



Alaska Department of Natural Resources
Division of Forestry
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Anchorage, Alaska 99501

Front cover photo: Paper birch in southcentral Alaska (*Trevor Dobell-Carlsson*)

Back cover photo: Turnagain Arm Trail Chugach State Park (*Patricia Joyner*)

Table of Contents

Division of Forestry 2021 Annual Report

State Forester's Comments	4
Resource Management & Development	5
Forest Practices Implementation	
State/Federal Projects	8
Forest Management	9
Alaska's State Forests	12
Coastal Region	13
Northern Region	16
Cooperative Forestry	19
Fire & Aviation	31
2021 Wildland Fire Season in Alaska	31
State Fire Support	41
National Fire Plan & WUI Projects	43
Fuels Reduction Program	45
Fire Prevention Program	47
Fire Training Program	48
Employee Recognition	52
Appendix	54

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 February 2021

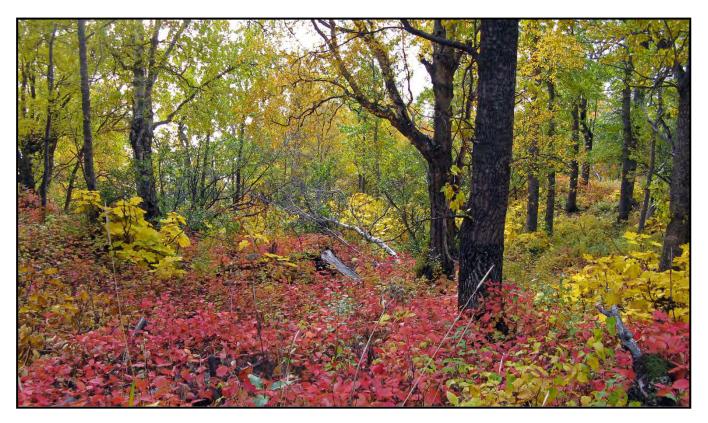
Tim Dabney (acting)

February 2021 to June 2021

Helge Eng

June 2021 to present





Alaska Department of Natural Resources Division of Forestry 2021 Annual Report

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

The Division of Forestry:

- Manages a wildland fire program on public, private, and municipal land
- Encourages development of the timber industry and forest products markets
- Conducts timber sales for commercial use, personal use, and fuel wood
- Protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act
- Manages the Southeast, Haines, and Tanana Valley state forests, totaling 2.1 million acres
- Administers the federally funded Community Forestry, Forest Health Protection, and Forest Stewardship programs
- Gives 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 2021, the division had 57 full-time, 202 part-time/seasonal, and five non-permanent positions.

State Forester's Comments

2021 was a year of change for the division. Chris Maisch served the Division of Forestry and Alaskans as State Forester for 15 years. After he retired in February, Deputy State Forester Tim Dabney served as Acting State Forester until I officially became your State Forester on June 1. I appreciate their efforts that made me feel welcomed and helped set me up for success.

I am pleased to provide my comments to the 2021 Annual Report as your new State Forester, in what is truly the greatest state in the country. For the past 30 years, I worked for the California Department of Forestry and Fire Protection in a variety of capacities, including State Forests Program Manager, and in the last five years as Deputy Director for Forestry. I also served on several Type I Incident Management Teams for 12 years, most recently as Plans Section Chief. I have a good understanding of what it takes to effectively manage Fire Protection and Forestry programs within the same agency, drawing on their similarities and overlap as well as their individual unique characteristics.

DOF submitted several budget requests in 2021. These requests are meant to restore and right-size both the division's Forestry and Fire Protection programs by adding personnel, as well as health benefits, adequate facilities, and equipment for our existing staff. The Governor included many of our requests in his fiscal year 2023 Budget, which came out on December 15. The Governor's budget must still be approved by the Legislature in the upcoming session, so these additions to our staff and facilities are not a given, but we will continue to work hard to demonstrate the need for these budget increases.

Overall, there was a slow fire season in Alaska in 2021. On the other hand, fire activity was very high in the Lower 48. Our Alaska Incident Management Teams were deployed four times during the season – once in Alaska, once in Oregon, and twice in California – and two 5-engine strike teams were sent to Washington and Oregon for more than two months.

With increased state funding in the last two years, we are expanding our hazardous fuels reduction program. Our focus is on expanding and maintaining a system of fuel breaks to help protect our communities.

In Southeast Alaska, the U.S. Forest Service decided to stop offering large volume old-growth timber sales. These decisions resulted in serious problems for the timber industry in Southeast Alaska, which for decades has relied on a steady supply of federal timber. The state owns only a small fraction of timber lands in Southeast Alaska, but under the Governor's Timber Bridge Program, I have committed to provide old-growth timber sale offerings during the next five years to help keep the timber industry and its jobs alive until federal young-growth timber sales become available in the next five to ten years.

We accomplished a lot in 2021. Our success hinges on our ability to continue to work together cohesively as one division, providing mutual support to each other, and maintaining good relationships. I look forward to working together with all of you to advance our mission in 2022.

Helge Eng

Alaska State Forester

RESOURCE MANAGEMENT & DEVELOPMENT

Forest Practices Implementation on Private, Municipal, & Trust Land

The Division of Forestry (DOF) is the lead agency for implementing the Forest Resources and Practices Act. Primary activities include:

- coordinating interagency review of detailed plans of operation (DPOs) for activities on private, municipal, and trust land;
- field inspections, implementation monitoring, and enforcement actions on these lands; and
- incorporating the standards of the Act and regulations into state timber sales.

Forest practices related work on federal land is conducted by the Alaska Department of Environmental Conservation (DEC) and the Alaska Department of Fish and Game (ADF&G) Habitat Division based on their authorities for water quality and fish habitat protection.

Note: FRPA data is reported on a calendar year basis because 11 AAC 95.220 requires Region 1 DPOs to be submitted by calendar year. Data on state forest management, e.g., state timber sales, are reported by state fiscal year (July 1 – June 30) to be consistent with state budget documents.

Forest Practices Activities

Notifications and inspections. In 2021, DOF received and reviewed 24 new harvest detailed plans of operation, nine new reforestation/timber stand improvement DPOs, and 17 renewals for private, municipal, and state trust lands. New DPOs covered 4,208 acres and 30.68 miles of new forest road. The division conducted 22 inspections on private, municipal, and trust land and 73 inspections on state timber sales.

DPOs reviewed and acreage notified on non-state land operations decreased from 2020 to 2021. Most of the FRPA activity on private land occurred in the Southeast Area on Mental Health Trust land at Naukati, and second growth harvesting in Yakutat on village corporation and Yakutat Borough

Region 1: Coastal Forest - Southern Southeast, Northern Southeast, and portions of Kenai/Kodiak and Copper River

Region 2: Southcentral Transitional Forest - Mat-Su, and portions of Kenai/Kodiak and Copper River

Region 3: Interior Boreal Forest - Fairbanks, Southwest, Delta, and Tok

land. Inspections on state land in Southeast was higher than in 2020, with operations at Thorne Bay, Gravina Island, Tuxekan, and Haines. Sales sold in late 2020 at Thorne Bay and on Tuxekan Island began operations in 2021.

Sales are being planned at Sumez Island, Kosciusko, Heceta and Whale Pass. Significant new road construction on Gravina Island began in 2017 and provided open access to the western northern and western portion of the island.

Notifications and acreage notified increased slightly in the Kodiak-Afognak area. There was minimal FRPA activity on non-state land in Regions 2 and 3 however, there were two DPO reviews in Region 2 and one DPO review in Region 3. All 22 inspections on non-state land occurred in Region 1.

Variations and Enforcement. For the third year in a row, there were no requests for variations to harvest in riparian buffers. One violation was issued.

Compliance monitoring. DOF monitored for compliance in 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 or was implemented ineffectively. The data shows solid implementation rates in all regions. Region 1 averaged 4.5 out of 5.0 and both Region 2 and Region 3 scored 4.6.

In Region 1, where there were 62 inspections, 91 percent of BMPs evaluated met or exceeded compliance standards although there were individual BMPs that required corrective action. Those BMPs were related to road drainage, adequate number

of drainage structures, grading bridges, and locating roads in riparian areas. Operators acted quickly to rectify deficiencies as they were discovered. Active road maintenance and BMPs related to timber harvest were excellent. One training session was held in Southeast for Yak Timber Inc. staff.

Due to low harvest activity, only nine inspections were conducted in Region 2 and all scores exceeded 4.0. Most of the activity was winter logging and winter road construction and there was full compliance on all operations. Region 3 also had excellent compliance; 93 percent of the scores exceeded 4.0 on the 24 inspections.

The Tanana Valley State Forest road maintenance program has improved in recent years due to increased funding for equipment operators and the efforts of timber sale contractors using the TVSF mainlines. This road system receives a significant amount of public use, so attention to road maintenance and grading prior to freeze-up has been a priority in recent years. The Tanana River ice bridge crossing was successfully constructed, and compliance was exceptional on winter roads and most harvest operations in Region 3.

Reforestation exemptions. Operators may request an exemption from FRPA reforestation requirements for harvests composed of significant numbers of dead or dying trees. DOF received and approved two new requests for reforestation exemptions on 148 acres in 2021.

Road condition surveys and remediation. With assistance from ADF&G's Craig office and Sealaska, DOF performed road condition surveys on 25 miles of inactive forest roads on six Sealaska operations on Prince of Wales Island. The impetus for the surveys was that Sealaska Timber Corporation shut down and turned over management of its forest road system to Sealaska Corporation. While most spur roads have been closed and structures removed, some mainline roads in this ownership remain open (inactive FRPA status) with crossing structures in place. The 2021 surveys focused on the bridges and culverts requiring fish passage on inactive roads. Results of the surveys were submitted to Sealaska. The following operations have one or more bridges or culverts that require attention to fully meet FRPA standards: Election Creek, Black Bear, Soda Bay, and Tolstoi.

New Notifications Detailed Plans of Operation							
	2018	2019	2020	2021			
Southern SE	14	24	33	13			
Northern SE	10	13	5	5			
Mat-Su/SW	1	0	0	2			
Kenai-Kodiak	3	5	3	3			
Coastal	28	42	41	23			
Fairbanks	1	1	1	1			
Delta	0	0	0	0			
Tok	0	0	0	0			
Copper River 0 0 0 0							
Northern	1	1	1	1			
TOTAL	29	43	42	24			

Harvest Acreage in New Notifications						
	2018	2019	2020	2021		
Southern SE	2,479	4,376	7,843	1,860		
Northern SE	863	961	1,242	683		
Mat-Su/SW	1,646	0	0	148		
Kenai-Kodiak	1,460	841	1,085	1,479		
Coastal	6,448	6,178	10,170	4,170		
Fairbanks	29	29	45	38		
Delta	0	0	0	0		
Tok	0	0	0	0		
Copper River	0	0	0	0		
Northern	29	29	45	38		
TOTAL	6,477	5,207	10,215	4,208		

Road Miles Notified									
2017 2018 2019 2020 2021									
SSE	20	22	36	41	10.28				
NSE	1	36	14	15	2.25				
Mat-Su/SW	0	9	0	0	0.25				
Kenai-Kodiak	6	31	6	8	16.90				
Coastal	27	98	56	64	29.68				
Fairbanks	2	3	3	7	1.00				
Delta	0	0	0	0	0				
Tok	0	0	0	0	0				
Copper River	0	0	0	0	0				
Northern	2	3	3	7	1.90				
TOTAL	29	100	59	71	30.68				



Loading logs headed to Southcentral Alaska from Haines. (Joel Nudelman)

Effectiveness monitoring and research. DOF works with agencies and affected interests to prioritize effectiveness monitoring of the Forest Resources and Practices Act and related research needs. The interagency Effectiveness Monitoring Working Group, including representatives from DOF, USFS, ADF&G, USF&WS, and Sealaska Corporation, will meet in January 2022 to discuss projects and priorities. The group remains in contact on high priority projects and opportunities for collaboration.

Landowner, operator, staff training. DOF Area and regional staff provide training for landowners and operators that varies from formal classroom presentations to "tailgate" sessions during field inspections. DOF also provides training in the form of DPO reviews and inspection reports that recommend effective ways to implement BMPs.

In 2021, DOF conducted one FRPA training session in Southeast, attended by five people. In addition, approximately 20 DOF employees attended compliance monitoring training.

DOF has a series of FRPA training modules using PowerPoint. The series has 20 modules that cover: purpose, applicability, DPOs, stream classification, riparian standards, road construction and maintenance, stream crossings, reforestation, timber harvesting, inspections and compliance monitoring, enforcement, mass wasting, prosecution coordination, and hearing officer duties. Most FRPA training materials are on the public website: http://forestry.alaska.gov/forestpractices, and are used by a variety of users with questions about FRPA. The modules for FRPA enforcement, prosecution coordination, and hearing officer training are on the internal Division of Forestry website, and available for division employees.

Board of Forestry

The Board of Forestry advises the state on forest practices issues and provides a forum for discussion and resolution of forest management issues on state land. The board also reviews all proposed changes to the Alaska Forest Resources and Practices Act and its regulations. Board members are appointed by the governor for three-year terms and represent a variety of forest-related interests.

The Board of Forestry's major task this year was selecting new State Forester candidates after Chris Maisch retired in February. The board met many times to review interview questions, interview the candidates, and decide on candidates to submit to the DNR Commissioner for consideration.

Helge Eng was selected as State Forester, coming to the division after 30 years with California's Department of Forestry and Fire Protection, the last five as deputy director, where he dealt with many of the forest management and wildland fire issues common to western states. Eng earned a Bachelor of Science degree in forest resources management from the University of British Columbia. At Oregon State University, he earned master's and doctoral degrees in forest management, as well as a Master of Science degree in statistics. He began his service as Alaska's State Forester in June.

Alaska Board of Forestry Members

Helge Eng, Ex-officio Chair, State Forester

Bill Morris, Fish/Wildlife Biology Non-Governmental, Fairbanks

Denise Herzog, Mining Organization, Fairbanks

Russell Byerly, Recreation, Haines

Mike Post, Forester Non-Governmental, Anchorage

Eric Nichols, Forest Industry Trade Association, Ketchikan

Vacant, Commercial Fishery, Juneau

Nathan Lojewski, Native Corporation, Anchorage

Chris Stark. Environmental Organization, Fairbanks

State/Federal Projects

The Good Neighbor Authority

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

Kosciusko Island Timber Sale

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

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



Deck of large logs at Vallenar Good Neighbor Authority Timber Sale. (*Greg Staunton*)



Commissioner Corri Feige and State Forester Helge Eng at the Vallenar Sale. (*Greg Staunton*)

Harvest, hauling, scaling, and road work continued in 2021 and approximately 15,303 MMBF of young growth timber had been harvested as of September 30. Several price reductions were negotiated due to market tariffs, oversupply of beetle-killed wood in Europe, and COVID-19.

Vallenar Bay Timber Sale

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

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

the appraisal. The tariff was not a verifiable cost at the time of initial offer and the primary market for the young growth timber is projected to be China.

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

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

The reoffer sale package was compiled and publicly noticed the first week of January 2019. The state received one bid at the end of January and the sale was awarded to Alcan Timber Inc. on February 6, 2019. The purchaser and the state signed the contract the following week.

DOF's Ketchikan office issued a contract for public works construction improvements to the alignment of the Vallenar Road mainline in August 2020. The work on the state forest road focused on adjusting the vertical alignment to improve vehicle sight distance. The work used residual funds from the state capital fund that originally financed the road.

The purchaser also purchased timber from adjoining University of Alaska Trust lands in 2019 and the Mental Health Trust in 2020 and operated on both in early 2021. Later in 2021, the purchaser harvested in Units 1, 4, and 5 on state land. As of the end of October 2021, the purchaser had scaled 1,719 MBF of timber in the yard associated with the GNA sale from state land.

Tongass Young Growth Conversion

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

All project work was completed by the end of 2020. During the first six months of 2021 final grant accomplishment reports and final grant financial reports were completed. The Tongass Young Growth Conversion Challenge Cost Share Agreement was formally closed out in July 2021.

Forest Management

State Timber Sales

In Fiscal Year 2021, DOF sold 30 sales on 2,145 acres of land for a total of approximately 42.3 million board feet. Compared to FY 20, timber sale volume increased sharply. Staff recruitment and retention efforts in Southern Southeast have been difficult. Two positions were vacant for all of 2021. The office plans to be fully staffed in 2022.

