2 Green Incident Management Team was ordered, followed by the Northern Rockies Type 2 IMT 7.

The Deshka Landing Fire also grew substantially on August 18, forcing closure of the Nancy Lake Parkway at Mile 2.2 and a Level 1 (Ready) evacuation alert for residences along Long Lake Road to the east. The fire grew to an estimated 1,000 acres but firefighters were able to keep it from impacting cabins or residences. A Type 2 incident management team from the Pacific Northwest was ordered to manage the Deshka Landing Fire on August 23. Initial efforts focused on protecting about 45 cabins on Red Shirt Lake at the south end of the fire.

Most of the acreage burned in the Deshka Landing and McKinley fires occurred in the first two days of the incidents due to the wind, with minimal growth in the days that followed. When fire activity mellowed, firefighters focused their attention on structure

protection and mopping up. The final size of the Deshka Landing Fire was estimated at 1,314 acres while the McKinley Fire burned an estimated 3,289 acres.

Due to extreme drying in the lower level duff layers, the McKinley Fire burned deep, resulting in a high percentage of tree mortality, acres of fallen trees, and deep burning ash pits. Snags and mop-up of ash pits were significant incident hazards. Responders sustained a total of 13 burns as a result of these conditions. Managers employed non-standard mop-up specs and a variety of tools and tactics to mitigate risks and minimize exposure to firefighters. Numerous Infrared platforms were used, as opposed to traditional gridding to locate hotspots.

Southwest Area: 114 fires, 592,447 acres

As usual, the Southwest Area office in McGrath recorded the largest number of acres burned in DOF protection areas. The McGrath Area responded to 145 incidents, of which 114 were fires that burned 592,447 acres.

Coastal areas experienced an earlier than normal snow-melt resulting in several early-season human-caused fires. The first fire of the season began on March 30 in the Port Heiden area. In June, the weather pattern set up for dry lightning, and McGrath was on track for a record fire season lasting through September.

Fire suppression efforts protected numerous cabins, Native allotments, and three mines - Donlin, Nixon Fork, and Red Devil. Protecting allotments proved especially challenging as there were allotments within five miles of about half of the Area's fires. Of those, 40 fires burned within three miles of allotments and required monitoring.

The **Hidden Creek Fire** was started by lightning on July 9 about 20 miles northwest of Nikolai in the area of the Nixon Fork Gold Mine. Seven smokejumpers and the Bear Divide Hotshots created defensible space around structures, set up pumps, hose lays, and sprinkler systems for protection. Mine infrastructure included an 85-person housing facility, a power plant, a mining camp, and maintenance buildings. The 17-person Southwest Area Crew #1 was mobilized to the incident with firefighters from Hooper Bay, Shageluk, Nikolai, and Nondalton. This fire was demobilized on August 13 and mapped at 1,017 acres.



Top: Aerial view of start of McKinley Fire taken on August 17. (Tim Whitesell)

Middle: A burned area in McKinley Fire where ash pits were often hidden and posed a hazard to firefighters mopping up. (Mike McMillan)

Bottom: Firefighter uses Pulaski handle to measure depth of ash pit on the McKinley Fire. (Renette Saba)



Southwest Area Pack test in Scammon Bay on airport runway. (Seth Ross)

The **McCally Creek Fire** started by lightning on July 10 near Red Devil and merged with the **Barometer Mountain Fire** and the **Barometer Foothills Fire** totaling 2,905-acres. The Pioneer Peak Hotshots and a squad of five firefighters from Kalskag worked to protect the Red Devil mine, community, and other structures across the Kuskokwim River. Several Native allotments in the area were also protected.

Lightning started the **Smith Creek Fire** on July 12, one mile west of the Donlin Mine. The fire burned into the **Peary Creek Fire** and the **Timber Creek Fire** to the north, threatening structures and Donlin Mine infrastructure. Mining personnel were evacuated, and firefighters used heavy equipment on site to create control lines and conduct successful firing operations to defend 80 structures. The fire was demobilized on August 2 and mapped at 72,452 acres.

Several fires in the Bristol Bay region also created a flurry of activity late in the season, most notably, the **Levelock Fire** was reported north of the village of Levelock just after midnight August 19. Due to limited resources and the late hour, village residents were the first to respond to the fire, using bulldozers to build control lines to the south and west of the village. Due to the proximity of the fire to the village and heavy smoke, some residents chose to evacuate.

Eight smokejumpers joined the fight on the morning of August 19 and set up pumps and hose to protect the village. The fire threatened the village dump and a handful of homes, but smokejumpers and residents were able to keep it from impacting homes. The fire, burning in tundra and grass, grew to an estimated 5,000 acres. Firefighters and residents focused on protecting the village and airstrip while allowing other portions of the fire to take its natural course.

Several days of rain that began on August 30 and continued into the first week of September helped to moderate fire activity on the Levelock and other fires the area. However, due to persistent dry conditions that allowed fires to burn deep into the peat and duff, fires were resistant to control and required extensive mop up. The Levelock Fire was estimated at 9,345 acres when it was demobilized and placed into monitor status on September 2.

Fairbanks Area: 49 fires, 53,703 acres

The 22,487-acre **Shovel Creek Fire** was the biggest of the season in the Fairbanks Area, but there were many other incidents that occupied Area personnel through late July when season-ending rains came. For the season, a total of 49 fires burned 53,703 acres, with most of the acreage burning in the Shovel Creek and Nugget Creek fires.

The first significant response was on June 16 for the lightning-caused **Caribou Creek Fire** about 25 miles east of Fairbanks. The fire was located approximately 7½ miles north of Chena Hot Springs Road near Mile 18. It was reported late in the afternoon and had grown to an estimated 300 acres by 11 p.m. despite an aggressive aerial assault that included multiple aircraft dropping retardant and water to slow the spread.

The fire was not accessible by road so about 100 firefighters were flown in by helicopter to begin suppression efforts on the ground. A Type 3 incident management team was based out of Two Rivers near Mile 19 of Chena Hot Springs Road.

Aircraft were used heavily during the first three days to prevent the fire from climbing over a ridge to the north and to keep it from spreading south toward Chena Hot Springs Road. Firefighters on the ground were challenged by hot, dry conditions and difficult terrain, as the fire was burning on a steep hillside. Downed and jack-strawed trees posed a significant challenge and required considerable saw work for firefighters trying to cut a containment line around the fire. At its peak nearly 200 personnel were assigned to the fire, posing a logistical challenge because all personnel and supplies had to be flown in by helicopter. Firefighters completed a saw line around the fire on June 23 and began mop-up operations, which required another three weeks before the fire was demobilized on July 13 at a final size of 258 acres.

On June 21, the **Shovel Creek Fire** was ignited by lightning three miles north of Murphy Dome, a popular landmark about 25 miles northwest of Fairbanks. Due to hot, dry conditions, the fire threatened subdivisions on the north side of Murphy Dome and dozens of recreational cabins 2½ miles to the south along the Chatanika River.

The fire exhibited extreme fire behavior and moved rapidly toward cabins on the river, prompting an aggressive aerial response from two air tankers, water-scooping aircraft, helicopters and air attack. Eight smokejumpers began containment efforts on the ground. By early evening, the fire had grown to 200 acres and the Type 2 Alaska Green Incident Management Team was ordered to take command of the fire on June 24.



Top: Smoke plume from Shovel Creek Fire northwest of Fairbanks rises over Murphy Dome on June 21 shortly after the lightning-caused fire was reported. (Isaac Solomon)

Bottom: A firefighter serves as lookout on the Shovel Creek Fire on June 27. (Division of Forestry)

A firefighter holds the line near 14 Mile Trail on Murphy Dome during a firing operation to keep the Shovel Creek Fire from moving south and east. (Division of Forestry)



The Alaska Green T2 IMT was the first of three incident management teams that would manage the Shovel Creek Fire. Over the next six weeks, multiple Level 1 (Ready), Level 2 (Set) and Level 3 (Go) evacuation alerts were issued for nearly 1,000 homes in five subdivisions on Murphy Dome and dozens of cabins along the Chatani-ka River corridor.

Suppression tactics using existing trails were initially used to control the fire but the hot, dry conditions and changes in wind direction caused the fire to repeatedly jump containment lines and produce spot fires. Firefighters used bulldozers to put in containment lines and developed a structure protection plan for subdivisions.