Reforestation and Stand Improvement

Regeneration of harvested or naturally disturbed areas is an essential part of forest management on state land. In areas where planting is desirable, DOF collects cones for seed extraction, contracts for seedling production, and plants seedlings to improve reforestation. In many areas, natural regeneration, with or without scarification, provides sufficient regeneration to meet reforestation standards. In 2021, DOF surveyed 152 acres for regeneration. No pre-commercial thinning, pruning, or planting occurred on DOF managed lands in 2021, however, DOF ordered 40,000 seedlings to plant in the Tanana Valley State Forest.

Beach Log Salvage and Log Brands

The Southeast Area office issued four beach log salvage licenses in Southern Southeast and sold 10 log brands, including renewals.

Commercial Timber Sales Sold on State Land Fiscal Year 2021 (MBF = 1,000 board feet)							
Area	Sales	Acres	Volume MBF	Sale Value			
Southern SE	5	585.00	15,851.85	1,688,333.20			
Northern SE	5	1,064.00	23,218.91	433,455.00			
Kenai - Kodiak	2	22.00	150.00	6,375.00			
Mat-Su	Mat-Su 0 0.00 0.00 0						
Coastal	12	1,671.00	39,220.76	\$2,128,163.20			
Fairbanks	8	191.10	1,144.29	63,109.72			
Delta	7	254.20	1,887.35	125,816.07			
Tok	1	10.00	37.80	500.00			
Copper River	2	19.00	55.02	3,668.00			
Northern	18	474.30	3,124.46	193,093.79			

42,345.22 \$2,321,256.99

30 2,145.30

STATE TOTAL

Timber Sale Revenue (in thousand dollars)					
FY12	555.3				
FY13	682.3				
FY14	354.0				
FY15	1,917.0				
FY16	212.8				
FY17	688.5				
FY18	477.4				
FY19	FY19 464.3				
FY20	91.7				
FY21	265.4				

Commercial Timber Sales Harvested on State Land Fiscal Year 2021 (MBF = 1,000 board feet)								
Area	Area Sales Acres Volume MBF Sale Va							
Southern SE	2	0.00	508.51	98,359.48				
Northern SE	5	76.00	642.69	34,256.05				
Kenai - Kodiak	2	20.50	150.00	6,375.00				
Mat-Su	0	0.00	0.00	0.00				
Coastal	9	96.50	1,301.20	138,990.53				
Fairbanks	3	127.70	1,510.32	83,688.36				
Delta	0	39.00	479.64	32,923.86				
Tok	2	50.00	7,220.34	6,146.35				
Copper River 2 19.00 55.02 3,668.0								
Northern	7	235.70	9,265.32	126,426.57				
STATE TOTAL	16	874.00	10,566.53	265,417.10				

Firewood Permits Issued & Cords Sold						
FY 17	780	3,336				
FY 18	740	3,093				
FY 19	619	2,296				
FY 20	574	2,279				
FY 21	653	2,872				

	Ten-Year Record of Timber Volume Sold - MBF							
	Coastal Southeast	Coastal Southcentral	Northern Region	State Total	Statewide Sales			
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			
FY 20	262	250	1,809	2,321	31			
FY 21	39,071	150	3,124	42,345	30			



Viking Lumber log yard in Klawock. (Joel Nudelman)

Forest Inventory and Analysis

The Forest Inventory and Analysis (FIA) program of the U.S. Forest Service provides information to assess America's forests. In interior Alaska the Division of Forestry has partnered with the USFS to install and measure plots through a joint venture agreement. As the nation's continuous forest census, the program monitors the status and trends of all public and private forestlands in the U.S. This is especially important in Alaska where significant changes in temperature, permafrost, and plants are occurring and expected to increase.

Samples at each plot include trees, soils, understory plants, and woody debris. State field crews have successfully conducted the Interior Alaska FIA program for six years and have met all USFS quality control metrics. This was the first year the crew operated from a field hub off the road system for the entire season. In 2021, the field hub was the DOF base in McGrath and staff accessed plots mainly by helicopter. Staffing included two permanent coordinators, two permanent seasonal quality assurance foresters, six permanent seasonal crew leads, and 14 non-permanent crew members.

Cooperative Alaska Forest Inventory

The Cooperative Alaska Forest Inventory (CAFI) was implemented by the University of Alaska Fairbanks in 1994. The CAFI is by far the longest-running

forest inventory project in Interior Alaska and its 200 road accessible plots are widely distributed from the Kenai Peninsula north to Coldfoot. The data have been used by many researchers to evaluate forest conditions, such as forest growth, diversity, carbon stocks, and forest health.

Despite the highly valuable datasets, the project was discontinued in 2015 due to a lack of resources at UAF. The Division of Forestry began remeasuring the plots in 2020 and secured grants in 2021. DOF is using USFS Evaluation Monitoring Program funds to remeasure the CAFI plots in southcentral Alaska to assess the effects of the spruce beetle outbreak. DOF and UAF researchers are collaborating to measure the remaining plots. Continuous monitoring of growth and conditions in highly managed and accessible forests provides invaluable information for forest management.

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.



Loading logs near Naukati. (Joel Nudelman)

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

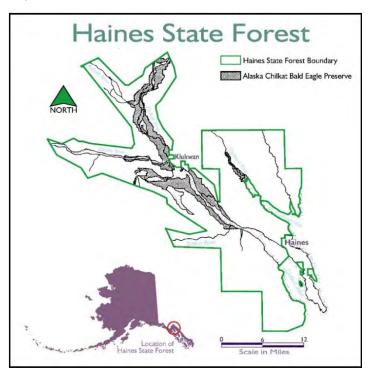
286,208 acres

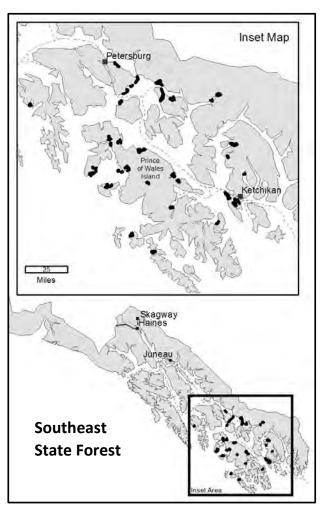
Tanana Valley State Forest: Established in 1983

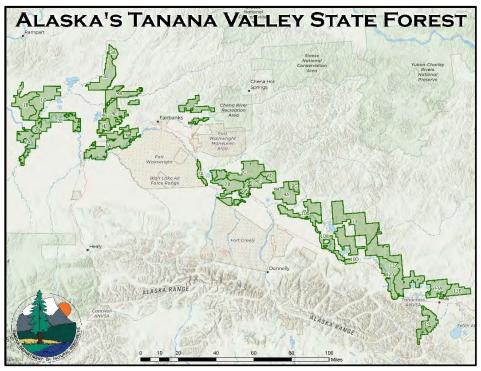
1.78 million acres

Southeast State Forest: Established in 2010

48,472 acres









Northwest section of Kenai Peninsula College fuels reduction project. Kaliforsky Beach Elementary School is in the upper left and college dorms in lower right. (*John Winters*)

Coastal Region

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 Act in Regions 1 and 2.

The Kenai-Kodiak Area sold two timber sales in 2021. Timber is marketed as firewood, round logs for dimensional milling, and house logs. Multiple small mill operators on the Kenai Peninsula rely on timber harvest on state lands as a material source, producing dimensional lumber, cabin kits, and dunnage (typically 4x4x48 inches or 6x6x48 inches, used in oilfield construction and shipyards).

Firewood demand from the public remains high and land management agencies coordinate to provide 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.

Timber operators in Region 1 on Afognak Island harvested about 35 million board feet in 2021 and operations are ongoing. The division processed three detailed plans of operation (DPO) totaling 1,479 acres of proposed harvest. The Area Office makes field inspections on Kodiak and Afognak islands ensuring reforestation and ongoing operations meet Forest Practices Act requirements.

Fire. During the 2021 fire season, personnel responded to 133 calls: 62 wildland fires, 67 smoke reports, and four false alarms. A total of 188.6 acres burned. The first fire occurred on April 6 and the last fire on October 6. The largest fire, Loon Lake, (102.2 acres) occurred in a Limited Protection Area near the Swan Lake Fire (2019). A Type 3 team was assembled on June 14, and the fire was downsized to a Type 4 incident and returned to the Area for management on June 21.

Area dispatchers and technicians supporting fires within Alaska accounted for 492 worker days of assistance between April and August. Personnel supported fires in the Lower 48 from August through October accumulating 333 worker days.

Technicians staffed the second strike team of engines deployed to Washington and filled single resource roles on other incidents. The dispatch cadre supported dispatch center assignments for logistics initial attack dispatch, and aircraft dispatch.

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 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. The Area is managed from Forestry's Palmer office and a seasonal office in McGrath. It supports initial attack wildland fire response and administers state timber sales and the Forest Practices Act.

Public demand for firewood remains high. A total of 505 cords of personal-use firewood were sold through 136 online permits in the Mat-Su and Southwest Area. The Area sold 18 negotiated personal use contracts for 92 cords of firewood and 25 MBF of sawlogs for residents to harvest beetle killed trees from state lands near their homes and remote properties for heating and to reduce hazardous fuels.



DOF, the Department of Fish & Game, and the Division of Parks partnered to make significant improvements to the 7-mile-long Willer-Kash Road in the Ma-Su in 2021. The work was funded by a Pittman-Robertson grant. (*Martin Schoofs*)

There is one active state commercial timber sale for 45 acres in the Mat-Su. The Area also approved two detailed plans of operation for two timber sales on Mat-Su Borough lands totaling 148 acres.

The Area partnered with the Alaska State Parks Design and Construction Section and Alaska Department of Fish and Game to improve degraded sections of the seven-mile-long Willer-Kash Road near Willow. The work was funded by a Pittman-Robertson grant. The improvements allowed better access to popular hunting and recreation areas, timber sales, and personal use firewood cutting areas. Additional work is planned for 2022.

Fire. There were few fires in the Mat-Su and Southwest Area this summer, so most staff members were deployed to the Lower 48 for fire assignments. Area staff participated on Incident Management Teams (IMT) and supported an Alaska engine task force that mobilized to the Pacific Northwest.

In the Mat-Su Area 85 fires burned 27 acres and in the Southwest Area, 18 fires burned 9,337 acres. The 2,186-acre About Mountain fire, outside of McGrath, started on June 14, and was managed by a Type 3 IMT June 17 - 28 when the fire was turned over to the Area as a Type 4 incident.

The Mat-Su Area is home to two state sponsored fire crews, the Gannett Glacier Type 2 Initial Attack Crew (IAC) and the Pioneer Peak Interagency Hotshot Crew (IHC). The 22-person crews are based between Palmer and Wasilla and may be deployed for both in-state and out-of-state assignments.

When not on fire assignments the crews engage in fuels reduction work.

In 2021 the Pioneer Peak IHC was on fire assignment for 45 days in Alaska and 69 days out of state. The crew logged 18 days on fuels reduction work. The Gannet Glacier Type 2 IAC was on in-state fire assignments for 27 days and 61 days out of state. This crew also logged 18 days on fuels reduction.

Fire Prevention. Mat-Su Area fire prevention staff implement a robust prevention and education program, administer the burn permit program, coordinate fire investigations, and enforce wildland fire protection statutes. In 2021, the Prevention Team interacted with 1,000 individuals and made 38 educational presentations at various venues including the state fair, local schools, area sportsman shows, and community events.

The team completed 101 Firewise home assessments and eight Firewise/Ready-Set-Go presentations. The team of four have embraced the latest technology to streamline the burn permitting process and are updating the division's burn permit website to be more informative and user friendly.

New Staff Member. The Area hired **Martin Schoofs** as the Resource Forester in July. Martin was previously in a long-term non-permanent position in the Forest Health Program. His knowledge and experience will be helpful as the Area continues to respond to the spruce beetle outbreak.



Gannett Glacier Interagency Hotshot Crew prepares to board a plane to the Lower 48 in July. (Amber Rosser)

Southeast Area

The Southeast Area covers the Alaska panhandle from Haines to Ketchikan. The public and private land in the area provides most of the timber volume and revenue harvested in Alaska. The Area manages the Southeast and Haines state forests and administers the Alaska Forest Practices Act on extensive private holdings within its jurisdiction. The predominate ownership in the area is federal land managed by the U.S. Forest Service.

Domestic and export markets recovered from last year's volatile demands and prices by midyear. Significant activity occurred on the 15 million board foot Bayview Timber Sale on Prince of Wales Island that Viking Lumber purchased from the state in 2021. The timber will be domestically processed. Alcan Timber Inc. of Ketchikan operated on old growth timber in the 16 MMBF mixed age Vallenar Good Neighbor Authority sale. Vallenar timber was shipped to round log markets in the Lower 48, Japan, and China.

DOF sold the 23 MMBF Baby Brown Glacier Side Sale in Haines to NWFP Inc. but logistical constraints precluded operations in 2021. Local small mill use of timber from the Haines State Forest remained strong.

A shut-down of timber production on the Tongass National Forest and Sealaska lands shifted focus for regional timber to state sources such as lands managed by DOF and newly acquired federal exchange parcels managed by the Alaska Mental Health Trust.

The division repaired damage on the Sunshine and Kelsall forest roads damaged by fall flooding in 2020. The roads provide access to the forest for a variety of commercial operators and the public.

Covid-19 continued to cause logistical, supply issues, and shipping capacity challenges to the industry. Changing labor markets also present staffing hurdles for timber sale purchasers and agencies.



Cabin kits by Yak Timber in Yakutat. (Joel Nudelman)



Log deck on Mental Health Trust sale near Hollis. (Joel Nudelman)



Logs salvaged after windthrow and beach erosion in Yakutat. (Joel Nudelman)

Northern Region

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

The sawlog demand remains stable while the firewood and biomass industry in Interior Alaska has increased slightly due to fluctuations in oil prices. The biomass mills in North Pole and Tok continue to produce wood pellets and pellet logs and distribute their products statewide. The Fairbanks-Delta office produces the highest revenue and volume outside of Southern Southeast Alaska. It historically provides 70 percent 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 or is re-evaluated for feasibility.



Fourth graders from Immaculate Conception School in Fairbanks plant a tree on Arbor Day. (*Tim Mowry*)



Log deck on winter sale near Delta. (Andrew Allaby)

Sawlog spruce goes primarily to three mills operating in the interior: Northland Wood in Fairbanks, Logging and Milling Associates in Dry Creek, and Young's Timber Inc. in Tok. Pole and pulp timber go to Aurora Energy Solutions, the largest purchaser in the interior, and Tok Biofuels, which produces compressed fire logs.

The division provides information to communities on the benefits of burning dry, well-seasoned wood as the U.S. Environmental Protection Agency warns the cities of Fairbanks and North Pole of the ongoing danger to human health caused by high levels of particulate matter caused by burning wood.

Fairbanks-Delta Area

Commercial timber is sustainably harvested throughout the Fairbanks and Delta areas. There are more than 85 active timber contracts with 35+ operators on state land. The demand for spruce sawlogs remains stable and the demand for birch fuelwood is increasing.

Northland Wood Products, located in Fairbanks, remains the primary purchaser of Tanana Valley State Forest spruce sawlogs; they procure and process approximately three million board feet annually. It supplies Interior Alaska with locally processed dimensional lumber, cabin logs, tongue and groove siding, and rough timbers.

Northland Wood Products' cofounder and long-time owner Jerry Flodin passed away in August.

Aurora Energy Solutions LLC was formed early in 2020 and acquired Superior Pellet Fuels soon after. Aurora Energy Solutions is producing pellets, compressed logs, and kiln dried firewood for interior Alaska markets. Much of the raw material used by this company comes from Tanana Valley State Forest timber sales. The firewood kiln is estimated to need 5,000 to 6,000 cords per year to meet demand.

Aurora Energy Solutions is having a noticeable positive effect on the local timber market. They have helped clear a backlog of over-the-counter timber sales that had been available for multiple years, increased wood fiber use by sorting log products at the landing and sending grouped log specifications to the corresponding mills and supplied residents with a source of high-quality fuelwood that helps improve air quality.

Personal use firewood sales have decreased since last year, but usage levels remain within average 10-year levels. From January 1 through November, Fairbanks Area sold 205 permits for a total of 782 cords, and Delta Area sold 52 permits for a total of 218 cords. Two new personal use firewood cutting areas were established this year, one area along Two Rivers Road and the other along the Maisch Logging Road. The two new areas are a source of fuelwood for residents of the Two Rivers community and Nenana respectively.

Regeneration surveys continue every spring in the Fairbanks-Delta Area. All timber sales surveyed in 2021 passed regeneration standards. No seedlings were planted in 2021 due to difficulty procuring seedling stock. The Area's resource foresters have acquired 40,000 seedlings to plant in 2022. Scarification is a common post-harvest treatment to promote natural regeneration.

Road work and maintenance are an ongoing need in the Fairbanks-Delta Area. Contractors and Forestry staff work on road projects annually to ensure multi-use access to the Tanana Valley State Forest. Unlike the 2020 road work season, the



Forestry booth at the Tanana Valley State Fair in Fairbanks. (Tim Mowry)

2021 season was slowed by warm, dry weather, which increased the local fire activity and, in turn, tied up the division's sole heavy equipment operator. Forestry staff were able to reestablish proper road surface profiles on most of the mainline forest roads before the fire season got rolling.

Area personnel performed a lot of road work in 2020, which showed noticeable results this year. Brush was removed from the edges of Cache Creek Road to allow more sunlight and air flow onto the road surface, and conditions in 2021 were markedly better than they have been over the past few years, especially during breakup.

The planning phase of the Fortune Creek Bridge replacement and Cache Creek Road improvement is nearly complete, and work is expected to be completed by the end of August 2022. This project is funded by Pitman-Robertson funds made available to DOF through an agreement with the Alaska Department of Fish & Game.

Tok-Copper River Area

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

The highest demand for raw materials from state lands in the Tok Area continues to be fuelwood followed by logs and biomass. Four commercial firewood operators harvested approximately 650 cords of fire-killed spruce for fuelwood with some value-added products in 2021. The value-added products were used in cabin kit production.

The Tok Area had an abundant supply of fire-killed spruce at one time, but this supply has dwindled greatly or succumbed to rot over the years. The Area is exploring other accessible permitted firewood cutting locations.

The Alaska Gateway School District has harvested approximately 40 acres of its timber sale. There are plans to potentially develop biomass heating at the Northway school. Should this happen, the school district may purchase more hazardous fuels sales to meet the new needs. No plans have been completed to date.

Two large, negotiated sales this year produced a total of 147 tons of sawlogs and 1,224 tons of utility wood. The units within these sales consist of

dense mature white spruce stands. The goal is to create openings and promote moose browse during early successional seral stages of stand development. The Tok Area and the Department of Fish and Game are discussing unit shapes, prescribed fire, and other post-harvest treatments to benefit habitat and promote browse species.

There have been requests for house logs and saw timber in the Copper River Area, but fuelwood is the most requested resource. Seasonal access and broken ownership patterns are the limiting factors for personal use fuelwood in the Copper River Rasin

A small operator in McCarthy continues to purchase small sales on state land. The operator has a niche market in the area for dimensional lumber and firewood. Four timber sales were laid out in 2020 with this small operator in mind. These locations should supply the operator with raw material for three to four years.

A Community Wildfire Protection Plan is being developed in the Copper River Basin to reduce hazardous fuel loading and create potential biomass markets. Various groups within the Copper River Basin have discussed using the biproducts of fuel break construction for biomass heating facilities. The Tok-Copper River Area is working with these groups to provide information and support as discussions progress.



Regeneration survey at end of Standard Creek Road, Tanana Valley State Forest. (Andrew Allaby)

Cooperative Forestry

The Forest Health, Forest Stewardship, and Community Forestry programs provide technical and financial assistance to diverse landowners and managers. The U.S. Forest Service funds these programs, contributing over \$1 million in federal funds annually to the state economy. The programs assist Alaska Native corporations, other private forest landowners, businesses, local governments, and non-profits, who contribute matching funds.

Forest Health Program

The Forest Health Program is a primary source of forest health expertise and assistance in the state for forest landowners, resource managers, and others. The program's focus is on monitoring native and invasive forest pests, pest management, technology development, and technical assistance. The main way Alaska's forests are monitored is through cooperative DOF and U.S. Forest Service Forest Health Protection (FHP) aerial pest detection surveys. 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 from the annual 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 from the air.

A summary of the 2021 preliminary survey results is included in Surveys Overview below. Detailed information pertaining to surveys and monitoring of forest insects, tree diseases, invasive plants, and abiotic disorders is included in the annual *Forest Health Conditions in Alaska* report published by FHP in collaboration with DOF and other key cooperators.

Program Staffing

In 2021, Forest Health Forester Martin Schoofs hung his last spruce beetle traps and left the program to accept the position of Resource Forester with the Mat-Su Area. He had worked with the Forest Health Program since 2018 and was instrumental in the program successes during this period.

Outreach

In 2021, DOF Forest Health staff connected with an estimated 400 individuals to provide forest health assistance or information. Outreach efforts were somewhat limited, probably due to the continuing COVID-19 pandemic and decreasing spruce beetle activity in some areas. Outreach was conducted primarily through presentations at various meetings, workshops, and conferences, mostly through virtual platforms. Additionally, Forest Health staff participated in two news media interviews related to spruce beetle.

Western Bark Beetle Initiative

In 2020, DOF initiated a Western Bark Beetle Initiative (WBBI) cost-share program to assist non-federal landowners with bark beetle prevention, suppression, and forest restoration efforts. There was high interest in the program and staff assessed many properties that year. In 2021, staff awarded WBBI funding to landowners whose properties had been assessed previously. The FHP also created an interactive datasheet and related instructions to allow landowners with remote properties to conduct their own property assessments for WBBI funds. Funding has been awarded to four applicants and the WBBI program will continue in 2022.



Martin Schoofs hangs a spruce beetle monitoring trap at Zero Lake near Houston. Spruce beetles have been monitored in this location yearly since 2017. (Jason Moan)

Research

For several years, Forest Health staff have been evaluating new tools with the potential to help residents protect their trees from spruce beetle-caused tree mortality. One such research effort occurred in 2021: an anti-aggregation pheromone (MCH) trial evaluating SPLAT-MCH (ISCA Technologies, Inc). This is a biodegradable paste impregnated with spruce beetle anti-aggregation pheromones, both alone and in combination with other semiochemicals. This project is being conducted in partnership with the U.S. Forest Service Pacific Southwest Research Station and FHP. The preliminary treatment combinations were evaluated via a trapping study in 2021 on the Kenai Peninsula; additional field evaluations are planned for 2022.

Surveys Overview

In 2021, DOF and USFS-FHP staff mapped about 1.2 million acres of forest damage on the 15.7 million acres surveyed. The top three damage agents documented, based on the number of acres of damage observed, were western blackheaded budworm, spruce beetle, and hemlock sawfly-caused topkill. For more detail on these and other forest insects, diseases, and abiotic disorders, please refer to the *Forest Health Conditions in Alaska 2021* report, which should be available by early 2022.

Spruce Beetle: The **spruce beetle** outbreak in Southcentral Alaska is estimated to be in its sixth year. The outbreak is now estimated to have affected at least 1.6 million cumulative acres of mixed spruce and birch forests in the region (See map of Spruce Beetle Outbreak - Cumulative).

Spruce beetle activity was observed on about 193,500 acres in 2021, a 39 percent increase over that observed in 2019 (139,500 acres), the last time the aerial detection surveys were flown. The spruce beetle damage observed in 2019 and 2021, however, was much lower than that mapped in 2018 (590,000 acres), the apparent peak of the outbreak thus far. More than 98 percent of the spruce beetle damage observed in 2021 was in Southcentral. The outbreak is most active in the northern Matanuska-Susitna Borough, the southern Denali Borough, and portions of the Kenai Peninsula. This activity is summarized below, from north to south.



Forest Health Program Manager Jason Moan documents rusty tussock moth and spruce beetle damage on Curry Ridge in Denali State Park. Jason is ground-truthing damage mapped here during the 2021 aerial detection surveys. (Steve Swenson, USFS Forest Health Protection)

In the **Denali Borough** (22,900 acres), activity was prevalent in the Cantwell area and north to near Carlo Creek, as well as along the Denali Highway. The northward expansion of the outbreak is being very closely monitored.

Within the Matanuska-Susitna Borough (141,225 acres), most of the damage observed was in the northern portion of the borough, specifically in the Chulitna River valley and along the Parks Highway north to the borough boundary. Damage was also noted in the northern Talkeetna Mountains and east along the upper Susitna River, including near its confluence with the Tyone River. This area in the northeastern part of the borough will be prioritized for survey in 2022.

Surveys were limited within the **Municipality of Anchorage** (2,275 acres) in 2021. The most severe damage continues to occur in the northern municipality, from roughly the Ship Creek valley north, including most of the major valleys of the western Chugach Mountains.

Spruce beetle activity continued to expand in the **Kenai Peninsula Borough** (24,500 acres), with widespread damage in the Cooper Landing area and parts of the Chugach National Forest. On the

western Kenai Peninsula, the outbreak remains active west of Skilak Lake along the Kenai River and from the Kenai area south to about the Kasilof River.

Elsewhere in the state, scattered spruce beetle activity was observed in the **Interior**, with about 2,150 acres of scattered but somewhat concentrated damage along the Yukon River just southwest of Fort Yukon. This area will be monitored in 2022. No notable spruce beetle activity was documented in **Southeast** in 2021.

Defoliating Insects: The most notable defoliator activity observed in 2021 was in Southeast. The **hemlock sawfly** outbreak that began in 2018 has subsided in the region, with scattered mortality (21,000 acres). Extensive topkill in the surviving trees (186,150 acres) was observed in 2021. In 2020, nearly 80,000 acres of tree mortality were attributed to this outbreak.

On the heels of the hemlock sawfly outbreak, western blackheaded budworm populations have increased to outbreak levels across Southeast, with 520,000 acres of damage observed in 2021. Most of the activity was on Admiralty, Baranof, Kuiu, Kupreanof, Mitkof, Prince of Wales, Wrangell, and Zarembo islands and in several mainland drainages north to Haines. This activity is expected to continue in 2022. Western hemlock is the primary host being affected by both the western blackheaded budworm outbreak documented this year and the recently subsided hemlock sawfly outbreak.

In Southcentral, the **rusty tussock moth** outbreak first reported in 2020 continued in 2021 (44,000 acres). As observed in 2020, much of the defoliation was minor, though moderate to complete defoliation was observed in several locations near or above tree line in Denali State Park and in the Chulitna River valley. Rusty tussock moth is a generalist defoliator that feeds on a variety of host species. The damage observed in 2021 was primarily in alder, birch, and blueberry.

State Forest Survey Summaries

Each year, aerial detection surveys cover portions of the Tanana Valley, Haines, and Southeast state forests. In 2021, about 45,500 acres of damage were noted within the three forests, with the majority occurring within the Tanana Valley State Forest (~38,000 acres). The top damage types (in terms of acres affected) for each forest are listed below; all acreages are rounded:

Tanana Valley State Forest: Aspen leafminer (35,900 acres), flooding (1,000 acres), defoliation – unknown cause (550 acres), spruce beetle damage (325 acres).

Haines State Forest: Western blackheaded budworm was the only notable damage observed (1,000 acres).

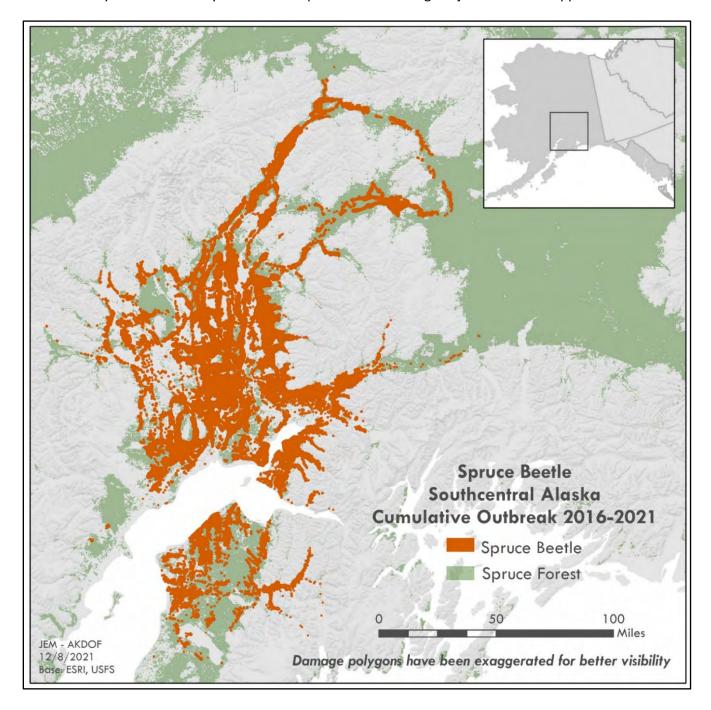
Southeast State Forest: Western blackheaded budworm (3,800 acres), hemlock sawfly-caused topkill (2,325 acres), hemlock sawfly-caused mortality (175 acres).



Large beetle-killed white spruce on the Kenai Peninsula. (John Winters)

Spruce Beetle Outbreak – Cumulative

This map illustrates the area impacted during the current spruce beetle outbreak in Southcentral Alaska, as observed during aerial forest health detection surveys. These surveys cover only a portion of the state's forests each year and it is likely that there is spruce beetle damage adjacent to the mapped areas.



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 entirely by the U.S. Forest Service State & Private Forestry, the program responds to the requests of landowners to prepare Forest Stewardship Plans that include field visits and contain the latest technical forestry advice. Plans often address forest health, reforestation, timber stand improvement, and defensible space from wildfire.

Alaska Native corporations are the largest private landowners in Alaska and DOF provides sub-grants to allow them to hire private consulting foresters who prepare Forest Stewardship Plans. Plans for individual private landowners are written primarily by Division of Forestry stewardship foresters.

By the numbers:

- Nationally, 25 million acres are managed under a current Forest Stewardship Plan. Alaska contributes 14 percent of these acres.
- Nearly 1,100 Alaskan landowners and thousands of Alaska Native corporation shareholders have benefitted from Forest Stewardship Plans.

The Forest Stewardship Program receives guidance from the Forest Stewardship Committee, which is comprised of representatives from a broad range of 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 WebEx once in 2021.

2021 continued to provide unique opportunities as all three staff members transitioned to hybrid remote and office work, socially distanced property visits, and occasionally writing Forest Stewardship Plans using aerial images and limited interaction with landowners to mitigate COVID-19 risks.

2021 Highlights

- Two Alaska Native corporations were awarded sub-grants to begin developing Forest Stewardship Plans that will cover more than 51,000 acres.
- An additional corporation continued work on a Stewardship Plan for 299,000 acres, but COVID-19 travel restrictions in remote villages delayed work on this project. It is on track to be completed in 2022.
- Thirty-four Forest Stewardship Plans covering more than 478 acres were prepared for individual forest landowners.
- More than 32 homeowners completed wildfire fuel reduction projects using federally funded cost-share grants, with more than 90 total defensible space contacts made in 2021.

Alaska Native Corporations

Alaska Native corporations are the largest private landowners in Alaska and providing sub-grants that allow these corporations to develop Forest Stewardship Plans is an important service of the Alaska Forest Stewardship Program. Biomass energy development, commercial timber production, forest health enhancement, forest resilience, wildlife habitat, and reforestation were all important goals of Alaska Native corporations in 2021.

Since the inception of the Forest Stewardship Program in 1992, 68 plans covering more than 7.3 million acres have been written for Alaska Native corporations; plans expire after 10 years, meaning that 2.7 million forested acres are currently being sustainably managed with guidance from a professionally written forest management plan.

These plans help guide sustainable timber development and commercial operations, bringing economic benefits to rural villages and helping restore previously logged areas for traditional land values. Other benefits include the potential to sell carbon credits on the California carbon credit market, which several Alaska Native corporations have successfully done after completing Forest Stewardship Plans.

Individual Landowners

Stewardship Plans covering more than 478 acres were prepared for 34 private landowners in 2021. Wildfire defensible space, spruce beetle mitigation, and reforestation were primary goals for individual landowners.

Since 1992, over 1,100 individual landowners have adopted Forest Stewardship Plans covering a total of more than 52,000 acres. Most Stewardship Plans are for landowners in the Matanuska-Susitna, Fairbanks North Star, and Kenai Peninsula boroughs.

Cost-Share Assistance and Competitive Grants

Forest Stewardship Program personnel assisted private forest landowners by providing advice on ways to mitigate the risk of wildfires. The Council of Western State Foresters provides cost-share grants for hazardous fuel reduction practices in the wildland urban interface (WUI). In 2021, forest stewardship foresters performed final inspections for more than 32 homeowners who had incentive sub-grants for reducing hazardous fuels by strategically removing or pruning spruce trees near structures. Staff provided education and literature about the importance of defensible space to an additional 90 homeowners. There are currently active grant projects in the Matanuska-Susitna Borough, Kenai Peninsula Borough, and the community of Delta Junction.