By June 27, the fire had grown to 1,600 acres and there were 345 personnel assigned. Lack of water in the Murphy Dome area posed a significant challenge, forcing fire managers to use water tenders and large fire engines to truck water to the top of the dome to support an extensive network of fire hose that had been set up around the perimeter of the fire.

The fire continued to grow to the east and south and was estimated at 10,000 acres on July 1, prompting heightened evacuation levels for residences in those areas. There were approximately 550 personnel assigned to the fire at that point.

Rain moderated fire activity on July 1 but due to the growing complexity of the fire and limited resources available in-state, a Type 1 incident management team from the Pacific Northwest took command of the fire on July 3. With weather conditions cooperating, firefighters completed a five-day firing operation that pushed the fire's acreage to more than 20,000 acres but secured containment lines south and east of the fire by burning the fuel between the main fire and threatened subdivisions. With containment lines secured, evacuation levels for area residences were lowered and crews strengthened fire lines around the fire.

Rain on July 13 helped slow fire growth and clear the smoke as crews began mop-up operations and backhauling equipment. Crews removed more than 25 tons of hose,

pumps, sprinklers, portable water tanks and other equipment that had been used to protect structures. On July 23, all evacuation notices were lifted, and the number of personnel assigned to the fire dropped to under 400 as the fire transitioned to a Type 3 incident management team.

Over the next week there was occasional smoke as pockets of unburned fuel within the perimeter burned and firefighters mopped up and patrolled for hot spots. The fire transitioned to a Type 4 incident management team from the Fairbanks Area on July 30.

Lightning also started the 17,499-acre **Nugget Creek Fire** on June 21 in the Chena River State Recreation Area, approximately 35 miles east of Fairbanks. The fire was on the south side of Chena Hot Springs Road near Mile 34 and south of the Chena River. Because it was in a Limited Management Option Area and nothing was threatened by the fire, no suppression action was taken, and the fire was placed in monitor status.

The Nugget Creek Fire was initially managed by the Alaska Green T2 IMT that was also managing the Shovel Creek Fire but was turned back over to the Fairbanks Area. While the fire did not pose a threat and remained south of the Chena River, flames and smoke were highly visible from Chena Hot Springs Road, producing considerable interest from the public. Two information officers provided information to tourists and recreators along Chena Hot Springs Road in the state recreation area for the month that the fire burned.

Firefighters set up protection measures around Nugget Creek Cabin, a State Parks public-use cabin on the South Fork Chena River five miles south of Chena Hot Springs Road, but took no action except to monitor the fire to ensure it did not cross the Chena River and/or Chena Hot Springs Road. State Parks closed the cabin and the Mastodon Trail leading to it, as well as the Granite Tors Trail, due to their proximity to the fire. The Nugget Creek Fire was placed in monitor status on July 31 after receiving significant rainfall.

The 896-acre **Kobe Fire** was another wildland urban interface fire that prompted evacuation alerts for two remote subdivisions near the community of Anderson south of Fairbanks. The fire was reported at 6:45 p.m. on July 11 as a rapidly growing fire west of the Parks Highway near Mile 275, about 10 miles south of Anderson. The fire was about 2½ miles west of the Parks Highway and west of the Nenana River. Alaska State Troopers assisted with evacuations in the Kobe Agriculture Subdivision and a Level 2 (Set) evacuation alert was issued for the Anderson Subdivision. The fire exhibited extreme fire behavior including running, torching, and crowning.

Multiple structures were initially threatened and firefighters from DOF and the Anderson, Tri-Valley, and McKinley volunteer fire departments responded to assist with evacuations and structure protection. Due to heavy smoke caused by multiple fires in the Interior, aircraft could not be used to drop retardant or water, and eight smoke-jumpers and two hotshot crews had to respond by ground.

By 11 p.m. the fire had grown to an estimated 600 acres and Level 3 (Go) evacuations were ordered for both subdivisions and a Level 2 (Set) evacuation notice was issued

for Anderson. Fire behavior moderated late in the evening when a thunderstorm moved through the area and rain fell on the fire.

Light rain and cooler temperatures on July 12 helped moderate fire behavior and three crews were mobilized from other fires to assist with the Kobe Fire, estimated at 1,200 acres. Crews began building and plumbing containment lines with pumps and hose while dozers were used to build control lines. Evacuation alerts were reduced or removed on July 13.

A Type 3 incident management team took over the fire on July 15 and firefighters spent the next week using heavy equipment to put a control line around the fire. Helicopter water drops extinguished hot spots and spot fires along the containment line once the smoke cleared and aircraft could fly.

Rain and cooler weather tempered fire activity as crews began mop-up operations. Smoldering berm piles and strong winds produced spot fires outside containment lines and caused burned trees to fall, which posed safety concerns for firefighters during mop-up. The fire was declared controlled and was demobilized on July 29.



Mosaic pattern of Rainbow 2 Fire. (Mike Goyette)

Delta Area: 16 fires, 18,527 acres

The Delta Area was snow-free by mid-March, producing very high fire danger, evidenced by the start of the Oregon Lakes Fire on military land on April 30, one of the earliest project fires in Alaska's fire history.

The Delta Area had the fewest number of fires of any DOF Area but one of those fires kept the Area busy for two months. A total of 18,527 acres burned.

The 18,452-acre **Rainbow 2 Fire** was started by lightning on June 29 about 15 miles west of Delta Junction and eight miles north of the Oregon Lakes Fire. Fueled by a large expanse of black spruce, the fire grew rapidly and was estimated at 200 acres two hours after being reported.

The fire exhibited extreme fire behavior with 100-foot flame lengths and spotting at the head. An aggressive aerial response slowed the fire's spread. Eight smokejumpers protected cabins on Rainbow Lake and along the Richardson Clearwater River about eight miles northeast of the fire.

The Rainbow 2 Fire remained quiet with minimal growth before flaring up on July 5, producing smoke visible from Delta and Salcha. Water and Blaze Tamer were dropped to slow the spread, but no firefighters were put on the ground. The fire continued to move north and west toward the Richardson Clearwater River and when it grew to an estimated 5,000 acres on July 9, a 10-person fire-use module from Utah was assigned to manage and monitor the fire.

Winds on July 11 caused the fire to make a 3-mile run to the northeast before stopping within one-quarter mile of multiple recreational cabins on the Richardson Clearwater River. Fortunately, the cabins had already been prepped with pumps, hose, and sprinklers during the Oregon Lakes Fire and that equipment was still in place. Firefighters merely had to ensure the equipment was still operable, saving a tremendous amount of time and effort.

A Type 3 incident management team took over the fire, which had grown to nearly 12,000 acres, and was assisted by the Utah fire-use module, two five-person initial attack squads, and a five-person helitack crew from the Area. The National Guard brought in Blackhawk helicopters to assist with water drops on the northern flank of the fire closest to cabins on the Richardson Clearwater. River boats were hired to transport supplies and firefighters to the field.

Two Type 2 initial attack crews were also brought in to assist. With the help of helicopter water drops, crews were able to keep the fire south of Clear Creek and no cabins in the Richardson Clearwater area were impacted by the fire.

Substantial rain in late July and early August moderated fire activity and allowed crews to reinforce control lines while using boats and helicopters to retrieve equipment from the field. At its peak, about 120 personnel were assigned to the fire and all personnel were demobilized by August 18.

Tok Area: 21 fires, 41,339 acres

The Tok Area had the second-fewest fires among DOF Areas, and most of the acreage was from two fires – the 25,252-acre McArthur Creek Fire and the 14,913-acre Boundary River Fire.

The **McArthur Creek Fire**, in a Limited Protection Area near the Alaska/Canada border southeast of Tok, was started by lightning on May 21. It was in a remote location and did not pose a threat to nearby communities, so no initial attack response was taken. The fire burned throughout the summer and was monitored by Area personnel, who protected a gold mine and a handful of other structures but took no direct suppression action.

The **Boundary River Fire** was started by lightning on June 23 in a Full Management Option Area about 40 miles southeast of Tok and 12 miles southwest of Northway. Burning in black spruce and driven by high winds, the fire grew to an estimated 1,600 acres in the first hour after it was reported as a 1-acre fire. Water-scooping aircraft and air attack responded for initial attack but given the size of the fire, limited resources, and a low probability of success no personnel were put on the ground to take direct action.