Competitive grants increase the ability of Forest Stewardship Program personnel to contact private forest landowners and deliver education and outreach in an area with a high risk of wildfire. These grants are funded by the U.S. Forest Service.

John Winters, Stewardship Forester for the Kenai Peninsula, Kodiak Island, and nearby remote villages has done extensive work under these grants to help homeowners understand the importance of hazardous fuel reduction and spruce beetle mitigation. DOF Wildland Forestry Technician Gabe Pease-Madore continues to implement a similar grant in Delta Junction that will be completed in early 2022, expanding the Stewardship Program's reach to this community.

New Educational Tools

John Winters, Kenai/Kodiak Stewardship Forester, worked extensively in 2021 to modernize materials for expanded public outreach, primarily an interactive PDF self-study guide. The self-study guide expands the outreach of forest stewardship education to landowners across the state. With increased settlement in the wildland urban interface and an ongoing spruce beetle infestation, there is an urgent need for Alaskans to learn how to best care for their forested land. A landowner can now learn more about forestry and draft a Forest Stewardship Plan for DOF to finalize.

The self-study guide uses links and QR codes to connect landowners to natural resource websites and online publications. The guide also enables the Stewardship staff to create numerous stewardship plans for landowners dealing with similar issues such as fire protection, insect and disease mitigation, and reforestation. The guide can be found on the Alaska Division of Forestry Stewardship Program website at Your Forest Self Study Guide (alaska.gov)

The Stewardship Program Manager worked with U.S. Forest Service staff to develop a birch veneer business card that has a QR code linked to the Forest Stewardship website. The card also has a forestry basal area gauge on it that can help landowners inform their forest thinning goals.

Planning for Future Forests

The Forest Stewardship Program partners with DNR's Division of Agriculture Plant Materials Center in Palmer to provide cold storage for tree seeds that have been collected throughout the state. The collection has seed lots dating back to the 1990s. Seed viability is tested periodically; roughly 50 percent of an ongoing project to test germination was completed in 2021 to ensure that stored seed is still viable. The final phase of the project began in November 2021 and will conclude in 2022. This will help determine where new seed will need to be collected to ensure continued access to seeds for statewide reforestation efforts.

Forest Stewardship Staff

The Forest Stewardship Program manager 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. John Winters is the Stewardship Forester for the Kenai Peninsula, Kodiak Island, and remote villages in the vicinity. John also served as acting Stewardship Program Manager for two months while Trevor was in another acting role. Elizabeth Fernandez filled the role as acting Stewardship Forester in Fairbanks for two months while the position was vacant; Kieven Breitenbach served in the acting role for the final month of 2021. The vacant position will be filled permanently in 2022.

2021 Forest Stewardship Committee Members

Clare Doig, Consulting Forester, Forest & Land Management, Inc., Anchorage
Priscilla Morris, Wood Biomass and Forest
Stewardship Coordinator, USDA Forest
Service State & Private Forestry, Anchorage
Will Putman, Tanana Chiefs Conference
Forestry Director, Fairbanks
Julia Nave, Conservation Forester, The
Nature Conservancy, Juneau
Sue Rodman, Alaska Department of Fish
and Game, Anchorage
Chris Tcimpidis, Natural Resources Conservation Service Alaska Forester, Juneau
Clay Hoyt, Staff Forester, Chugachmuit Inc.



Teachers share observations at a PLT outdoor workshop. (Rachel Gold)

Project Learning Tree

Project Learning Tree (PLT) is a nationwide program providing K-12 outdoor educational curriculum and training to help educators bring the natural world, including forestry, into the classroom or bring the classroom to the outdoors. It is overseen nationally by the Sustainable Forestry Initiative. The Forest Stewardship Program has funded PLT in Alaska at a low level in the past, but thanks to one-time funding from the U.S. Forest Service State & Private Forestry, a full-time PLT coordinator position was funded for at least two years in 2020. The Stewardship Program is administering the funds through a sub-grant to the Alaska Association of Conservation Districts, which houses the position. The long-term goal is for this position to become self-funded through competitive grants. https://www.plt.org/

In 2021, Alaska PLT focused on connecting educators with opportunities for professional development, fire education, and forest-based curriculum that is correlated to the relatively new Science Standards of Alaska.

Alaska PLT coordinator Molly Gillespie updated National PLT's new online professional development course with the Alaska fire modules, and will use PLT's newest activity collection, "The Nature of Fire" with PLT programs in Alaska.

Alaska PLT teamed up with Project WET (Fairbanks Soil & Water Conservation District) and Project WILD (ADF&G) to offer a one-credit college level course providing 13 educators with a free PLT Environmental Education Activity Guide and fire-education modules.



Exploring trees as habitats in the winter with Molly of Denali. (Kris Capps, "Fairbanks Daily News Miner")

Alaska PLT delivered the one-credit college level course for educators, "Wildfire and you in a Changing Climate." This course uses Alaska-specific fire modules to introduce educators to PLT, Alaska's boreal forest and tundra ecosystems, fire management in Alaska, and to Firewise practices. Two online courses offered in the winter and spring reached 12 educators.

The highlight of 2021 was delivering three workshops in Denali National Park at the Murie Science and Learning Center Field Camp at Teklanika, hosted by Alaska Geographic. It was funded by a Sustainable Forestry Initiative Education Grant to Alaska PLT. The three-night workshops provided place-based forestry education and PLT's newest activity guide, "Explore Your Environment" to 18 educators. The workshops were low cost for educators, held outdoors, and provided much needed respite and rejuvenation after a difficult year of teaching during the pandemic. Denali Park education specialists also attended and provided participants with natural history information.

The Alaska PLT program was strengthened by partnerships formed at these workshops. Alaska Geographic, the nonprofit education and fundraising partner to Alaska's National Parks, National Wildlife Refuges, National Forests, and BLM Conservation Lands is now providing PLT curriculum to participants in their other programs. The National Park Service also provided the PLT "Explore Your Environment Activity Guide" to every educator at every National Park in Alaska. Alaska PLT also provided training at their annual educators' retreat.

Alaska PLT partnered with the UAF Cooperative Extension Service to build a Forestry Demonstration Trail at UAF's experimental farm in Palmer. The trail will highlight forest stewardship practices and PLT educational components. The space can also be used to demonstrate forestry measurement tools and practices and is open to the public.

Alaska PLT partnered with the PBS Kids "Molly of Denali" show and KUAC in Fairbanks to create educational videos to use in PLT virtual workshops. Molly of Denali came to Denali National Park in February and July to highlight outdoor learning in the boreal forest in the winter and summer.

Alaska PLT introduces foresters and natural resource professionals to work from National PLT, such as the Forestry Literacy Framework developed with U.S. Forest Service funds; "Green Jobs: Exploring Forest Careers," a guide that engages youth ages 12 to 25, in researching forestry jobs; and the "Explore Your Environment K-8 Activity Guide."

This was the best professional development course I've had as a teacher. The instructor was well-prepared, had a plethora of materials for students to peruse, and developed a sequence that helped us understand science standards, various resources, the PLT curriculum and lessons, techniques, and so much more. I feel much more prepared for the start of the school year.

-- Denali Workshop Participant

Community Forestry Program

City trees and greenspaces confer many health, social, economic, and environmental benefits but they need care to maximize these benefits. The Community Forestry Program (CFP) helps communities enhance these benefits through effective management.

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 Council (ACFC) helps set priorities for the program and provides expertise and advice to the division. The 15-member council represents the diversity and broad spectrum of interests and experiences in the state, and members are valuable partners in local community forestry efforts.

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
- Community and rural forests are connected and good management of one helps the other.



Municipality of Anchorage staff host a tour of soil cells being installed on 4th Avenue. The cells provide adequate soil for trees planted in sidewalk openings to reach mature sizes. (*Josh Hightower*)

Community Assistance

Anchorage Tree Board: It has been a long-time goal to establish an Anchorage Tree Board or similar organization to fulfill a U.S. Forest Service performance measure indicating a city is managing its urban forest. In 2021, the ACFC, CFP and Alaska Soil and Water Conservation Board held a series of Zoom meetings for individuals interested in trees. The CFP is supporting the newly reestablished Anchorage Soil and Water Conservation District in forming a committee to focus on replacing white spruce lost to the spruce beetle, removing invasive Prunus species, replanting downtown street trees, and increasing the tree canopy in Anchorage.

Fish Need a Forest: Restoring Campbell Creek Using Green Infrastructure: The CFP, Anchorage Parks Foundation, and the Municipality of Anchorage, completed the U.S. **Forest Service** Landscape Scale Restoration Grant project. The final step was installing three interpreta-



tive panels in Campbell Creek Park in July. The panels are entitled "This is Salmon Land," "Fish Need a Forest," and "Investing in the Bank."

4th Avenue Street Trees: In September CFP staff attended a site inspection of Anchorage's 4th Avenue reconstruction between C and E streets that features Silva Cells, which provide large cells of soil under sidewalks. Silva Cells are considered an effective way to grow and sustain street trees because they provide the space and uncompacted soil trees need to reach a mature size. CFP is encouraging the inclusion of more Silva Cells in ongoing street upgrades.

Technical Assistance: Staff assisted the University of Alaska Anchorage, three single-family homeowners, a condominium association, and a church with invasive trees or orchard trees.



Youth Employment in Parks teens plant seedlings to reforest an area that burned near McHugh Creek in Chugach State Park. (*Brad Muir, MOA Parks and Recreation*)

Chugach State Park: In August, CF staff and the Municipality of Anchorage Youth Employment in Parks planted over 100 birch and spruce seedlings near McHugh Creek where a wildfire burned in 2016. Sue Rodman, Alaska Department of Fish and Game, recently retired Chugach State Park Ranger Tom Crockett, and CFP Manager Jim Renkert spoke to the youth about natural resources careers.

Alaska Virtual Run for Women: For the second year in a row the CFP partnered with the Arbor Day Foundation, and the MOA Parks and Recreation Department to give away 100 trees at the virtual Alaska Run for Women. Over 3,400 participants represented all 50 states and the District of Columbia. The trees were again provided through a generous gift from International Paper.

Other Activities

- Alaska's Arbor Day was Monday May 17 and there were tree planting events in Fairbanks, Wasilla, Juneau, and on Joint Base Elmendorf-Richardson. The planting at Aurora Elementary School on JBER was featured on local television station, KTUU.
- The CFP continued the National Association of State Foresters Centennial School Tree Challenge begun in 2020. It provides grants to public schools for educational tree planting events, and to purchase seedlings and orchard or native trees.
- Because COVID continued to limit in-person training events, the CFP offered to pay registration fees for CFP volunteers and partners to attend virtual conferences of the International Society of Arboriculture and the Arbor Day Foundation.

- In May, Community Assistance Forester Josh Hightower visited Machetanz Elementary School in Palmer to provide information on tree care and urban forest management and to support the school's goal of creating an outdoor boreal forest classroom.
- CFP and the Forest Stewardship Program participated in a Zoom discussion of biochar with biomass coordinators from the USFS and Alaska Energy Authority, and a private company. There are many challenges but a growing awareness and interest in developing biochar in Alaska. Biochar is charcoal produced from wood or other plant matter and stored in the soil as a means of removing carbon dioxide from the atmosphere. It may be used to amend or improve poor soil.

Invasive *Prunus* **Species**

- The CFP issued its first Prunus control grants, funded by the USFS, in 2020 and the second round in 2021. Recipients included the Fairbanks, Palmer, and Wasilla Soil and Water Conservation Districts, the MOA Parks and Recreation Department, the Anchorage Cooperative Invasive Species Management Area, and the University of Alaska Anchorage. A third round of grants will be announced in early 2022.
- A public service announcement about the damage caused by *Prunus* aired on public radio station KSKA from May until August. Feedback on the PSA was very positive.



Community activist Sally Gibert discusses invasive *Prunus* during an interview with Lauren Maxwell from KTUU News at Tikishla Park in Anchorage. (*Josh Hightower*)



Homer Soil and Water Conservation District staff removing invasive *Prunus* at the Kilcher Homestead on the Kenai Peninsula with funds from a *Prunus* control grant. (*Casey Greenstein, Antheia Environmental*)

- In August, CFP launched the "Remove and Replace Program," funded by the Forest Stewardship Program, to incentivize Anchorage homeowners to remove invasive *Prunus padus* and P. virginiana. The Anchorage Daily News contacted the CFP for information and published a story on August 26. KTUU television also aired a story on August 18. ADN Chokecherry Story 08.26.21 KTUU Chokecherry Story 08.18.21 Staff completed over 60 initial inspections, and 16 final inspections to homeowners who were issued a \$100 voucher for a tree from a nursery. Participating nurseries are Bells, Alaska Mill and Feed, Arthur Campbell, and GreenEarth. The program expects to complete all inspections and issue the remaining vouchers in the spring of 2022.
- In August the CFP provided 12 trees to plant at a Prunus removal event sponsored by the Anchorage Park Foundation along Chester Creek.
- In October CFP staff led a tour of three badly infested sites, two along Chester Creek and one along Campbell Creek. Fifteen people representing agencies (DNR, USFS, UAF Cooperative Extension Service), non-profits, a soil and water conservation district, and neighbors took part in the tour. Participants got a close-up look at dense monocultures of *Prunus* in natural areas. Several attendees said it was a "bit shocking" and a "real eye opener."

 In May CFP staff discussed the *Prunus* control grant and efforts by the Talkeetna Community Council on radio station KTNA's *Su Valley Voice*. The council began work in May and completed the grant work in June.

Arbor Day Foundation Recognition

The Arbor Day Foundation recognized the following for meeting standards to protect and enhance community forests.

Tree Cities USA: The City of Wasilla, Ketchikan Gateway Borough, Eielson Air Force Base, Joint Base Elmendorf-Richardson, Fort Wainwright, and the Municipality of Anchorage all attained Tree City USA status again. Fort Greely is the newest Alaska Tree City USA.

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

Tree Campus Higher Education: University of Alaska Anchorage.



Society of American Foresters Cook Inlet Chapter member Ken Winterberger bundles seedlings at the Alaska Plant Materials Center, to distribute at the annual SAF seedling sale. (Josh Hightower)

Community Forestry Organizations

In 2021, volunteers donated over 642 hours to community forestry projects in Alaska. Citizen groups, including the Fairbanks Arbor Day Committee and Juneau Urban Forestry Partnership organized volunteers, applied for grants, raised funds, and supported tree planting and care. CFP staff also engaged with other organizations that are involved in tree planting, received a grant, or organized events to remove invasive species:

- Anchorage Fairbanks, Homer, Palmer, and Wasilla Soil and Water Conservation Districts
- Alaska Pacific University Lands and Sustainability Committee
- UAA Tree Campus USA Committee
- Alaska Pioneer Fruit Growers Association
- Alaska Botanical Gardens
- Fairbanks Area Surface Transportation FAST Planning
- Soc.ietry of American Foresters Cook Inlet Chapter
- Anchorage Cooperative Invasive Species Management Area
- Anchorage Youth Employment in Parks

Alaska Community Forest Council

In August the council held its first in-person meeting since March 2020. The meeting in Anchorage included a field trip to the new Chanshtnu Muldoon Park Food Forest and Community Garden. Several new members joined the council in 2021.

After many years of dedicated and enthusiastic service, the council and CFP staff bid farewell to long-time member and former ACFC chair Nan Mundy of Juneau. Nan and her family moved to Maine.

Chugach Electric Association, Paul's Tree Service, and the Society of American Foresters – Cook Inlet Chapter each donated \$1,000 to the Alaska Community Forest Council to support its mission.

Alaska Community Forest Council Members

Meg Burgett, Chair, Wasilla
Elise Huggins, Vice Chair, Anchorage
Laura Charlton, Ketchikan
Alex Wenninger, Secretary, Anchorage
Paul Guzenski, Anchorage
Nathan Lojewski, Treasurer, Anchorage
Robert Gorman, Anchorage
Dan Rees, North Pole
Patrick Ryan, Anchorage
Mitch Michaud, Soldotna
David Ezra Jay, Anchorage
Susan Rogers, Anchorage
Corey Steffen, Ketchikan



Fourth-grade students from Immaculate Conception School plant a tree on Arbor Day, May 17, in Fairbanks. (*Tim Mowry*)

FIRE & AVIATION

2021 Wildland Fire Season in Alaska

The 2021 fire season was relatively quiet, but 389 wildfires burned an estimated 254,500 acres statewide. Although it was well below the 10-year average of 547 fires and almost 1.2 million acres burned, many of the fires were located near population centers requiring aggressive initial attack.