Great Northern Type 2 initial attack crew hikes back to camp from Boundary River Fire. (crew photo)

Great Northern Type 2 initial attack crew from Montana observes burnout operation in black spruce on Boundary River Fire from Nabesna River. (crew photo)



By June 28, the fire had grown to 8,000 acres and a Type 3 organization was assembled to manage the fire. Two Type 2 initial attack crews and two Type 2 hand crews were brought in to protect cabins and Native allotments along the Nabesna River.

The fire grew to an estimated 14,888 acres by July 9 when a National Incident Management Organization (NIMO) was brought in to take command of both the Boundary River and McArthur Creek fires. Crews used a combination of direct attack and point protection on values at risk in the direction of fire spread, including allotments north of the fire and the village of Northway. Firing operations were used to defend control lines.

Intermittent rain and cooler temperatures helped moderate fire activity and crews began mopping up and backhauling equipment on July 14. The NIMO team demobilized on July 17 and both the Boundary River and McArthur Creek fires were turned back to the Tok Area on July 18. The peak number of personnel on the fire was 200.

Copper River Area: 28 fires, 17,581 acres

Like most DOF Areas, the early spring brought an early start to a busy fire season for the Copper River Area. The first significant fire of the season was the 3.4-acre **Moose Creek Fire**, reported on April 30 along the Tazlina River about two miles southwest of Glennallen. The river was still frozen, and an aerial photo depicted the stark contrast of smoke rising from the fire next to ice sheets in the river.

A helicopter dropped water and a four-person helitack crew began suppression efforts on the ground while the Gannett Glacier Type 2 Initial Attack Crew was mobilized to the fire. The crew hiked about a mile into the fire and contained it within 48 hours.

It was relatively quiet in the Copper River Basin for much of the next two months before heating up due to extremely dry conditions, temperatures in the 90s, and lightning activity.

A lightning-caused fire near Lake Louise was reported on June 30 about four miles from residences, prompting an aggressive aerial response with four air tankers and two water-scooping aircraft. Air tankers boxed in the fire with retardant drops and water scoopers and a helicopter supported with water drops. The Type 2 UAF Nanooks Wildland Fire Crew and the Gannett Glacier Type 2IA crew were mobilized to the fire and spent two days mopping up before the fire was controlled and contained on July 2 at 53 acres.

A week later, the human caused **Klutina River Fire** was reported by residents on July 8 near Mile 16 Klutina Lake Road. The fire was in a Full Management Option Area one-half mile southeast of the Klutina River and about 20 miles south of Glennallen.

Three air tankers, a helicopter, and air attack responded, and eight smokejumpers were deployed on the fire to keep it from pushing north and crossing the river. The fire grew rapidly to an estimated 50 acres by the end of the night.

More resources were ordered, including two National Guard Blackhawk helicopters and the Gannett Glacier Crew, which was working on the nearby Tulsona Fire. Two crews from Montana were shuttled to the fire by boat on July 10 to bolster containment efforts.

Suppression efforts were hampered by low visibility that prevented use of water-scooping aircraft, but helicopter water drops supported firefighters on the ground. Mother Nature assisted with some much-needed rain early in the incident and firefighters contained the fire at 176 acres. All resources were demobilized from the fire by July 21.

The Area also handled the response for two lightning-caused fires in Wrangell-St. Elias National Park and Preserve. Both the 207-acre **Long Fire** and the 2,130-acre **Chetaslina Fire** were reported in Limited Management Option areas inside the park and preserve where fire is allowed to play its natural and ecological role. The Long Fire was reported on July 10 and the Chetaslina Fire was reported on July 17. Smoke from the Chetaslina Fire was visible from the Richardson Highway, drawing attention and interest from passing motorists and residents.

Area personnel coordinated with the National Park Service to monitor the fires and assess any values for possible point protection. A community meeting was held in Kenny Lake on July 22 to provide information to the public. No suppression actions were initiated and heavy rain (2.5+ inches) on July 25-27 reduced activity and both fires were placed in monitor status on July 30.

Four lightning-caused fires in a Limited Management Option Area south of the Glenn Highway in mountains on the eastern shore of Tazlina Lake also required considerable attention. The **Tokaina Creek** and **Tokaina 2 Fires** were reported on July 17 and were



Start of the Klutina River Fire on July 8. (Tim Whitesell)



Roadside thank you signs for firefighters working on the McKinley Fire posted by members of the public.
(Mike McMillan)



Janet Ladd is recognized for her years of service by DNR Deputy Commissioner Brent Goodrum (L) and State Forester Chris Maisch.

placed in monitor status. The **Tokaina 3 Fire** was reported as a 4-acre fire near the Tokaina 2 Fire on August 9 and determined to be a lightning holdover.

The Tokaina 2 Fire grew to more than 2,000 acres and on August 10 the Pioneer Peak Hotshots were flown in to protect two cabins on High Lake; they remained on the fire until August 19, when it was placed back into monitor status. On August 21 two Area personnel were inserted to more closely monitor the fire, which had grown to 3,300 acres. Water drops from a helicopter cooled the fire's edge closest to the cabins.

The **Tokaina 4 Fire**, meanwhile, was found during a reconnaissance flight of the Tokaina 2 Fire on August 28. That fire, also determined to be a lightning holdover from July, was two-tenths of an acre when discovered in a Modified Management Option Area. With continued dry conditions, the Tokaina 2 Fire grew to an estimated 9,000 acres on September 3. Smoke and flames from the four fires were visible from the Glenn Highway, attracting attention and reports from motorists.

Firing operations kept the fire from encroaching on the two cabins and drones were used to monitor the fires until they were demobilized on September 19. Over the course of two months, the four Tokaina fires used seven incident commanders, two hotshot crews, and over 100,000 gallons of water from two Type 3 helicopters, as well as a continual presence of personnel at the High Lake cabin sites.

The active, late-season burning at elevations of more than 4,500 feet surprised fire managers but was indicative of the extremely dry conditions that allowed fires to burn well into September. The last reported cumulative acreage for the four Tokaina fires was 14,981 acres.

Janet Ladd, who was the lead dispatcher for the Tok/Copper River Area for many years, retired this year. She was also a longtime member of the Alaska Incident Management Team, where she served as a Logistics Section Chief.

PROGRAM MANAGEMENT

The fire season began with a change in leadership, as Norm McDonald was named chief of the Fire and Aviation Program on May 1. He replaced long-time chief, Tom Kurth, who retired in December 2018. Norm has worked for DOF for 30 years and was previously the Mat-Su/Southwest Area fire management officer based in Palmer.

Norm began his wildland firefighting career in 1989 as a member of the Alaska intern crew. Over the next 17 seasons, he worked on hand crews, engines, and helitack. In 2006, he became the fire management officer for the Anchorage/Mat-Su Area, overseeing wildland fire responses and management. He helped develop two permanent state fire crews, the Pioneer Peak Interagency Hotshot Crew and the Gannett Glacier Type 2 Initial Attack Crew, which remain key components of the state's initial attack resources. Norm responded to fires throughout Alaska and the Lower 48 as a member of the Alaska Incident Management Team where he now serves as incident commander.



Norm McDonald, new Chief of Fire & Aviation.

State Fire Support

More than 8,000 individuals filled Alaskan fire positions in 2019, coming from every state except Connecticut. The first Lower 48 support arrived on April 17. The state employed more than 767 emergency firefighters, providing \$6.5 million in wages. Alaskans filled 41 percent of the total firefighting positions and 29 percent of the crew assignments. Due to heavy fire activity in Alaska, only 14 Alaskans filled Lower 48 fire positions this year.

Fifteen Lower 48 interagency management teams were assigned to Alaskan fires and Alaska incident management teams were assigned to six fires. The National Incident Coordination Center (NICC) sent 27 jets with a total of 135 crews. The first NICC jet arrived on June 19 for the Swan Lake Fire and the last jet departed Alaska on September 11.

The state operated two mobilization centers to provide airport transportation, housing, meals and meeting space. A center operated at the University of Alaska Fairbanks until the school year began, when it moved to the Carlson Center. A center at the University of Alaska Anchorage operated through the season even after school was back in session. The National Guard Armory Alcantra was activated in case southcentral fires needed additional support. The National Guard also assisted with evacuations, traffic control, and by providing Blackhawk helicopters.

The division mobilized nine engine task forces to fires on the road system to supplement DOF equipment. The engines were provided by volunteer fire departments, municipalities, and private sources. The division used nearly 400 vendors to provide \$20 million in services, equipment, food, fuel, and other supplies to support wildland firefighters in the field.

Fire Warehouse

The warehouse issued 950 miles of hose (over 50,000 lengths) and 1,934 pumps to incidents in 2019. By comparison, only 156 pumps were issued last year. The warehouse ordered 7,185 fresh food boxes - 4,055 to fires in state protected areas, and 3,130 to federal AFS fires. This was the first year the state used Hot Shot Caterer to supply fresh food; it supplied food on the Shovel and the McKinley fires.

For the first time, the warehouse brought supply trailers from six Lower 48 caches. Supplies in the 24 53-foot trailers included 530 miles of hose (28,000 lengths), 500 pumps, 220 chainsaws, and 8,000 gated wye hose valves.

Due to increasing incidents of theft, staff installed a chain link fence around the warehouse compound in Fairbanks and is in the process of completing an electric gate system. In addition, a tent structure was installed to protect supplies and equipment from the elements.

Communications

The division participates in the Alaska Land Mobile Radio (ALMR) system. However, since wildland fires occur outside of the ALMR system, the division also maintains a legacy analog communication system to ensure it can operate statewide. To keep pace with the changing communication environment, the Communication Section is identifying repeaters to update to digital, and areas where additional repeaters may be needed.



Jerri Webster retired from position of Palmer warehouse manager, after working for the state for nearly 30 years.

Support Staff

Jerri Webster retired after working for the state for nearly 30 years, 23 of those with Forestry. She started in 1996 in McGrath where she worked at the mess hall for eight seasons. Jerri transferred to the Palmer Warehouse in 2004 and worked in all areas of operations. In 2006, she was promoted to warehouse manager, where she served for 13 seasons until her retirement. Jerri also worked on the Alaska Type 1 Incident Management Team in different capacities and was a primary logistics chief for eight seasons. Amber Rosser has been hired as the Palmer Warehouse manager.

Betsey Torres transferred from Northern Region accounting to a seasonal state logistic dispatch position. Barbara Kraemer stepped in as acting support forester for much of the summer during K.T. Pyne's absence.

Firefighter Property Program

The U.S. Forest Service Firefighter Property Program (FPP) offers property to fire suppression, fire prevention, and related emergency service agencies registered with the State Fire Marshal. The Division of Forestry operates under federal program regulations, and fire departments are required to sign agreements of cooperation with the division to participate.

The U.S. Forest Service updated the FPP agreement last year and DOF signed a new agreement this summer. DOF is now working with local fire department to update

their agreements. New procedures are as follows:

- States must have an updated certified inventory that accurately describes all assigned property and its status,
- States must monitor FPP items that go to fire departments, and
- All FPP items must be placed into service within one year of acquisition or returned.

In 2019, DOF screened and acquired property through the FPP program valued at an estimated \$82,741. Items included a cargo carrier and a parts washer for the Palmer Warehouse. Additionally, fire departments acquired 82 items.

Aviation Program

This very long and busy fire season was the 17th year of operation with no accidents or incidents. Aviation Program staff have achieved this record by ensuring that safety and training are always the top priorities.

The two turbine Commanders and Shrike 500 contributed well over 500 hours of flight time, all in Alaska. The USFS Federal Excess Property Program DHC-2 Beaver flew more than 100 hours in support of fire missions. This was the second year of the five-year contract for two of the Convair 580, type 2 airtankers supplied by Conair of Abbotsford, BC. One was based in Palmer and the other at the Ladd Army Air Base in Fairbanks.

Due to increased fire activity, the division requested aid from Northwest Compact members and by mid-summer, two Convair 580 airtankers and four CL215T Super Scoopers from the Province of Saskatchewan were based at the Palmer Tanker Base. In addition, a large RJ-85 four-engine jet airtanker carrying 3,000 gallons of retardant arrived from Conair of Abbotsford BC. The division also requested four CL215Ts from Alberta when the Saskatchewan aircraft were recalled due to activity in that province.

Soloy Helicopters provided three long-term contracted type 2 helicopters, located in Palmer, Fairbanks and Soldotna. Temsco Helicopters provided one type 2 helicopter for Delta, a new contract. Pathfinder Helicopters provided two type 2 helicopters for McGrath



Air tanker drops load of retardant on Malaspina Fire during initial attack on July 8 while helicopter dips bucket of water from pond. (Ed Soto)

and Tok. These rotorcrafts provided platforms for both initial attack helitack, and logistical support. All six helicopters were extended past their normal contract end dates.

Additionally, at the peak of fire activity, the division contracted 42 “call-when-needed” helicopters for use throughout the division’s fire protection area. This included six “heavy,” large helicopters, which was a first for the division. DOF appreciated the Alaska National Guard provision of Black Hawk helicopters, water buckets, and crews for fires in Anchorage, the Talkeetna area, the Swan Lake Fire, and the Delta area.

The aviation program saw only one staff change this year. Randy Weber, long time pilot, retired on November 15. The division expressed its appreciation for his excellent and professional service this fire season and wishes him the very best in future endeavors.

On November 1, Chief Pilot Doug Burts, who is on seasonal leave, accepted a 120-day assignment in New South Wales, Australia as a contract Bird Dog pilot, using planes that are similar to state aircraft. The knowledge and experience Doug gains benefits Alaska’s program. Australia also contracted with three tankers from the Lower 48.

National Fire Plan & Wildland Urban Interface Projects

The National Fire Plan was adopted in 2000 to provide grants to states on a competitive basis to reduce the threat of fire in wildland/urban interface areas. Funds are also available for wildfire prevention and education programs, mitigation, capacity building, and homeowner and community assistance. The Division of Forestry uses these U.S. Forest Service funds to support a variety of educational and mitigation projects:

Initial Attack Fire Fighters

National Fire Plan funds enable DOF to retain 10 permanent seasonal initial attack firefighters in Palmer, Fairbanks, Soldotna, Delta, and Tok. These firefighters improve the initial attack capabilities of state, local government, and volunteer fire departments in urban interface areas. Effective initial attack reduces suppression costs and minimizes threats to private and public property from wildland fire.

2019 Projects

Tok Escape / Safe Area: This project created multiple sites within the community where firefighting resources, including heavy equipment used in fire suppression efforts, could be staged, offloaded, and remain safe in the event of a passing flame front. The grant helps meet the objective during every fire to keep firefighters safe. The work and final report have been completed.

Olnes & Cripple Creek (near Fairbanks): DOF employees cut 15 acres of shaded fuel breaks and the White Mountain crew spent 13 days cutting fuel breaks. Crews used chainsaws to cut flammable vegetation, creating 100-foot wide shaded fuel breaks. Trees were thinned to a minimum of 10-15 feet apart and bottom limbs were removed up to six feet. Birch, aspen, and white spruce were the preferred species to remain. Black spruce and other fire prone vegetation was cut and piled to dry for one or two years. Piles will then be burned in compliance with Alaska Department of Environmental Conservation regulations and DOF policies, and when weather conditions allow for adequate smoke dispersion.

McGrath, Takotna, Nicolai, Telida Hazardous Fuels: Due to a busy fire season, DOF will begin this project in 2020 to mitigate hazardous fuels on a total of 196 acres. A 95-acre shaded fuel break will be constructed in McGrath to protect utility corridors, homes, and businesses. A 63-acre shaded fuel break will be constructed around Takotna, reducing the risk to homes, the school, businesses, and other infrastructure; and 10 acres will be treated to protect the historic Russian Orthodox Church in Telida. A total of 28 acres will be cleared around the dumps in McGrath, Takotna, and Nikolai. The work will be completed by DOF and local resources.

Caswell Fuel Mitigation Phase I: DOF reduced fuels in Caswell along Hidden Hills Road, to create safe passage in and out of the community on its only access road. In 2019 a minimal amount of thinning was completed (five acres) due to the active fire season. The project is divided into three units of state and borough land within a high fire risk zone. DOF fire crews and wildland fire and resource technicians will build on work done in 2018-2019 to treat 320 acres. The project is a very visible model for property owners to use in creating shaded fuel breaks on their land. DOF will also provide outreach and Firewise materials on the benefits of creating defensible space.

Alaska Urban Interface Fire Education & Outreach Program: Funds were sub-awarded to Alaska Natural Resources and Outdoor Education (ANROE) to deliver 12 one-credit fire education and prevention courses and to develop online teaching resources for K-12 educators. The project targets educators in communities with growing WUI areas and increased risk of wildfire both on and off the road system. Four workshops have been delivered in Fairbanks, Soldotna, Tok, and Delta, and eight more will be offered in 2020 and 2021. Additionally, ANROE converted fire background materials to an online audio and visual presentation and uploaded it to the national Project Learning Tree website. The materials include graphics and video about boreal forest ecology and fire from Alaska and Canada.