Humans caused 252 fires that burned 9,893 acres, lightning caused 126 fires that burned 244,593 acres, and 11 fires with an undetermined cause burned 14 acres. No homes were destroyed, and no serious injuries were suffered by the public. One firefighter was seriously injured in a vehicle accident enroute to a fire.

In 2021, 248 fires burned 95,805 acres in the Division of Forestry (DOF) protection area, 121 fires burned 158,688 acres in the BLM Alaska Fire Service (AFS) protection area, and 20 fires burned seven acres in U.S. Forest Service protection areas.

The slower-than-normal season was due to heavy spring snow and cool temperatures in the Interior that delayed the start of the season. Then heavy rain from mid-June through August kept ignitions and spread low and there were fewer-than-normal lightning strikes.

The low fire and acreage numbers don't tell the whole story, however, as there were spikes in activity and high fire danger in different parts of the state at different times. In DOF's Fairbanks Area, for example, there were numerous fires in the wildland urban interface that aggressive initial and extended attack kept from becoming larger, more destructive project fires. Those fires also attracted the attention of the public, media, and political leaders given their proximity to populated areas.

The division also had to overcome the challenges of fighting wildfires during the second year of the COVID pandemic and dealing with a national shortage of firefighting resources that is impacting states across the country.

It was clear this year that, even in a slow fire season, Alaska's limited capacity requires the state to rely on Lower 48 personnel. Of the 1,157 overhead

orders filled in Alaska, 308 required personnel from the Lower 48 because the orders could not be filled by Alaskans. (Overhead are personnel other than crew members.) The division is focusing on building capacity to reduce reliance on Lower 48 resources given the national shortage of wildland firefighting resources.

The largest wildfire in Alaska this season was the 51,763-acre Dry Creek Fire in the BLM AFS protection area about 10 miles south of Manley and 90 miles west of Fairbanks. Following close behind was the 50,965-acre Munson Creek Fire in the DOF protection area about 50 miles east of Fairbanks near Chena Hot Springs. Approximately 90 percent of the acreage burned by the Munson Creek Fire was in a Limited Fire Management Area where there were lower value resources and monitoring was the preferred management action.

Only one fire required an incident management team (IMT) - the 927-acre Haystack Fire about 20 miles north of Fairbanks. The Alaska Black Type 2 IMT commanded by DOF Operations Forester Ed Sanford was ordered to manage that fire June 18-30 before turning it back to the Fairbanks Area.

There were 53 staffed fires in DOF and AFS protection areas in 2021, a relatively high number given the low number of fires and acres burned overall. A staffed fire is one that requires firefighters to camp overnight.

The Kenai/Kodiak Area claimed title to both the first and last fires of the season. The first official wildfire was the Buskin River Fire on Kodiak Island on April 6, a grass fire started when cracker shells used to haze birds at the U.S. Coast Guard airport sparked. The Coast Guard suppressed the fire.

The last fire start of the season was the Berezka Fire on October 6 near Anchor Point. The fire was caused by a generator shed that caught fire and spread to the wildlands. It was suppressed by rain on the same night it began.

Given the weather this summer, the below-average fire season was a bit of a surprise. There were 21 days with temperatures of 80 degrees or higher recorded at the Fairbanks International Airport. The average is 12 days. However, a closer look reveals that most of the 80-degree days, 12 of 21, came in late July and early August, past the peak of the fire season. Also, there was little lightning during the period of hot, dry weather. Well-spaced rains in June and July tamped down fire danger and kept the deeper fuels that typically make wildfires more resistant to control from drying out.

Less lightning than normal helped limit the number of remote fires in Limited Protection Areas. The Alaska Interagency Coordination Center's lightning detection system recorded 51,319 lightning strikes for the season, which is about 14,000 below average. It was the lowest number of summer lightning strikes since 2013. Most of the lightning occurred in mid-June, with June 16 claiming title as the day with the highest number of lightning strikes at 5,957. The National Weather Service issued 14 Red Flag Warnings this summer, 11 of which were issued in the Interior.

Acres Burned by Landowner						
Landowner	Fires	Acres				
AK Native Claims Act Lands	43	38,500				
Borough & City	11	1,9 00				
Bureau of Indian Affairs	3	276				
Bureau of Land Management	32	22,100				
Department of Defense	31	538				
National Park Service	12	61,000				
Other Federal Lands	1					
Private	127	1,500				
State	92	87,900				
U.S. Fish & Wildlife Service	22	40				
U.S. Forest Service	14	2				
Number of fires reflects landownership at origin. Acceptately by landowner are subject to change						

Fires by Protecting Agency						
Agency	Fires	Acres				
AFS - BLM	121	158,688				
STATE	248	95,805				
USFS	20	7				
TOTAL	389	254,500				

Wildfires by Cause and Protection Area								
Cause	Α	ll Fires	9	State		AFS	US	SFS
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
Campfire	21	2,189.6	21	2,189.6	-	-	-	-
Debris Burning	12	3,603.2	12	3,603.2	-	-	-	-
Equipment	26	5.1	26	5.1	-	-	-	-
Firearms/Explosives	34	552.5	4	15.0	30	537.5	-	-
Fireworks	5	2.9	5	2.9	-	-	-	-
Incendiary	2	2.9	2	2.9	-	-	-	-
Lightning	127	244,595.3	44	86,568.5	82	158,026.7	1	0.1
Miscellaneous	121	175.4	95	43.6	9	125.5	17	6.3
Powerline	14	1.4	14	1.4	-	-	-	-
Smoking	2	0.6	-	-	-	-	-	-
Undetermined*	25	3,375.2	23	3,374.7	-	-	2	0.5
*Investigated but cause un	determir	ned						

Fire & Aviation Highlights

- 389 fires burned an estimated 254,500 acres statewide. The 10-year average is 547 fires and 1.2 million acres burned.
- Aggressive initial attack helped to keep several fires from becoming much larger project fires.
- No homes were destroyed and there were no serious injuries to the public. One firefighter was seriously injured in a vehicle accident.
- There were 51,319 lightning strikes, about 14,000 below the average.
- DOF established the Northern Forestry Dispatch Center in Fairbanks to consolidate Northern Region dispatch centers. The center provides initial attack and logistical support for Fairbanks, Delta Junction, and Tok and is a more efficient, career-oriented dispatch system.
- The division became the first state or federal agency in the U.S. to use the Conair Q400 air tanker, which replaced the contracted Convair 580 air tankers. Alaska served as a testing ground for the newer air tanker, which is faster, more fuel efficient, and has a larger capacity than the Convair 580s.
- DOF purchased a Cessna Grand Caravan 206B to replace the Aero Commander 500 Shrike that was damaged beyond repair in a crash near Aniak in May 2020. It will be ready for the 2022 wildfire season.
- DOF supported agencies on incidents in 15 states and sent two staffed five-engine strike teams to Washington and Oregon, where they remained for more than two months.
- The Take Time to Learn Before You Burn campaign introduced new wildfire prevention mascot, Spruce the Moose, to the public.
- DOF awarded \$154,000 in Federal Volunteer Fire Assistance grants to 33 rural volunteer fire departments.

Record High Fire Seasons		
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



A Type 6 engine from the Valdez-Copper River Area is loaded onto a TOTE boat for transport to the Lower 48 as part of a 5-engine strike team. (*Jessica Warner, TOTE Maritime*)



Pioneer Peak Hotshot Crew members monitor burnout operation on the Munson Creek Fire. (*Ira Hardy*)

Munson Creek and Haystack Fires

The most high-profile fires for the Division of Forestry in 2021 were the Munson Creek and Haystack fires in the Fairbanks Area.

The Munson Creek Fire was started by lightning and burned 50,965 acres. It began about 50 miles east of Fairbanks and five miles south of Chena Hot Springs Resort at the end of Chena Hot Springs Road. It was the second-largest fire in the state and burned for nearly two months before heavy rain put it out. Several attributes contributed to the fire's complexity:

- It was in a Limited Protection Area within Chena River State Recreation Area and there was no initial attack to allow the fire to fill its natural ecological role on the landscape. Instead, firefighters monitored fire behavior and progression and focused on protecting Chena Hot Springs Resort and cabins.
- Chena Hot Springs Resort is a popular tourist destination at the end of the 56-mile Chena Hot Springs Road, the only way in or out.
- More than 70 cabins and homes in a five-mile stretch at the end of the road required protection. As the fire grew, an evacuation order was issued for the resort and cabin owners, but public messaging was a challenge because DOF was not trying to suppress the fire.



DOF Incident Commander Zane Brown briefs Governor Mike Dunleavy on the Munson Creek Fire. (*Ira Hardy*)

 The fire burned for nearly two months and required vigilant monitoring from the air and ground for an extended period.

The fire was reported on June 18 as a 2-acre fire "smoldering and skunking around in the tundra." Because it was mapped in a Limited Protection Area with limited values at risk and where monitoring was the preferred management option, no suppression action was taken.



This aerial photo of Chena Hot Springs Resort taken July 8 shows how close the Munson Creek Fire came to the resort. (Sam Harrel)

Fueled by hot, dry weather that primed fuels, the fire became active on June 23 and grew to an estimated 80 acres as it burned through black spruce. A four-person Helitack crew was sent to protect a trail shelter cabin about two miles north of the fire and two miles south of Chena Hot Springs.

The fire continued to grow and slowly expand north toward Chena Hot Springs, putting up smoke columns visible from the resort and Chena Hot Springs Road. The fire was estimated at just over 300 acres on June 30 but several days of hot, dry weather energized the fire and it grew significantly.

On July 1, the fire had mushroomed to 8,900 acres and topped a ridge about two miles south of Chena Hot Springs, triggering firefighters to take suppression actions. The Fairbanks North Star Borough issued a *Set* evacuation notice for residents living east of Mile 48 Chena Hot Springs Road and guests and employees at Chena Hot Springs Resort. A Type 3 organization under Incident Commander Zane Brown from Fairbanks Area Forestry was assigned to manage the fire.

Approximately 80 firefighters worked to hold the fire on top of the ridge with the help of water and retardant drops by aircraft. As the fire intensified, firefighters were pulled back to set up point protection for the resort and homes. Firefighters set up pumps, hose, and sprinklers around buildings at the resort and cabins and homes along the road.

Over the next week the fire grew and slowly advanced north, creeping down a hillside behind the resort. Firefighters continued to assess and prep structures in case the fire reached them. The fire was estimated at 20,000 acres on July 4 when it reached a trigger point about one mile south of the resort. This prompted the Fairbanks North Star Borough to issue a *Go* evacuation order for resort guests and employees and cabin owners between Miles 48 and 56 on Chena Hot Springs Road.

Over the next three days, the fire burned to within 100 yards of some resort buildings, but firefighters kept it from burning any structures. Cooler, wetter weather arrived on July 6 to moderate conditions and allow firefighters to take direct action on the fire. Burnout operations were conducted on the eastern end of the fire closest to the resort.



The Angel Rocks to Chena Hot Springs Trail shelter cabin was saved during the Munson Creek Fire. (Sam Harrel)



Firefighters protect structures from the Munson Creek Fire. (*Ira Hardy*)



The Munson Creek Fire burns through black spruce. (Ryan McPherson)

By July 8, the fire was estimated at 36,000 acres and more than 200 firefighters removed brush and set up pumps, hose, and sprinklers around cabins from Mile 42 to 56. Firefighters prepped more than 70 cabins along that stretch of road over the next few weeks. Firefighters also set up point protection at several cabins and other structures at mining camps along the Middle Fork Chena River on the south end of the fire.

Gov. Mike Dunleavy visited the Munson Creek Fire incident command post at Chena Hot Springs Resort on July 9 and was briefed on the fire.

Over the next four weeks, firefighters steered the fire away from the resort, cabins, and homes while allowing it to play its natural role on the landscape. The *Go* evacuation order issued on July 4 was reduced to a *Set* evacuation level on July 13. Rain and cooler temperatures moderated fire behavior and, as firefighters monitored the fire's progression and behavior, management of the fire was downsized to a Type 4 organization on July 17. Heavy rain on the weekend of July 24-25 further reduced fire activity and the borough reduced the evacuation level from *Set* to *Ready* on July 26.

A return to hotter, drier weather over the next two weeks resulted in renewed fire activity and when the fire crept to within one-quarter of a mile of cabins near Mile 53, the borough raised the evacuation level from *Ready* to *Set* on August 5. After more than an inch of rain fell on the fire over the weekend of August 6-8 and a forecast for more rain, the borough again reduced the evacuation level from *Set* to *Ready*. Continued heavy rain during August further diminished the threat as Fairbanks Area staff monitored the fire.





The Haystack Fire north of Fairbanks. A firebreak put in for the 2004 Boundary Fire helped contain this fire. (Ryan McPherson, BLM-Alaska Fire Service)

The Haystack Fire, at 927 acres, was the other high-profile fire in the DOF protection area. The fire was started by lightning on June 14 and was the only fire in 2021 that required an incident management team. Located about 18 miles north of Fairbanks, the fire threatened more than 200 residences in the Haystack Subdivision, just two miles south of the where the fire started.

The Haystack Fire was reported about a week earlier following lightning in the area but firefighters searching on the ground and in the air were not able to locate it. The fire finally revealed itself on June 14 as a lightning holdover and was reported by air attack personnel working on another fire about 20 miles to the southwest.

The Fairbanks Area mounted an aggressive initial attack from both the air and on the ground, holding the fire to about six acres on initial attack. However, it jumped a containment line the next day and made a significant run to the north, producing a smoke column visible in downtown Fairbanks.

Munson Creek Fire Incident Commander Zane Brown, center, looks at a map with other firefighters on July 11. (Sam Harrel)

Air tankers and water scoopers were ordered to slow the spread of the fire while dozers and crews were mobilized on the ground. Dozers constructed a line around the perimeter of the fire while crews reinforced the lines and began laying hoses.

The fire was estimated at 897 acres and 30 percent contained when the Alaska Black Type 2 Incident Management Team commanded by DOF Operations Forester Ed Sanford took over on June 18. An incident command post was established at Tanana Middle School in Fairbanks and 136 personnel were assigned to the fire. Rain fell on the fire the same day and helped moderate its behavior. Cooler, more humid weather helped firefighters get a handle on the fire in the first few days after the IMT took over.

More crews were brought in, including a few from the Lower 48, to construct fire lines by hand in areas that were too steep and rugged for dozers. Crews worked to plumb a hose lay around the fire perimeter and douse hot spots close to the fire's edge. A firebreak put in during the 2004 Boundary Fire was used as a containment line on the north end of the fire and was instrumental in slowing progress to the northeast. Though the fire did jump that line early in the incident, crews were able to catch it with dozers and helicopter water drops.

By June 19, the fire had increased to its final size estimated at 927 acres. The number of personnel assigned to the fire had increased to about 250, though containment remained at 30 percent. Hot spots as deep as 12 inches were reported on the



On June 28, the day after the Brock Road Fire started, the effects of water and retardant drops had in knocking down the fire is apparent. (*Tim Whitesell*)

south end of the fire while it burned about five inches deep on the north end.

A half inch of rain on June 20 moderated fire activity and allowed crews to engage the fire directly. By June 22, containment had increased to 48 percent, and it bumped up to 66 percent on June 23. Winds on June 24 tested containment lines but they held, and containment grew to 77 percent.

The fire was declared 100 percent contained on June 25 and crews spent the next five days mopping up and looking for hot spots. Drones equipped with infrared equipment were flown over the fire to identify hot spots along the perimeter. The fire was turned over to the Fairbanks Area on July 1.

Fairbanks Area Fires

Brock Road Fire

Date Started: June 27

Cause: Human Final Size: 17 acres

Summary: This remained a relatively small fire, thanks to aggressive aerial initial attack and the availability of water scoopers and air tankers in Fairbanks. The fire, in a wooded, residential area about eight miles southeast of Fairbanks, was burning primarily in black spruce and grew quickly, threatening residences less than a quarter mile away. Water scoopers and air tankers dropped water and retardant on and around the fire to knock down the flames. More than 70 firefighters from DOF, BLM AFS, and North Star Volunteer Fire Department reinforced the work by aircraft. After the aerial assault there was smoke but no flames were visible. Crews spent three days mopping up.

End State: The fire was declared fully contained on June 30 and resources were demobilized on July 4.