Delta Area WUI Hazard Fuels Reduction & Homeowner Education: This project provides 50/50 cost share grants for homeowners to break up continuous fuels in high risk areas and create defensible space. Approximately 25 ownerships and 60 acres will be treated. The program began in 2018 and garnered so much interest that it is at its capacity and additional funding will be sought to meet the demand. The project also funded 54 Firewise assessments and thinning of 26 acres of spruce on private land to aid in home protection. Plans are under way for additional fuels projects on the west side of the Delta River north of the Donnelly Training Area–west.

LEARN Before You Burn: Passage of House Bill 355, “The Human-Caused Wildland Fire Reduction Act”, in 2018 was the first major revision to the division’s wildland fire and prevention program and statutes since 1961. It requires DOF to kick off a statewide public education and information campaign to convey the updated and reorganized fire prevention laws and enforcement actions. The campaign aims to reduce human caused wildfires by 10 percent annually. Plans include developing and launching 20 public service announcements and a smartphone app on safe burning practices, distributing Firewise and safe burning materials, and holding 22 workshops in high risk WUI communities where humans are the leading cause of wildland fires.

Kenai Peninsula State Parks Fuels Reduction Phase II: Work began in late fall and will continue in 2020. The project mitigates fuel loading and lowers overall fire risk potential on 275 acres with high to extreme hazard fuel on Alaska State Parks parcels at Morgan's Landing and Funny River, which border communities of Sterling and Funny River. Phase 1 mitigated 133 acres of hazardous fuels in the Scout Lake Recreation Area. In Phase II, DOF technicians will hand thin black spruce on the two sites. Larger, healthy spruce will be left to provide shade, limiting the introduction of blue joint grass, which carries fire in spring and fall conditions. Useable firewood will be made available to the public free of charge. Two interpretive signs will be constructed to display each treatment measure and location. Firewise and "Ready, Set, Go" materials will be distributed in nearby neighborhoods and made available at treatment sites.

Sunset Fuels Break Phase I: Due to the busy fire season, work will begin in 2020 to protect the communities of Meadow Lakes and Houston from wildfire. A DOF crew will thin trees, remove brush, and abate slash, using an existing seismic line corridor to create a 150 to 200-foot shaded fuels break over about three miles of a proposed seven-mile fuels break on state managed lands. Crews will treat 60 acres of highly concentrated hazardous fuels, much of it spruce recently killed by beetles. Two kiosks will be constructed at the site to provide information about the project and benefits of fire adapted communities and shaded fuel breaks. DOF will partner with Mat-Su Borough fire chiefs to distribute Firewise literature at public events, community council meetings, and fire stations.

Anderson Community Fire Resilient Landscape: This project will create 80 acres of shaded fuels breaks adjacent to fire prone areas in Anderson. DOF will provide information to residents on Firewise principles, wildfire prevention, and shaded fuel break maintenance through workshops, handouts, and mailings. The goal is for Anderson to become a fire resilient and fire adaptive community. A DOF crew will hand thin 50 acres of black spruce, ladder fuels, brush, and hazardous trees on state land bordering residential and city properties, taking advantage of natural barriers where possible. The crew will also construct a 30-acre shaded fuel break between Anderson and Clear Air Force Base, increasing protection of the AFB. Useable firewood will be made available free to the public.

Tok Area WUI Project: Two fuel breaks, totaling 187 acres, will be established on the western side of Tok to protect the community from wildfire. In the Mackenzie South area mechanized equipment will be used to clear cut 125 acres in patches to create a non-continuous fuel break. DOF will contract with a local wildfire crew to hand-cut a 62-acre shaded fuel break along the eastern and southern boundaries of Eagle Subdivision. The Tanana Chief's fire crew plans to establish a fuels reduction squad that will be available most of the fire season. The Alaska Gateway School District will provide the equipment and labor to remove, process, and transport approximately 5,000 tons of hazardous fuel for use in the school's biomass boiler. Due to the extended fire season in 2019, work will begin during the 2020 field season.

Building Resilience: A Landscape Approach to Fire Prevention & Education: The project will raise public awareness of wildfire risk; support activities that contribute to better prepared, more resilient fire adapted communities; and prevent human-caused fires in wildland-urban interface areas in Mat-Su and Southwest communities over a three-year period. There are five categories of activities: 1) homeowner education, 2) outdoor recreationist education, 3) homebuilder and contractor education, 4) children/youth education; and 5) rural community fire prevention. Planning is taking place for implementation in 2020.

Matanuska-Susitna Borough Landowner Hazardous Fuels Reduction: Grant funds are being used to provide Firewise education and homeowner defensible space measures via 50/50 cost share grants in high risk WUI areas in the Matanuska-Susitna Borough. Black and white spruce and beetle-killed white spruce are the dominant fuel types in this area. This project will reduce hazardous fuels on 130+ acres of approximately 130 ownerships, a goal in the MSB Community Wildfire Protection Plan.

Kenai Peninsula WUI Defensible Space and Education: This project received only a portion of the \$276,880 requested because DOF reached the maximum that any western state can receive through the competitive WUI grant process. The project provided Firewise educational outreach and 50-50 landowner cost share assistance to reduce hazardous fuels on approximately 15 acres of private land on the Kenai Peninsula. The project has been completed.



Area burned by McKinley Fire taken on August 18. (Maureen Clark, Bureau of Land Management)

VOLUNTEER FIRE ASSISTANCE
GRANTS TO RURAL FIRE
DEPARTMENTS

Fire Department	Amount Awarded
Anchor Point VFD	\$7,500.00
Bear Creek VFD	\$2899.68
Bethel VFD	\$3725.55
Butte VFD	\$7,498.35
Caswell Lakes VFD	\$6,589.72
Chena Gold Stream Fire & Rescue	\$7,300.29
Craig VFD	\$3,633.75
Ester VFD	\$3,555.00
Fire Protection Area #1 (Bayside)	\$5,063.40
Gakona VFD	\$7,470.00
Gustavus VFD	\$3,735.00
Haines	\$3,574.80
Houston VFD	\$7,463.70
Kachemack Emergency Services	\$6,664.72
Kenai FD	\$7,467.97
Kennicott/McCarthy VFD	\$7,496.44
Lowell Point VFD	\$7,500.00
Nikiski VFD	\$6,466.49
Ninilchik Emergency Services	\$7,470.45
Nondalton VFD	\$5,616.20
Northway VFD	\$4,123.00
Palmer Fire & Rescue	\$3,641.06
Seward FD	\$2,667.50
Talkeetna VFD	\$7,500.00
Tok VFD	\$3,756.75
Tri-Valley VFD	\$3,130.00
Valdez VFD	\$2,633.00
West Lakes VFD	\$3,750.00
Willow VFD	\$7,272.00
Grand Total	\$224,999.19

2020 Projects

Two of the division’s four applications, totaling \$444,325, were recommended for funding through the 2020 Western WUI Competitive Grant process. Implementation depends on the U.S. Forest Service receiving these funds in Federal FY 2020. West-wide (17 states and territories) there were 87 applications requesting a total of \$24 million and only \$14 million was available so it was a very competitive process.

West Wide Risk Assessment - Alaska Fuels Mapping Improvement Phase I - \$150,000: The project will focus on areas designated as Critical and Full Fire Management Options that have the highest values at risk and are the highest priorities for initial attack. Improving Alaska’s current vegetation type and fuels map is necessary to accurately assess fire risk in the WUI. Mapping will be contracted to a company with expertise in mapping the Alaska landscape. The resulting product will be used to identify issues with LANDFIRE vegetation classifications and new classifications, and as reference for, and integration with, the LANDFIRE Remap work scheduled for 2021.

Delta River West Fuels Mitigation - \$294,325: This project aims to protect Delta Junction and Whitestone by constructing 400 acres of shear-blade units that will be used as control lines during a wildfire to the west of Delta Junction. The work implements strategies in the Alaska Forest Action Plan and Delta Junction Community Wildfire Protection Plan.

Volunteer Fire Assistance Grants to Rural Fire Departments
The Volunteer Fire Assistance (VFA) program provides funds to increase firefighter safety, improve the firefighting capabilities of rural volunteer fire departments, and enhance protection in the wildland urban interface. The funds come through the U.S. Forest Service and are administered by the Division of Forestry.

In 2019, the VFA Grant Program provided \$224,999.19 to rural fire departments. The division received requests from 43 volunteer fire departments for equipment, training, and prevention activities and funded 42 departments.

Fire Training Program

The division provides training to maintain a qualified and safe workforce, ready to respond to wildland fires and other emergencies. Interagency courses are open to federal cooperators, structure fire departments, local governments, other state agencies, emergency firefighters, other geographic areas, and Canadian fire agencies.

National Level Training in Lower 48

Division personnel participated in advanced level training offered by the National Advanced Fire and Resource Institute that prepared them to serve on Alaska’s Incident Management Teams, to train future instructors, develop air attack and airtanker base manager programs, and train wildland fire investigators. Personnel were also trained as extended attack incident commanders, which are critical for type 3 complex incident management.

This year, 16 Division of Forestry employees and one emergency firefighter attended the following 12 courses in the Lower 48 for a total of 496 hours:

- Air Service Manager - 1
- S-340 Human Resource Specialist - 1
- Air Tanker Base Manager - 1
- S-359 Medical Unit Leader - 1
- Engine Academy (Instructor Training) - 1
- S-371 Helibase Manager - 1
- FI-310 Wildland Fire Investigation Case Development - 1
- S-375 Air Support Group Supervisor - 1
- M-582 Fire Program Management-Leading Complex Programs - 1
- S-491 Intermediate National Fire Danger Rating System - 1
- S-300 Extended Attack IC - 4
- S-520 Advanced ICS – 3

Instate Training

Training that meets national standard qualification requirements is key to maintaining experienced personnel qualified to fight fires both in and out of Alaska. Training is offered for fire departments, local governments, federal cooperators, emergency firefighters, DOF, the Division of Homeland Security, Alaska Railroad, and the military.

Structure fire departments across the state, including at JBER, assist the division in fire suppression in populated areas through cooperative agreements. These cooperators are a valuable source of trained, experienced firefighters.

DOF supports Native corporation crews through agreements with the Tanana Chiefs Conference (TCC), Chugachmiut Corporation, and the University of Alaska Fairbanks. Support consists of training, issuing red cards, tracking training and experience



Gannett Glacier Fire Crew members taught basic wildland firefighting skills to King Tech High students in Anchorage to help grow a future firefighting force. The course covered pumps, saws, suppression tactics, risk management, basic fire behavior, and entrapment avoidance. Crew member Elias Stratton demonstrates safe use of chainsaws. (Bryan Quimby, Gannett Glacier Crew)

records, and assisting with mobilization. Administrators from TCC, Chugachmiut, and UAF attended IQS training.

The Division of Forestry, the Alaska Fire Service, U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, fire departments, and local governments co-operate to provide most in-state training. They use agency employees, Alaska contractors, and Lower 48 subject matter experts as instructors. DOF instructors share their years of experience and subject matter expertise to provide excellent training to students. Area staff delivered many basic firefighter courses including fire line safety refreshers, fitness testing, pumps, saws, initial attack IC, squad boss, and followership to leadership courses.

The flex plan for wildland fire and resource technicians and wildland fire dispatchers allows employees to move up to a higher pay grade by meeting training and experience requirements. Many courses are offered to meet flex plan training requirements.



2019-S244 Field Observer, a DOF flex plan training requirement for wildland fire resource technicians. Instructors L to R: Dale Woitas, FWS, Lead Instructor; Melania Stoeber, AFS; Matt Snyder, DOF; and Chris Wennogle, AFS.



2019-CAN290 Intermediate Course on Fire Behavior and Canadian Forest Fire Danger Rating System, which Alaska uses to help predict fire behavior. Instructors L to R: Jennifer Barnes, NPS; Jennifer Hrobak, NPS; Chris Moore, AFS; Eric Miller, AFS; and Tom St. Clair, BLM.

In-state Training Summary

Five DOF employees and 19 students from the Alaska Fire Service, National Park Service, and Chugach National Forest completed the S-420 Command and General Staff Exercise Course. This helps build capacity for Alaska’s Incident Management Teams. Students went on to become section chief trainees within the ICS organization, and 109 interagency students attended the required Incident Command organization classes.

Statewide training required by the National Wildfire Coordinating Group (NWCG) and the state’s flex plan was emphasized. Courses presented were: Basic Air Operations, Helicopter Crewmember, Field Observer, Fire Operations in the Wildland Urban Interface, Division/Group Supervisor, and Intermediate Fire Behavior with the Canadian Forest Fire Danger Rating System. The NWCG offered students the opportunity to complete a portion of the course work online and the remainder of the courses with instructor-led training, a cost savings to the DOF.

Fire management courses were offered to train resource advisors, future instructors, and incident qualification system account managers. Warehouse personnel were trained to safely transport hazardous materials, and Prescribed Fire Implementation and Planning courses were also provided.

Dispatch classes rotate every three years in Alaska. In 2019, Aviation Dispatcher, Dispatch Recorder, and ROSS were presented. It was also the year IC Simulation and IFM for Dispatchers was offered.

Aerial supervision training refreshed air tactical group supervisors to lead air tankers into fire areas. Helicopter managers received refresher training to meet national certification requirements, and 23 students attended the Air Tanker Base Manager Refresher. Aerial Firing Refresher was presented to DOF area offices.

Leadership courses were presented for all levels of qualifications. Single resource bosses received training in L-280 Followership to Leadership and unit leaders received training in L-380 Fireline Leadership. Several fire prevention and enforcement courses were conducted: the annual Fire Prevention Workshop, FI-210 Wildland Fire Origin and Cause Determination, and Prevention Officer Enforcement Training for HB355 were presented to 58 students.

The Alaska Crew Boss Academy for interagency Type 2 crews is usually presented in odd numbered years, however, due to low enrollment numbers the academy was canceled. DOF Type 2 crews received the required NWCG courses to meet national training requirements.

A new edition of the 310-1, Wildland Fire Qualification System Guide was released in October. The title was changed to NWCG Standards for Wildland Fire Position Qualifications. Position qualification standards are also located in the NWCG

ALASKA STATEWIDE COURSES					
Class type	Courses	Instructors	Hours	Students	
ICS	4	10	80	109	
Suppression	14	74	320	284	
Dispatch	3	10	64	57	
Prevention	3	13	120	58	
Leadership	2	9	64	46	
General Management (READ, IQS, MOI, Haz Mats)	4	10	80	79	
Prescribed Fire	2	10	40	18	
Totals	32	136	768	651	

STUDENTS STATEWIDE						
Class type	DOF	Local Gov’t	EFF	Federal	Other	Total
ICS	14	19	0	58	18	109
Suppression & Prescribed Fire	142	7	31	121	1	302
Dispatch	15	0	2	40	0	57
Prevention	43	1	0	12	2	58
Leadership	29	0	0	17	0	46
General Mgmt.	49	4	1	25	0	79
Totals	292	31	34	273	21	65

Position Catalog, <https://www.nwcg.gov/positions>. Copies of the qualification guide are available on the NWCG website: Visit <https://www.nwcg.gov/publications/310-1> for the links to the web-based PMS 310-1 and NWCG Position Catalog.

Online training increases the opportunity for students to attend Fire Suppression, ICS, and Aviation courses. Information may be found at:

- <https://www.nwcg.gov/publications/training-courses> – Online NWCG courses
- <https://training.fema.gov/is/> – FEMA Independent Study (IS) courses, Incident Command System
- <https://www.iat.gov> – Interagency Aviation Training
- <https://nationalfiretraining.nwcg.gov> – National Wildland Fire Training

Denali Peak Performance Award

DOF Safety Officer Tom Greiling, Statewide Training Coordinator Cindy Forrest-Elkins, and Training Specialist Carrie Hale received a Denali Peak Performance Award honorable mention for developing and implementing a safety training program offered predominantly online. Implementing online safety training required by OSHA and the division helps reduce the cost of delivering training for employees.

Priority Trainee Program

There is a shortage of qualified applicants for fire management and incident management positions. The Priority Trainee Program develops an interagency workforce by mobilizing trainees to incidents, assisting them in gaining critical experience for fire management positions, and planning for succession of incident management teams. It is crucial that the interagency wildland fire community continue to promote work force development to fill future vacancies.