Salcha River Fire
Date Started: June 9
Cause: Lightning
Final Size: 7 acres

Summary: This lightning-caused fire was in an area with many recreational cabins and a substantial fire history. The fire was in a Full Protection Area about 25 miles up the Salcha River, and five miles southeast of Fairbanks. The fire was about one quarter of a mile south of the river where there were cabins on both sides of the river. Water bombing aircraft responded quickly to slow the fire's progress until firefighters could arrive on the ground. Air tankers dropped retardant between the fire and cabins on the south side of the river. Two crews, eight smokejumpers, and a four-person Helitack load were flown into the fire. There was minimal spread following the aerial assault.

End State: The fire was declared 100 percent contained on June 13.

Rosie Creek Fire
Date Started: June 12
Cause: Lightning
Final Size: 1 acre

Summary: Located 14 miles southwest of Fairbanks in an area with a history of big fires and black spruce for fuel, Fairbanks Area initial attack pounced on this fire to prevent it from spreading toward the Parks Highway two miles to the north and threatening homes in the Rosie Creek area. An aggressive aerial attack by four water-scooping aircraft and a helicopter contained the fire until firefighters could fly in by helicopter. Two crews spent two days mopping up the fire.

End State: The fire was declared out on the morning of June 14.

Straight Creek Fire
Date Started: June 20
Cause: Lightning
Final Size: 24 acres

Summary: The fire was reported about two miles north of the Parks Highway near Skinny Dick's bar at Mile 325. Smoke was visible from the highway and multiple motorists called in the fire, which was not road accessible. Twelve smokejumpers were deployed for initial attack, and retardant and water drops helped cool the fire until firefighters arrived. The Yukon Crew and Fairbanks 1 crew were helicoptered into the fire and Fairbanks Area Forestry firefighters responded on four-wheelers. Crews spent six days containing and mopping up the fire.

End State: The fire was fully contained on June 25.



The start of the Yankovich Road Fire near Fairbanks on July 16. (*Ernest Prax*)

Yankovich Road Fire Date Started: July 16 Cause: Lightning Final Size: 3.5 acres

Summary: This fire had the potential to be a destructive project fire. It started on a hot, dry day within one-half mile of a residential subdivision in west Fairbanks and only one and one-half miles from the University of Alaska Fairbanks campus. Aggressive initial attack by ground and air kept the fire from spreading to residences and growing larger. Four water-scooping aircraft made a total of 60 water drops totaling 42,000 gallons of water to keep the fire under control while approximately 80 firefighters were mobilized to the fire within a few hours. A model run using the Fairbanks North Star Borough's property tax database showed that DOF's quick, aggressive response protected \$15.4 million in homes and improvements.

End State: The fire was declared 100 percent contained on July 17 and was called out on July 20.

Winter Trail Fire
Date Started: June 14
Cause: Lightning
Final Size: 37 acres

Summary: The fire was reported within two hours of the Haystack Fire about 20 miles to the northeast and required sharing aircraft and initial attack resources. The fire was 14 miles northeast of Fairbanks and three quarters of a mile from Fort Knox Gold Mine. Eight smokejumpers were deployed for initial attack and water scoopers and air tankers dropped water and retardant on and around the fire. The Yukon Crew replaced smokejumpers and the Fairbanks 1 Crew arrived to replace them when the Yukon Crew was pulled for initial attack on the Straight Creek Fire.

End State: The fire was fully contained on June 21.

Kenai/Kodiak Area Fires

Loon Lake Fire

Date Started: June 12 Cause: Lightning Final Size: 102 acres

Summary: This fire could have been a political challenge. It started in a Limited Protection Area in the Kenai National Wildlife Refuge about one mile from where the 2019 Swan Lake Fire started. No initial attack response was taken on the Swan Lake Fire because it was in a Limited Protection Area and there were higher priority fires at the same time. That fire went on to burn nearly 170,000 acres over four months, intermittently shutting down the Sterling Highway and severely impacting tourists and residents on the Kenai Peninsula. Fearing a similar situation, refuge officials requested a non-standard response. Helicopter water drops

calmed fire behavior and a fourperson Helitack load arrived in late evening. The fire had grown to only six acres the next day but became more active in the afternoon, prompting DOF to bring in two water scoopers and request permission from refuge officials to drop retardant around

Tanker 540, the new Q-400 air tanker from Conair, drops retardant on the Lichen Fire north of Willow on July 4. (*Tristan Reid, Caswell Volunteer Fire Department*)

the fire. Scoopers and air tankers made more than 100 water drops totaling over 100,000 gallons of water. Air tankers also dropped three loads of retardant around the fire to keep it corralled until more firefighters arrived. Two crews constructed a hose lay and saw line on the fire perimeter and spent a week mopping up.

End State: The fire was declared 100 percent contained on June 19.

Mat-Su/Southwest Area

Lichen Fire

Date Started: July 4 Cause: Human (fireworks) Final Size: 2.5 acres

Summary: This Fourth of July fire, started by fireworks, had potential to be a destructive fire but for quick action by Mat-Su Area initial attack forces both from the air and on the ground, and several fire departments. The fire was reported at a halfacre just after 6:30 p.m. near Mile 91 of the Parks Highway. There were multiple residences and outbuildings in the area and evacuations were initiated for some residents. The Mat-Su Area initial attack helicopter delivered a six-person squad and made water drops to slow the rapidly growing fire. Two retardant drops on different flanks of the fire kept it from spreading. Local fire departments, including Caswell, Central Emergency Services, Houston, Talkeetna, and Willow, assisted with initial attack and water delivery. Firefighters had a hose lay around the fire by 8:30 p.m. and the fire was declared 100 percent contained at 11:10 p.m. The Pioneer Peak Hotshots began mop up on July 5.

End State: The fire was declared out on July 15.



About Mountain Fire Date Started: June 14

Cause: Human

Final Size: 2,179 acres

Summary: This fire, about six miles south of McGrath, posed a threat to 15-20 cabins and outbuildings in the Cranberry Ridge subdivision three miles north of the fire. Twenty-four smokejumpers provided initial attack, but it grew substantially in the first three days, reaching 2,000+ acres. A Type 3 organization commanded by smokejumper Pat Johnson was assigned to manage the fire. Firefighters used aircraft water and retardant drops and natural barriers to keep it contained early on. Once firefighters established protection around structures in the subdivision, they constructed containment lines. Drones helped identify hot spots along the perimeter of the fire. At its peak, more than 90 firefighters were assigned to the fire.

End State: The fire was declared 100 percent con-

tained on June 25.

Pilot Point Fire

Date Started: May 24

Cause: Human (escaped dump fire)

Final Size: 3,600 acres

Summary: This remote, early-season fire in the Southwest Area drew the first significant response of the season and threatened the coastal village of Pilot Point on the Alaska Peninsula about 370 miles southwest of Anchorage. The fire started when a fire in the dump escaped into grass and spread to the tundra about two miles north of the village. Residents tried to contain it but were thwarted by strong winds. The fire had grown to an estimated 200 acres by the time 12 smokejumpers arrived later in the afternoon. A Palmer-based air tanker dropped a load of retardant and smokejumpers conducted a burnout along the five-mile road leading from the village to the dump to keep it from crossing the road to the south and spreading toward the village. The Pioneer Peak Hotshots flew in to assist with line construction and mop up. A drone with infrared equipment was used to search for hot spots along the perimeter.

End State: The fire was declared 100 percent contained on May 30.



Start of the Black Hills Fire on July 21. (Wille Nelson)

Tok Area

Black Hills Fire

Date Started: July 21
Cause: Lightning
Final Size: 20 500 per

Final Size: 30,500 acres

Summary: This fire in the Tetlin National Wildlife Refuge 56 miles southeast of Tok did not threaten communities but it did threaten an allotment and a remote automated weather station, both of which were successfully protected by firefighters. It was DOF's second-largest fire of the season and produced smoke columns visible from the Alaska Highway, Tok Cut-Off, and Tetlin Road. The fire was reported in a Limited Protection Area and no initial attack was taken. However, the fire blew up the next day due to dry fuels and erratic winds. The fire grew to about 2,500 acres and a crew was flown in to protect the allotment with direct attack and burnouts. The fire burned up to the cabin, but firefighters arrived in time to save it, although under tense circumstances. Two water-scooping planes and two helicopters assisted firefighters on the ground with water drops and an air tanker dropped retardant around the cabin and allotment. Sprinklers, pumps, and hose were set up around the cabin and firefighters opened an old saw line around the cabin. The fire continued to burn through July and much of August. It burned around the remote weather station on August 2, but helicopter water drops protected it.

End State: Tok Area monitored the fire by air until rain put it out in late August.

Information Office Activity

Despite the slow fire season, Division of Forestry information office staff in Fairbanks had their hands full. A slower fire season can add work for DOF information officers if an incident isn't big enough to warrant an incident management team, which includes information officers. This places the entire workload of information management on the Area and DOF information offices.

Multiple fires in the Fairbanks Area kept public information officers busy. The Munson Creek Fire, 50 miles east of Fairbanks, posed a considerable challenge due to its location, duration, and the interest it generated with the public and political leaders. The fire was in a Limited Protection Area, so there was no initial attack, and the fire was allowed to play its natural ecological role. However, once the fire grew large enough to pose a threat to Chena Hot Springs Resort, evacuation orders were issued, which caused considerable public interest. Three public information officers were brought in over the course of four weeks in July to assist the DOF information office. Information officers were staged at Chena Hot Springs Resort to answer questions from residents and tourists.

DOF's statewide public information office also worked closely with the Alaska Black Type 2 Incident Management Team information office during the Haystack Fire in June.

Notably, in 2021 the DOF information office:

- Worked with statewide utility companies to publish wildfire prevention articles in *Ruralite*, the magazine for Golden Valley Electrical Association and Copper Valley Electric, and in Chugach Electric's monthly newsletter. Articles included burn permit requirements and tips for Firewise homes and safe campfires. The articles reached approximately 150,000 readers.
- Provided daily wildfire updates to DOF and DNR leaders and the Congressional delegation.
- Published over 700 posts on the DOF Facebook page, reaching about 5.5 million people.
- Handled information for multiple fires in the Delta Junction, Fairbanks, Kenai/Kodiak, Mat-Su/Southwest, and Tok areas.
- Created crew photo boards for the Pioneer Peak Gannett Glacier, and White Mountain crews.

State Fire Support

Firefighter Property Program

The Firefighter Property Program is a Department of Defense program that offers excess property to fire suppression, fire prevention, and related emergency service agencies. The program is managed by the U.S. Forest Service in cooperation with state forestry agencies.

In 2021, the division and local fire departments acquired numerous small items and the large and very valuable pieces of equipment shown below:



Zoom boom claimed by Anchorage Fire Department (Anchorage Fire Department)



Humvee claimed by Houston Fire Department (Houston Fire Department)



Fire Engine claimed by Palmer Fire and Rescue (*Defense Logistics Agency*)



Loader claimed by Tok Area Office (*Defense* Logistics Agency)

State Fire Warehouse

2021 was an average fire season for the warehouse system, which tallied \$11.4 million dollars in materials issued. No supplies were sent to, or borrowed from, the Lower 48 this season.

The warehouse supplied the cache van for the Haystack Fire, the only team fire this year. It also supported DOF Area caches, extended attack fires, one large Type 3 incident, and the Munson Creek Fire near Chena Hot Springs. The Palmer Warehouse was instrumental in mobilizing the Incident Management Team and crews to Lower 48 fires.

Ten warehouse employees accepted Lower 48 assignments totaling 49 weeks. An additional four weeks were devoted to in-state warehouse assignments, mostly at the Tok warehouse.

Communications

The Division of Forestry's communications staff completed several large projects in addition to the normal tasks and equipment updates to support fire operations. The biggest project was the Northern Forestry Dispatch consolidation move. This required moving radio consoles and related equipment from DOF's Fairbanks, Delta, and Tok offices to the new center in Fairbanks, which took many hours to plan and accomplish.

The Department of Military and Veterans Affairs Alaska Public Safety Communications System (APSCS) provides technical radio support for state agencies. The APSCS, BLM Alaska Fire Service Radio Shop, and Northern Forestry dispatch staff partnered to successfully move equipment and upgrade repeaters and control points to digital for better coverage. DOF upgraded four repeaters, with three remaining; two of which will be upgraded in 2022. Each project takes several weeks but provides a crucial link to the field.

Switching cellular phones and data to FirstNet has been very useful. In 2021 a Cellular-on Light Truck (self-contained total communications system) was deployed to the Haystack and Munson Creek fires to improve cellular connectivity.

DOF owns over 1,000 handheld, vehicle-mounted, and aircraft-mounted radios that are used on the statewide Alaska Land Mobile Radio system, DOF specific repeaters, and all incidents in Alaska and the Lower 48 where DOF firefighters are assigned.

UAA Mobilization Center. DOF once again used the University of Alaska Anchorage campus to mobilize and demobilize emergency firefighting crews that were ordered for Lower 48 assignments in July, August, and September. The crews were housed and fed at the UAA mobilization center prior to their departure and on their return to Alaska. The university was very accommodating, despite COVID-19 concerns and school being in session and is an important asset in DOF's firefighting efforts.



APSCS crew adding radio antennas to the new Northern Forestry Dispatch Center in Fairbanks. The towers are part of a network that allows DOF to provide radio service across the state, now including Delta and Tok. (*Teresa Rose*)



APSCS technicians
Andres Gajonera and
Evan Rockwell. Not pictured are ground crew
members Daniel Woody
and Mike Grant.
(Teresa Rose)

Staff Changes

Sarah Saarloos accepted the position of Fire Staff Officer in January. The position supervises three fire program coordinators positions: fuels reduction, fire training, and fire prevention; and oversees non-perms and contractors for other projects. The position manages budgets that include federal grants, state funds, and other funding sources. Sarah most recently worked as a Program Assistant in the prevention section but has many years of experience with the division on Incident Management Teams and in operations, dispatch, and public information. She brings a respected work ethic and fire experience to support the programs.

Long time warehouse employee, **Jessica Blyden-burgh**, accepted a promotion to Palmer Warehouse Assistant Manager. Forestry is very fortunate to have someone with her warehouse experience available and willing to step in.

Kim Stone resigned after a return to the warehouse for two seasons. Kim's knowledge of many aspects of Forestry's business is extensive and her organizational skills and professionalism will be hard to replace.



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 supports a variety of educational and mitigation projects funded by the U.S. Forest Service.

State Fire Assistance and Volunteer Fire Assistance funding supports the division's ability to respond to wildland fires and the impacts to communities while ensuring sufficient firefighting capacity. The program ensures delivery of an efficient, uniform, and coordinated wildland fire protection program.

DOF protects 150 million acres of land, of which 85.2 million acres are federal lands managed by the Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish & Wildlife Service, or National Park Service. As Alaska's population continues to move into urban interface areas, the numbers of human-caused fires in these critical fire protection areas will also increase.

This program provides partial funding for the State Operations Forester, Fire Staff Officer, Strategic Planner, Safety Officer, Air Attack Coordinator, Public Information Officer, Communications Technician, and interagency incident management team support. Positions support year-round, ongoing programmatic efforts.

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

Western Wildland Urban Interface Funding

The division was awarded two Wildland Urban Interface (WUI) grants in 2021, the Phase II and Project Learning Tree (PLT) Firewise Education.

Take Time to Learn Before You Burn, a successful educational campaign for wildfire prevention in Alaska, began its second phase. The program informs the public about DOF's compliance tools and reinforces the message that safe burning practices are essential for mitigating risk and damage from wildfire in an expanding wildland urban interface.

PLT will build on work completed under two previous WUI grants to increase awareness of wildfire and encourage risk mitigation and wildfire prevention statewide and in targeted communities. This project will create new online resources and professional development courses for Alaska educators using distance delivery platforms (ZOOM, Google Classroom, etc.). Distance delivery will allow courses to be held year-round and reach educators across the state more efficiently. Targeted communities include Anchorage, Mat-Su, Kenai, Soldotna, Kodiak, Copper River, Glennallen, Nenana, Healy, Galena, and Ft. Yukon.

Volunteer Fire Assistance Grants to Rural Fire Departments

The Division of Forestry provided \$154,247.80 through the Volunteer Fire Assistance grant award program. The Volunteer Fire Assistance program provides federal financial, technical, and other assistance from the U.S. Forest Service to state foresters to organize, train, and equip fire departments in rural areas to suppress fires. Rural fire departments represent the first line of defense in meeting expanded protection needs for wildland-urban interface fires. All volunteer fire departments in Alaska were given the opportunity to apply. There were 35 applications, and 33 departments were awarded funding.