All geographic areas in the U.S. participate in the Priority Trainee Program. As of early December, 630 priority trainees had been mobilized from all geographic areas. This year, 89 DOF Priority Trainee Program applicants served in a variety of positions. They completed 19 position task books and many others began work but need additional assignments to become qualified.

PRIORITY TRAINEE PROGRAM	
ICS Positions	Priority Trainees
Command	90
Operations	139
Air Operations	62
Plans	92
Finance	90
Logistics	107
Dispatch	50
Total	630



Short-term, non-perm firefighters work to contain the Oregon Lakes Fire.

Fire Medic Program

DOF maintains qualified fire medics to provide medical care to firefighters on the fire line. In 2019, 53 fire medics received incident qualification cards (red cards). Fire medics are certified as basic EMTs, advanced EMTs, and paramedics. Medical training is provided annually to meet certification requirements. DOF, in cooperation with the Alaska Fire Service, also maintains medical kits ready to be mobilized with fire medics.

In 2019 Alaska fire medics went on 78 Alaska assignments. An additional 192 fire medics were brought up from the Lower 48 to assist with Alaska fires. The continued development, training, and red carding of fire medics is key to maintaining firefighter safety on the fire line.

Alaska Academy and Short-term Nonpermanent Positions

The Division of Forestry funded 20 short-term, non-perm positions for an average of 30 workdays this year. Positions were divided between seven DOF offices. McGrath also hosted an Initial Attack Wildland Fire Module. An Alaska Crew Boss Academy graduate filled one position, Advanced Academy graduates filled five positions, previous year short-term non-perm (STNP) employees filled two positions, and one STNP was hired as a permanent division employee.

Short-term non-perm employees participated in 34 Alaska initial attack assignments and 21 Alaska fire assignments. Due to the busy fire season in Alaska no Lower-48 assignments were taken. The STNPs completed six position task books, initiated 21 position task books for further experience, and completed 69 classes, including 21 online.

The state has hired 20 STNP employees to permanent seasonal positions since 2013 and many are still employed.



Fire medic Terry Solomon works on 'patient' during first-aid training with White Mountain Type 2 Initial Attack Crew in Fairbanks. (Tim Mowry)

SHORT-TERM NON-PERMANENT POSITIONS

Office	STNP Positions	# Hired
McGrath	Fire Module: 1-WFERTIII, 4-WFERTII, 1-OA1	6
Mat-Su	1-WFDI	1
Kenai/Kodiak	3-WFRTI	3
Copper River	1-WFERTII, 1-WFDI	2
Tok	1-WFERTII, 1-WFRTI, 1-OAI	3
Delta	2-WFERTII	2
Fairbanks	2-WFERTII, 1-WFDI	3
Total Hired		20

2019 Alaska Division of Forestry Actuals

NOTE: Dollar figures are in thousands (e.g., \$40.5 is \$40,500.00)

FUNDING SOURCES	FOREST MGMT & DEVELOPMENT	FIRE PREPAREDNESS	FIRE ACTIVITY	TOTALS
General Funds	\$2,365.9	\$16,046.4	\$37,928.3	\$56,340.7
Federal Funds	\$3,391.5	\$1,359.8	\$33,564.0	\$38,315.3
Capital Improvement				
Receipts (Fed, GF,& SDPR)	261.7	565.9	0	\$827.6
Interagency Receipts	\$437.4	\$244.4	0	\$681.8
Timber Receipts	\$967.5	0	0	\$967.5
Other (SDPR)	0	0	\$285.5	\$285.5
TOTALS	\$7,424.0	\$18,216.4	\$71,777.9	\$97,418.3
POSITIONS				
Permanent Full-Time	29	28	0	58
Permanent Part-Time/ Seasonal	4	169	0	173
Non-Permanent	5	0	0	5

FOREST MANAGEMENT & DEVELOPMENT COMPONENT

RENEWABLE RESOURCE DEVELOPMENT & SALES	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Board of Forestry	0	0	\$11.7	\$11.7
Forest Practices	\$187.1	\$128.9	\$709.4	\$1,025.4
Forest Management	\$452.1	\$197.6	\$1,421.6	\$2,071.3
Interagency Receipts	0	0	\$437.4	\$437.4
Stat. Desig. Program Receipts (SDPR)	0	0	0	0
Federal Cooperative Forestry Assistance	0	0	\$3,391.5	\$3,319.5
Capital Improvement Receipts (Other)	0	0	0	0
Subtotals	\$639.2	\$326.5	\$6,233.3	\$7,198.9
Director's Office	0	0	\$225.0	\$225.0
COMPONENT TOTALS	\$639.2	\$326.5	\$6,458.3	\$7,424.0

FIRE SUPPRESSION PREPAREDNESS COMPONENT

	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Preparedness	\$3,358.0	\$2,068.1	\$10,620.2	\$16,046.3
Interagency Receipts	\$73.3	\$21.0	\$150.1	\$244.4
Federal Cooperative Intial Attack	\$303.5	\$118.7	\$937.6	\$1,359.8
Capital Improvement Receipts (Other)	0	0	\$565.9	\$565.9
COMPONENT TOTALS	\$3,734.8	\$2,207.8	\$12,273.8	\$18,216.4

2020 Alaska Division of Forestry Budget

NOTE: Dollar figures are in thousands (e.g., \$40.5 is \$40,500.00)

FUNDING SOURCES	FOREST MGMT & DEVELOPMENT	FIRE PREPAREDNESS	FIRE ACTIVITY	TOTALS
General Funds	\$2,433.8	\$17,124.8	\$13,641.0	\$33,199.6
Federal Funds	\$3,520.4	\$1,544.0	\$11,960.4*	\$17,024.8
Capital Improvement				
Receipts (Fed, GF,& SDPR)	\$265.0	\$582.2	0	\$847.2
Interagency Receipts	\$607.1	\$405.6	0	\$1,012.7
Timber Receipts	\$1,013.0	0	0	\$1,013.0
Other (SDPR)	\$4.7	0	\$1,500.0	\$1,504.7
TOTALS	\$7,844.0	\$19,656.6	\$27,101.4	\$54,602.0
POSITIONS				
Permanent Full-Time	29	28	0	57
Permanent Part-Time/ Seasonal	4	190	0	194
Non-Permanent	5	0	0	5

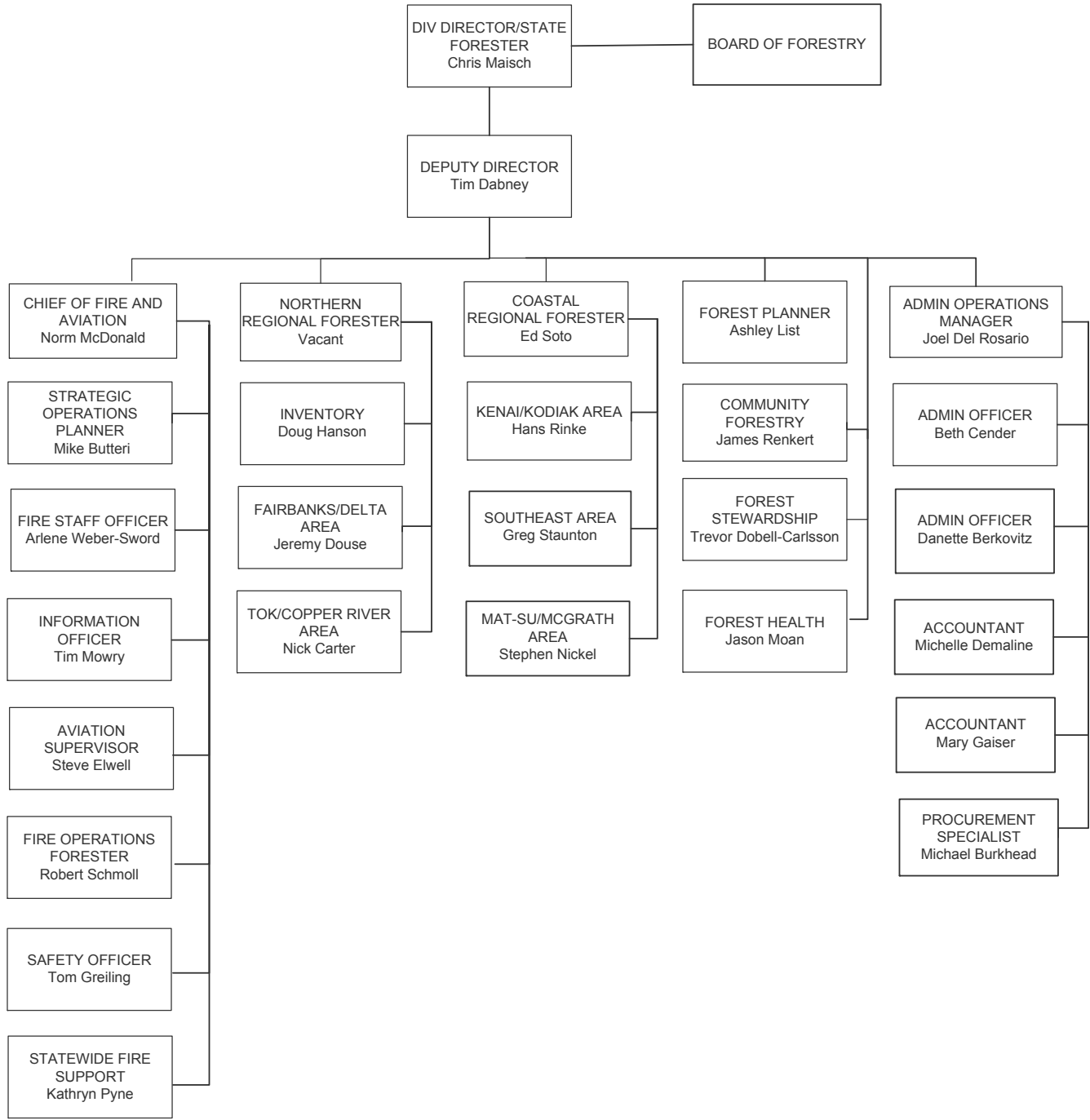
FOREST MANAGEMENT & DEVELOPMENT COMPONENT

RENEWABLE RESOURCE DEVELOPMENT & SALES	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Board of Forestry	0	0	\$14.0	\$14.0
Forest Practices	0	0	\$221.5	\$221.5
Forest Management	\$1,057.8	\$554.0	\$1,251.3	\$2,863.1
Forest Inventory and Analysis	0	0	\$1,078.2	\$1,078.2
Tongass Young Growth	0	0	\$1,078.2	\$1,078.2
Interagency Receipts	0	0	\$607.1	\$607.1
Stat. Desig. Program Receipts (SDPR)	0	0	\$4.7	\$4.7
Federal Cooperative Forestry Assistance	0	0	\$1,224.70	\$1,224.7
Capital Improvement Receipts (Other)	0	0	\$265.00	\$265.0
Subtotals	\$1,057.8	\$554.0	\$5,744.7	\$7,356.5
Director's Office	0	0	\$487.5	\$487.5
COMPONENT TOTALS	\$1,057.8	\$554.0	\$6,232.2	\$7,844.0

FIRE SUPPRESSION PREPAREDNESS COMPONENT

	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Preparedness	\$4,327.6	\$2,985.7	\$9,460.2	\$16,773.5
Interagency Receipts	0	0	\$419.8	\$419.8
Federal Cooperative Forestry Assistance	0	0	\$1,568.1	\$1,568.1
Capital Improvement Receipts (Other)	0	0	\$895.2	\$895.2
COMPONENT TOTALS	\$4,327.6	\$2,985.7	\$12,343.3	\$19,656.6

2019 Alaska Division of Forestry Organizational Chart



2019 Alaska Division of Forestry Directory

For current contact information see state employee directory: <http://alaska.gov/whitepages/>

State Forester's Office
550 West Seventh Avenue,
Suite 1450
Anchorage, Alaska 99501-3566
269-8463, fax 269-8931
Deputy State Forester
Tim Dabney, 269-8476
Admin. Operations Manager
Joel Del Rosario, 269-8477
Forest Planning
Ashley List, 269-8481
Community Forestry Program
Jim Renkert, 269-8465
Forest Health & Protection
(Insects & Disease)
Jason Moan, 269-8460

Fairbanks Office
3700 Airport Way
Fairbanks, Alaska 99709-4699
State Forester
John "Chris" Maisch, 451-2666

Forest Stewardship Program
(Landowner Assistance)
101 Airport Road
Palmer, Alaska 99645
Trevor Dobell-Carlsson,
761-6309
fax 761-6201

Fire Program Management
101 Airport Road
Palmer, Alaska 99645
Chief of Fire and Aviation
Norm McDonald, 761-6225

State Fire Operations
P.O. Box 35005
Ft. Wainwright, Alaska 99703
356-5850 fax 356-5855
Operations Forester
Robert Schmoll, 356-5850
AICC Logistics
356-5645
Intelligence
Gabriella Branson, 356-5671
AICC Coordinator
Katie Rubin, 356-5682
Strategic Operations Planner
Mike Butteri, 356-5858
Fire Behavior
356-5673
Fire Training & Prevention
269-8441

State Fire Support
3700 Airport Way
Fairbanks, Alaska 99709-4699
451-2608 fax 451-2763
Support Forester
Kathryn Pyne, 451-2608
State Logistics
451-2680
State Fire Warehouse
451-2640

Aviation Program
101 Airport Road
Palmer, Alaska 99645
761-6270 fax 761-6273
Aviation Manager
Steve Elwell, 761-6271
Coastal Aviation Mgmt
761-6231
Air Attack
761-6280

Regional Forester – Coastal
101 Airport Road
Palmer, Alaska 99645
761-6200
Regional Forester
Ed Soto, 761-6217

Regional Forester – Northern
3700 Airport Way
Fairbanks, Alaska
99709-4699
451-2660, fax 451-2690
Regional Forester
451-2670

Fairbanks – Delta Area
3700 Airport Way
Fairbanks, Alaska
99709-4699
451-2600, fax 458-6895
Area Forester
Jeremy Douse, 451-2601
Fire Mgmt. Officer
Ed Sanford, 451-2634
Fire Line
451-2626
Fire Operations
fax 451-2633
Lead Dispatcher
451-2620
Logistics
451-2627
Dispatch
451-2623

Delta Office
P.O. Box 1149
Delta Junction, Alaska 99737
(Mi. 267.5 Richardson Hwy)
895-4225, fax 895-2125
Area Forester
Jeremy Douse, 451-2601
Fire Mgmt. Officer
Mike Goyette, 895-2103
Fire Line
895-4227

Tok/Copper River Area
Box 10
Tok, Alaska 99780
(Mile 123.9 Tok Cutoff)
883-1400, fax 883-5135
Area Forester
Nick Carter, 883-1403
Fire Mgmt. Officer
Peter Talus, 883-1404
Fire Line
883-3473

Valdez/Copper River Office
P.O. Box 185
Glennallen, Alaska 99588
(Mi. 110 Richardson Hwy.)
822-5534 fax 822-8600
Area Forester
Nick Carter, 883-1403
Fire Mgmt. Officer
Mike Trimmer, 822-5534

Mat-Su/Southwest Area Office
101 Airport Road
Palmer, Alaska 99645
761-6300, fax 761-6319
Area Forester
Stephen Nickel, 761-6301
Fire Mgmt. Officer
Phillip Blydenburgh, 761-6302
Dispatch
761-6220
Fire Line
761-6311
Burn Permit
761-6312

Southwest Area Office
(Seasonal)
Box 130
McGrath, Alaska 99627
524-3010, fax 524-3932
Area Forester
Stephen Nickel, 761-6301
Fire Mgmt. Officer
Phillip Blydenburgh, 761-6302

Kenai/Kodiak Area Office
42499 Sterling Highway
Soldotna, Alaska 99669
(Mi. 92.5 Sterling Hwy)
260-4200, fax 260-4205
Area Forester
Hans Rinke, 260-4210
Fire Mgmt. Officer
Howie Kent, 260-4220
Fire Line
260-4100
Burn Permit
260-4269
Dispatch
260-4232

Southeast Area Office
2417 Tongass Avenue, Suite 213
Ketchikan, Alaska 99901
225-3070, fax 247-3070
Area Forester
Greg Staunton, 225-3070
Fire Line
524-3366



DIVISION OF FORESTRY State Forester John "Chris" Maisch (907) 451-2666 | Deputy Director Tim Dabney (907) 269-8476
550 W. Seventh Avenue, Suite 1450 | Anchorage, Alaska 99501-3566 | (907) 269-8463 | www.forestry.alaska.gov