Volunteer Fire Assistance Grants to Rural Fire Departments

Fire Amount				
Department	Awarded			
Steese Fire Department	\$4,500.00			
Chena Goldstream VFD	\$5,000.00			
Anderson VFD	\$4,998.63			
Gakona VFD	\$5,000.00			
Kennicott/McCarthy VFD	\$4,997.05			
Northway VFD	\$4,625.00			
McKinley VFD	\$4,961.02			
Tok VFD	\$4,034.71			
Tri Valley VFD	\$5,000.00			
West Lakes VFD	\$4,885.65			
Delta Junction VFD	\$4,972.27			
Rural Deltana	\$4,972.50			
Valdez VFD	\$4.499.99			
Houston FD	\$4,608.00			
Sutton VFD	\$3,224.00			
Talkeetna VFD	\$5,000.00			
Caswell Lakes VFD FSA #135	\$4,988.39			
Willow VFD	\$4,973.43			
Butte VFD	\$4,970.70			
Palmer Fire & Rescue	\$4,875.00			
Cooper Landing VFD	\$4,449.10			
Lowell Point VFD	\$4,995.00			
Nikiski VFD	\$4,626.00			
Seward FD	\$4,979.00			
City of Kenai VFD	\$4,974.92			
Homer VFD	\$4,998.50			
Kachemak Emergency Services	\$4,986.01			
Western Emergency Services Area	\$4,998.42			
Bayside VFD	\$4.500.00			
Womens Bay VFD	\$4,350.06			
Whale Pass	\$2,215.45			
Port Alsworth	\$4,499.00			
Aniak VFD	\$4,590.00			
GRAND TOTAL	\$154,247.80			

Fuels Reduction Program

Alaska is experiencing more intense, longer fire seasons and its forests are vulnerable to insect attack and disease. About 80 percent of Alaska's population lives in communities at risk from wildland fire, and more Alaskans are moving into fire prone areas. DOF is adapting to these changes with an aggressive hazardous fuels reduction program.

In 2021, DOF created a Statewide Fuels Coordinator position and implemented 16 hazardous fuel projects, which can help protect 17 communities across Alaska. The new position comes at a time of increased funding from multiple sources including the state's Capital Improvement Program (CIP), totaling \$17 million, specifically for firebreaks and hazardous fuel mitigation.

DOF's fuels program will continue to expand, with five additional projects planned for 2022, and 15 more projects proposed for 2023 – 2025. Firebreaks around communities reduce risk and are a cost-effective and efficient way to moderate wildland fire.

The division also put in place an updated GIS fuel reduction tracking layer and a <u>story map</u> to better communicate these efforts to the public. High priority areas include Mat-Su, Kenai Peninsula, Fairbanks, Delta Junction, Copper River, and Tok.

Interagency collaboration improved in 2021 as DOF was represented on the Alaska Wildland Fire Coordinating Group's new Fuels Management Committee. The committee supports a multi-agency approach to hazardous fuel mitigation in Alaska by leveraging funds, capacity, and programmatic strengths to best implement hazardous fuel removal. The committee has already begun creating a geo-spatial risk assessment tool to help agencies plan fuel breaks that can help protect communities and infrastructure at highest risk from wildfire.

In addition to new fuels projects, the division is maintaining existing firebreaks. Fairbanks Area staff and a local contractor are working on the Old Murphy Dome fuel break to help protect homes and property north of Fairbanks with an estimated economic value of \$30 million. Fuel breaks have proved their value in protecting communities. During the 2014 Funny River Fire on the Kenai, fuel breaks protected values estimated at \$1.7 billion,

and on the 2019 Shovel Creek Fire near Fairbanks, fuel breaks saved homes and property valued at \$51 million.

In the past five years, DOF has developed plans for 5,000 acres and completed fuels reduction on 1,600 acres, using federal funds to pay fire crews and private contractors. New CIP appropriations will fund vegetation management on fuel breaks created in the past. Current federal funding sources do not allow for maintaining fuel breaks, but this is an important step in ensuring that fuel breaks continue to be effective. The division is also looking at ways to offer firewood and woody biomass from the fuel breaks to the public.

DOF is building capacity to engage the private sector in fuels reduction work, as well as involving local governments in creating community-driven fuel breaks and wildland fire protection plans. To increase its capacity in Fiscal Year 2022, DOF plans to add six new positions funded fully or partially through the CIP. The additional positions will improve recruitment and retention by allowing upward mobility for current staff, and extended work for seasonal employees. DOF also purchased four commercial woodchippers for hazardous fuel disposal to be delivered in fall 2022.

As capacity increases and plans are implemented, the division will improve its fuels management program and ability to identify and protect highest values at risk - homes and other infrastructure. Creating breaks in continuous fuels between the wildland and urban interface give fire managers proven suppression options and aids to protect human life, property, and infrastructure.



New Program
Coordinator. The
division hired Darren
Finley to fill the newly
created Statewide Fuels
Coordinator position.
Darren brings a wealth
of experience in fire
program delivery, prevention, planning, and
operations.

2021 Fuels Reduction

Kenai Area

Morgan's Landing State Park Recreation Site:

Mature white spruce in the recreation area have been heavily impacted by spruce beetles. DOF seasonal staff removed hazardous fuels on approximately 17 acres to increase public safety and reduce the risk and intensity of wildfire. Workers removed dead trees in high foot traffic areas, removed lower limbs, and thinned dense stands of black spruce to create 12 feet between tree crowns. Slash was piled for burning.

Kenai Peninsula College: DOF staff are working with the University of Alaska to reduce fuels on 150 acres adjacent to the Kenai Peninsula College campus. A commercial operator will be contracted to remove dead and down trees and seasonal staff will treat areas near infrastructure.

Kenai Peninsula State Parks: This was the second year of an agreement with State Parks to remove hazardous trees and treat ingress/egress routes in parks. Park personnel removed about 760 hazardous trees and treated three miles of access routes in 2021.

Sterling Fuel Break: DOF staff in partnership with native corporations, the Kenai Peninsula Borough, private landowners, and other state and local agencies continued work on the Sterling Fuel Break, expanding the initial fuel break created in 2015 to the west and north.



The Pioneer Peak Interagency Hotshot Crew removes hazardous fuels on the Sunset fuels mitigation project. (*Pioneer Peak Crew*)

Russian River Campground: The Gannett Glacier Type 2 Initial Attack crew, based in the Mat-Su, removed beetle killed spruce in the Russian River Campground in the Chugach National Forest and along the river boardwalk under the Good Neighbor Authority agreement with the U.S. Forest Service.



The Gannett Glacier Type 2 Initial Attack Crew fells trees at the Russian River Campground to remove hazardous fuels. (Gannet Glacier Crew)

Mat-Su/Southwest Area

Hidden Hills Road: Staff completed phase one and began phase two of a shaded fuel break along the Hidden Hills Road to protect ingress/egress for the community of Caswell.

Lynx Lake: DOF held community meetings and laid out a shaded fuel break along the access route to the Lynx Lake community.

Houston: Area staff began laying out the Sunset fuel break that will help protect Houston.

Nikolai, Telida, and McGrath: The Southwest Initial Attack Module, assisted by the Pioneer Peak Interagency Hotshot Crew, completed fuels reduction projects in the communities of Nikolai, Telida, and McGrath.

Northern Region

Old Murphy Dome Fuel Break: DOF is maintaining this 300-foot-wide fuel break in an area with numerous landowners, utility rights-of-way, and recreational trails. This 603-acre fuel break provides a significant fire barrier for Fairbanks.

Vista Gold Shaded Fuel Break: This 25-acre shaded fuel break is on Fairbanks North Star Borough lands. It protects the Pandora Subdivision and surrounding areas off Goldstream Road.

Anderson Community Fire Resilient Landscape:

This project will thin 80 acres for a shaded fuel break creating defensible space adjacent to fire prone areas.

Delta River West: Preliminary planning has begun on this project located on the west side of the Delta River. It will result in a 13-mile, 750-acre fuel break from the Donnelley Training Area and help protect the community of Whitestone.

Eagle Subdivision Fuel Break: Two fuel breaks treating a total of 187 acres can help protect the community of Tok.

Copper River Area: DOF will update current Community Wildfire Protection Plans and complete two new plans for surrounding communities. This is a critical step in implementing fuel mitigation projects to help protect values at risk from wildfire.



A roller chopper removes vegetation on a fuel break in the Fairbanks Area. The work is funded by the state Capital Improvement Program. (*Jeremy Douse*)

Fire Prevention Program

The Fire and Aviation Program continued to promote the "Take Time to Learn Before You Burn" wildfire prevention campaign, developed in 2020. A highlight of the 2021 campaign was unveiling the new wildfire prevention mascot, Spruce the Moose, to the public. Spruce the Moose attended Alaska League Baseball games in Kenai, Mat-Su, and Fairbanks to throw out the first pitch, and he was a big hit – pun intended. The appearances also turned a spotlight on the "Take Time to Learn Before You Burn" campaign.

Prevention staff conducted multiple enforcement trainings on recent changes to the burn permit regulations in HB 355 for prevention technicians and associated law enforcement staff. Staff also held workshops to train local agencies on changes affecting their areas.

Staff participated in outreach events such as home shows, outdoor shows, state fairs, and realty association meetings to reach more than 8,000 youths and adults. In addition, staff held small workshops and informational meetings to develop relationships with realty agencies, youth and small school educational organizations, area emergency co-ops, chambers of commerce, and others.

These events allowed the division to get campaign material into the hands of the public and build relationships that will lead to invitations to events in the coming year and increased visibility for Spruce the Moose and DOF's fire prevention message.

away to promote wildfire preven-

tion. (Tim Mowry)

Fire Training Program

The Division of Forestry 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 & Interagency Training

With the ongoing pandemic, the national training in 2021 was presented virtually, cancelled, or post-poned. Although virtual classes were limited in size, employees attended four dispatch courses, one helicopter manager course, and one incident command course.

In the spring, the division sponsored Interagency training that followed national guidelines and focused on courses necessary for task book and position development including flex plan requirements for employee promotion. DOF offered classes through multiple platforms - virtual, blended, and in person. The platform chosen was based on the course design and content, to deliver the best quality class while keeping students and cadres safe during the COVID pandemic.

Converting National Wildfire Coordinating Group courses to a variety of virtual delivery platforms such as MS Teams, Google, and Zoom, required additional time and effort. However, the training season was successful, and all necessary courses were provided in a COVID-free environment.

Division Training Completed

Aviation: 225 students - Basic Air Operations, Helicopter Crewman, Helibase Manager, Aviation Transport of Hazardous Materials, Helicopter Manager, Aviation Radio Use, Mishap Review, Interagency Aviation Organizations, Basic Airspace, Mission Scheduling & Coordination, Aviation Policy & Regulations I, Mission Planning & Flight Requests, Crash Survival for Region-10 (Alaska), and Automated Flight Following

Dispatch: 17 students - Dispatch Recorder, Initial Attack Dispatcher, Aircraft Dispatcher, and IROC

Driving: 98 students - ATV/UTV training, CEVO3, Defensive Driving, Engine Operator, and Alaska Engine Academy

Leadership: 159 students - Human Factors in the Wildland Fire Service, Followership to Leadership, Fireline Leadership, and Fire Program Management an Overview

Division of Forestry Interagency Courses					
Date	Course	Location	Instructors	Students	
	Virtual Cou	ırses			
March 8-12	AK Prevention Workshop	Zoom	1	14	
March 15-17	ICS-300	Google	2	31	
March 18-19	IS-400	Google	2	21	
April 5-7	S-215	MS Teams	2	20	
April 6-8	IQS	Zoom	1	23	
April 19-23	S-372	MS Teams	5	26	
April 28-29	Hazmat – Warehouses	Zoom	1	22	
	Blended Co	urses			
April 12-14	RT-372	Palmer	1	32	
April 17-23	AK Engine Academy	Palmer	10	20	
In-person Courses					
March 29-April 2	L-380	Fairbanks	3	24	
April 7-9	L-280	Fairbanks	4	13	
Early May	RT-378	Palmer	1	6	

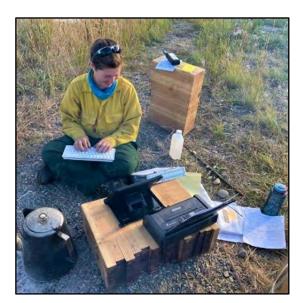
Finance: 8 students - Interagency Incident Business Management and Applied Interagency Incident Business Management

National Incident Management: 314 students - National Incident Management System Introduction, National Response Framework Introduction, Introduction to the Incident Command System, ICS for Single Resources and Initial Action Incidents, Intermediate ICS for Expanding Incidents, and Advanced ICS for Command and General Staff

Prevention: 11 students - Wildland Fire Observations & Origin Scene Protection for First Responders, Prevention Officer Enforcement Training, and Alaska Prevention Workshop

Refreshers: 931 students - Annual Wildland Fire Safety Training, Wildland Fire Chainsaw Refresher, Helicopter Manager Workshop, PLDO recurrency

Warehouse: 33 students - HAZMAT 49 and Forklift Operations: 471 students - Basic Wildland Fire Orientation, Firefighter Training, Introduction to Wildland Fire Behavior, Firefighter Type 1 Training, Initial Attack Incident Commander, Introduction to Incident Information, Portable Pumps and Water Use, Wildland Fire Chainsaws, Fire Operations in the Wildland Urban Interface, Firing Operations, Crew Boss, Engine Boss, Intermediate Wildland Fire Behavior, Taskforce/Strike Team Leader, Division/Group Supervisor, and Canadian Forest Fire Danger Rating System



Alaska Fire Medic Jackie Cheek logs information into a laptop while in Venetie supporting the Discovery Creek and Marten Creek fires in northeast Alaska. (Evan Sterling, BLM AFS)



Fire Medic Thane Cunningham, left, and helicopter crew member and fire medic Evan Sterling on the Twenty-Five Mile Fire outside Chelan, Washington in September. (Evan Sterling, BLM AFS)

Medical Training

DOF provided more than 825 hours of medical and EMS instruction to emergency firefighters, techs, EMTs, paramedics, crew medics, and other employees. More than 25 CPR/ First-Aid courses were held for 145 division employees for a total of 580 instructional hours.

There were three crew training sessions for Pioneer Peak Interagency Hotshot Crew, Gannett Glacier Type 2 Initial Attack (T2IA) crew, and White Mountain T2IA crew, including annual CPR/ First-Aid training and the new Stop the Bleed Program.

The new Stop the Bleed Program was offered with First Aid at 25 locations serving 145 division employees, for a total of 145 instructional hours. This course provided hands-on, realistic hemorrhage control and wound packing training.

DOF supported and sponsored six crew medics. Typically, an EMT-1 was paired with an EMT-2 as crew medics. The White Mountain crew has a paramedic. Crew EMTs received training and instruction to align with the state's new EMT scope of practice standards, comprised of 10 hours of classroom and skill verification and an average of 12 hours online course work (self-paced). Five EMTs attended a total of 60 hours of EMS instruction.

Safetyhub

The SafetyHub provided every DOF employee with convenient online access to Occupational Safety & Health Administration mandated safety training. DOF employees completed 2,965 safety courses, including OSHA-approved and DOF specific classes. 63 percent of employees completed all assigned training.

Short-term Non-Permanent Positions

The Division of Forestry funded 21 short-term, nonperm positions for 20 workdays in 2021. There were positions in area offices and an Initial Attack Wildland Fire Module was in McGrath.

These employees participated in 20 Alaska fire assignments and six Lower-48 assignments. They also completed eight position task books, initiated 20 position task books for further experience, and completed 60 classes.

Four of this year's STNPs accepted permanent positions with the division – a Fairbanks Area Wildland Fire & Resource Technician and three Wildland Fire Dispatchers, one each in Copper River, Mat-Su, and Kenai. The STNP Program has funded a total of 161 positions in eight years, with many continuing as permanent employees with the division.



Laura Lund, one of 21 Short-Term Non-Perms hired through the spring Academy, accepted a permanent position in the Fairbanks Area as a Wildland Fire & Resource Technician mid-summer. Laura is pictured here as a member of the Alaska Engine Strike Team in Washington on the Shneider Springs Fire. (David Camacho)



The Alaska Engine Academy was modified in 2021 to mitigate potential COVID exposure. Students completed class work over Zoom, worked with mentors in their home areas, and then met in small groups in Palmer for final operational instruction. (Kelly Gisolo)



It is not practical to hold leadership classes virtually. Fortunately, MC Solutions held an excellent course that protected the health of participants, despite a pandemic and three feet of snow. (MC Solutions)

Training Staff Changes

Carrie Hale returned to the Training Program in January in an acting capacity when Cindy Forrest-Elkins retired. She officially accepted the position of Statewide Training Coordinator in May. Carrie has a strong background with the division in fire operations, dispatch, project management and training.

Sunshine Meitzner was hired as a non-perm in March to help implement Safetyhub and Interagency Resource Ordering Capability crossover, to develop a prescribed fire program, and to provide general support. She has a long history with DOF and brings logistical, operational, and technical skills to the program. Sunshine is also a public information officer for the Alaska Incident Management Team.

Kelly Gisolo completes the training team. She was hired in the fall of 2019 as a Statewide Training Officer. She brings a strong background and knowledge of logistics and aviation due to her many years as a dispatcher in Mat-Su.



DOF staff at bear safety and firearms class. (Tom Greiling)







Statewide Training Coordinator Carrie Hale. Statewide Training Officer Sunshine Meitzner Statewide Training Officer Kelly Gisolo

EMPLOYEE RECOGNITION



Arlene Weber-Sword

Arlene retired from the Division of Forestry in April 2020 after 28 years of service. She began her career with BLM and the Alaska Fire Service on a suppression crew and in dispatch. After seven years she made the switch to state government in 1985, working in dispatch in McGrath the

first year the state was responsible for suppression in the Southwest District.

In 1995 Arlene accepted the position of Communications/Technical Systems Coordinator and served in that capacity for seven years. In coordination with DNR's Computer Support Division she initiated and facilitated the installation of Forestry's computer network. At the time only one other state agency had a "wide area" computer network. Arlene also expanded DOF's statewide repeater system for two-way radio communications. As DOF's Fire Staff Officer from 2002 to retirement, Arlene administered grants for the State Fire Assistance, Volunteer Fire Assistance, American Recovery and Reinvestment Act, WFHF Hazardous Fuels, Type 1 IHC, and Western WUI Competitive grant funds for a total of \$59.7 million in federal assistance to the division during her tenure.

She was instrumental in obtaining Alaska Department of Labor funding that enabled DOF to deliver wildland fire training academies to rural Alaskans for the first time. She also facilitated migration of the Volunteer Fire Assistance grant program to an electronic process. Arlene represented the fire program during development of Alaska's 2010 State Assessment of Forest Resources and Strategy and Forest Action Plan and contributed to countless long-term fire program projects.

Arlene served on numerous committees over the years including Forestry's Fire and Aviation Working Group, the Western WUI Grant Scoring Committee, and the Alaska Wildland Fire Coordinating Group's Prevention and Education

Committee. Arlene regularly supported fire suppression efforts, both in-state and in the Lower 48, primarily in dispatch.

Arlene has two adult children she loves visiting in Washington and California. She lives in Girdwood where she enjoys reading, painting, drawing, and cross-country skiing, while planning for international travel.



Kathryn Pyne

Kathryn (more often known as KT) arrived in Alaska with her large, extended family in 1961, when four families moved together from Michigan at the urging of a family friend. Her father found work as an engineer for the Department of Transporta-

tion, and she and her extended family have thrived in the Alaskan lifestyle ever since.

Kathryn began her career in natural resources with the BLM where she worked as a Land Law Examiner. During this period (1988-1990), she became interested in wildland fire and completed a threeyear commitment under the Fire Familiarization Program. As part of an FFP crew she shadowed the Chena and Midnight Sun crews to learn and experience wildland firefighting on-the-ground in both Alaska and the Lower 48. In 1990, she accepted a dispatch assignment to the Fairbanks Area. Following that assignment, KT transferred to a seasonal position at the Alaska Fire Service. She also completed a Bachelor of Science degree in Biology and a master's degree in Natural Resource Management at the University of Alaska. She also earned an associate degree in Veterinary Technology as an extension of her interest in animals and pets.

In 1996, KT accepted a full-time seasonal dispatch position at Delta Forestry but soon transferred to McGrath where she worked for three seasons. Fairbanks Area Fire Management Officer Tom Kurth hired KT as the Lead Dispatch for Fairbanks Area.

Here, she demonstrated her knowledge as a fire-fighter in a dispatch position. As Tom noted, "She had an uncanny knack for anticipating the needs of firefighters in the field and initiating actions to support them. She knew the vendors and their availability, the aircraft and their capabilities, the crews and their locations, and how to get resources to the fire in timely fashion." She assisted in organizing and successfully suppressing many initial and extended attack fires.

KT advanced through several positions in the interior region. She served as Stewardship Forester where she assisted the public in managing their private lands. She was the Communications Forester when the state adopted the statewide Alaska Land Mobile Radio system. She also served as the Fairbanks Area Forester, Planner, and Fire Support. Here, she was instrumental in warehouse organization, evolving the Integrated Fire Management System, and advancing the Fire Planner position.

KT continues her community service as an active member of professional and community organizations: the Society of American Foresters as secretary of the Yukon River Chapter, the Interior Fire Chiefs' Association, Chena Goldstream Fire and Rescue Board, and Fairbanks North Star Borough Land Management Advisory Commission.



Keri Groenwald

Keri retired in April after 34 seasons with the state. She began in 1985 in the Fairbanks warehouse where she worked for three years. Keri grew up in Wasilla so in 1990 she

accepted a position in the Mat-Su Area as an initial attack emergency firefighter. The area office was located on a knoll on the south side of Big Lake with a helipad and two small houses converted into dispatch, a suppression base, and a small garage/shop, with a spectacular view of the lake and Denali. In June 1990, she took a Tech II position in Big Lake, worked her way to Tech III and stayed for 10 seasons.

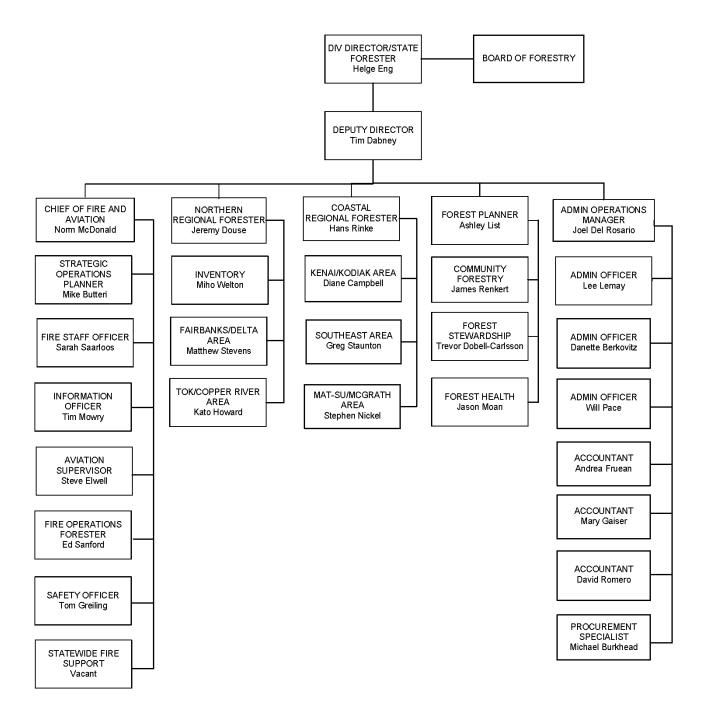
Keri and Dave Dolphi were on the first initial attack engine to reach the Miller's Reach Fire in 1996. They worked nonstop until 4am, by which time Forestry had the biggest urban interface fire in Alaskan history on its hands.

In 2000, Keri was hired to work in the Eagle River Warehouse, a hub supplying fires from Mat-Su, through Kenai, and to McGrath. She helped move the warehouse to its current location in Palmer when that facility was built. Keri worked as assistant manager at the Palmer Warehouse her last 19 years with the state. Keri was gracious enough to come back in the fall to help finish testing the multi-year warehouse computer software development project.

Keri is a talented stained-glass artist who sells her wares in the valley. She enjoys traveling, gardening, ice skating on Lake Wasilla, and cycling tours. Coworkers said that although Keri took years of knowledge with her, her smile and friendly attitude will be missed the most.

Alaska Division of Forestry Organizational Chart

December 2021



2021 Actuals NOTE: Dollar figures are in thousands (e.g., \$27.5 is \$27,500.00)

Forest Mgmt &			
Development	Fire Preparedness	Fire Activity	Totals
\$2,465.5	\$17,467.0	\$25,384.5	\$45,317.0
\$1,339.8	\$1,524.6	\$15,144.2	\$18,008.6
265.0	585.0	-	\$850.0
\$413.6	\$280.6	-	\$694.2
\$683.4	-	-	\$683.4
-	-	42	\$42.5
\$5,167.3	\$19,857.3	\$40,571.2	\$65,595.8
29	28	-	57
onal 12	190	=	202
5	-	-	5
	\$2,465.5 \$1,339.8 265.0 \$413.6 \$683.4 - \$5,167.3	Development Fire Preparedness \$2,465.5 \$17,467.0 \$1,339.8 \$1,524.6 265.0 585.0 \$413.6 \$280.6 \$683.4 - - - \$5,167.3 \$19,857.3 apple onal 12	Development Fire Preparedness Fire Activity \$2,465.5 \$17,467.0 \$25,384.5 \$1,339.8 \$1,524.6 \$15,144.2 265.0 585.0 - \$413.6 \$280.6 - \$683.4 - - - - 42 \$5,167.3 \$19,857.3 \$40,571.2 and 12 190 -

Forest Management & Development Component

Development & Sales	Coastal Region	Northern Region	Statewide	Totals
Board of Forestry	-	=	\$13.2	\$13.2
Forest Practices	\$222.9	\$226.9	\$844.8	\$1,294.6
Forest Management	\$338.2	\$352.7	\$931.5	\$1,622.4
Interagency Receipts	-	-	\$192.2	\$192.2
Stat. Desig. Program Receipts (SDPR)	-	-	-	\$0.0
Federal Cooperative				
Forestry Assistance	-	-	\$1,428.1	\$1,428.1
Capital Improvement Receipts			265.0	\$265.0
(Other)	-	-	-	\$0.0
Subtotals	\$561.1	\$579.6	\$3,674.8	\$4,815.5
Director's Office	-	-	\$351.8	\$351.8
Component Totals	\$561.1	\$579.6	\$4,026.6	\$5,167.3

Fire Suppression Preparedness Component

	Coastal Region	Northern Region	Statewide	Totals
Preparedness	\$3,411.1	\$2,100.7	\$10,787.8	\$16,299.6
Interagency Receipts	-	-	\$573.8	\$573.8
Federal Cooperative	\$535.5	\$209.3	\$1,654.1	\$2,398.9
Initial Attack	-	-	-	\$0.0
Capital Improvement Receipts	-	-	\$585.0	\$585.0
(Other)		\$0.0	\$0.0	\$0.0
Component Totals	\$3,946.6	\$2,310.0	\$13,600.7	\$19,857.3

2022 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	\$2,614.8	\$17,712.4	\$13,641.0	\$33,968.2
Federal Funds	\$3,660.0	\$1,362.1	\$23,960.4 *	\$28,982.5
Capital Improvement			-	
Receipts (Fed, GF, & SDPR)	\$277.0	\$605.6	-	\$882.6
Interagency Receipts	\$615.7	\$412.9	-	\$1,028.6
Timber Receipts	\$1,076.6	-	-	\$1,076.6
Other (SDPR)	\$29.7	-	\$1,500.0	\$1,529.7
TOTALS	\$8,273.8	\$20,093.0	\$39,101.4	\$67,468.2
POSITIONS				
Permanent Full-Time	30	28	-	58
Permanent Part-Time /Seasonal	11	190	-	201
Non-Permanent	5	-	-	5

FOREST MANAGEMENT & DEVELOPMENT COMPONENT

RENEWABLE RESOURCE DEVELOPMENT & SALES	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Board of Forestry	-	-	\$14.9	\$14.9
Forest Practices	-	-	\$235.9	\$235.9
Forest Management	\$1,128.0	\$579.3	\$1,342.0	\$3,049.3
Forest Inventory and Analysis	-	-	\$1,148.0	\$1,148.0
Tongass Young Growth			\$1,065.7	\$1,065.7
Interagency Receipts	-	-	\$630.1	\$630.1
Stat. Desig. Program Receipts (SDPR)	-	-	\$29.7	\$29.7
Federal Cooperative Forestry Assistance	-	-	1,304.20	\$1,304.2
Capital Improvement Receipts (Other)	-	-	277.00	\$277.0
Subtotals	\$1,128.0	\$579.3	\$6,047.5	\$7,754.8
Director's Office	-	-	\$519.0	\$519.0
COMPONENT TOTALS	\$1,128.0	\$ 579.3	\$6,566.5	\$8,273.8

FIRE SUPPRESSION PREPAREDNESS COMPONENT

	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Preparedness	\$4,514.3	\$3,114.6	\$9,868.6	\$17,497.5
Interagency Receipts	-	-	\$413.9	\$413.9
Federal Cooperative				
Forestry Assistance	-	-	\$1,585.5	\$1,585.5
Capital Improvement Receipts				
(Other)	-	-	\$596.1	\$596.1
COMPONENT TOTALS	\$4,514.3	\$3,114.6	\$12,464.1	\$20,093.0

Division of Forestry Directory – December 2021

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

State Forester's Office

550 West Seventh Ave., Suite 1450 Anchorage, Alaska 99501-3566 269-8463, fax 269-8931

State Forester

Helge Eng, 269-8474

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

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

Training & Prevention, 269-8441

State Fire Operations

P.O. Box 35005

Ft. Wainwright, Alaska 99703

356-5850, fax: 356-5855

Operations Forester

Edward Sanford, 356-5850

AICC Logistics, 356-5680

Intelligence

Vacant, 356-5671

AICC Coordinator

Katie Rubin, 356-5682

Strategic Operations Planner

Mike Butteri, 356-5858

State Fire Support

3700 Airport Way

Fairbanks, Alaska 99709-4699

451-2680, fax: 451-2763

Support Forester

Vacant, 451-2608

NFDC Fairbanks, 451-2680

State Fire Warehouse, 451-2667

Aviation Program

101 Airport Road

Palmer, Alaska 99645

761-6270, fax: 761-6273

Steve Elwell, Aviation Manager

761-6271

Coastal Aviation Mgmt, 761-6231

Air Attack, 761-6280

Regional Forester - Coastal

42499 Sterling Highway

Soldotna, Alaska 99669

260-4200, fax: 260-4205

Hans Rinke, Regional Forester

260-4262

Mat-Su/Southwest Area Office

101 Airport Road

Palmer, Alaska 99645

761-6300, fax: 761-6319

Stephen Nickel, Area Forester

761-6301

Phillip Blydenburgh

Fire Mgmt. Officer, 761-6302

Dispatch, 761-6240

Fire line, 761-6311

Burn Permit, 761-6312

Southwest Area Office (Seasonal)

Box 130

McGrath, Alaska 99627

524-3010, fax 524-3420

Fire line, 524-3366

Dispatch fax: 524-3932

Kenai-Kodiak Area Office

42499 Sterling Highway

Soldotna, Alaska 99669 (Mi. 92.5 Sterling Hwy)

260-4200, fax: 260-4205

Diane Campbell, Area Forester

260-4210

Howie Kent, Fire Mgmt. Officer

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 Greg Staunton, Area Forester

225-3070

Fire line, 524-3366

Regional Forester - Northern

3700 Airport Way

Fairbanks, Alaska 99709-4699

451-2660, fax: 451-2690

Jeremy Douse, Regional Forester

451-2670

Fairbanks-Delta Area

3700 Airport Way

Fairbanks, Alaska 99709-4699

451-2600, fax 458-6895

Matthew Stevens, Area Forester

451-2601

Gordon Amundson, Fire Mgmt.

Officer, 451-2636

Fire line, 451-2626

Fire Operations, fax: 451-2633

NFDC 451-2680

Delta Office

P.O. Box 1149

Delta Junction, Alaska 99737

(Mi. 267.5 Richardson Hwy)

895-4225, fax: 895-2125

Matthew Stevens, Area Forester

451-2601

Mike Goyette, Fire Mgmt. Officer

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

Timothy "Kato" Howard,

Area Forester, 883-1403

Vacant, Fire Mgmt. Officer, 883-1404

Fire line, 883-3473

Valdez/Copper River Office

P.O. Box 185

Glennallen, Alaska 99588

(Mi. 110 Richardson Hwy)

822-553, fax: 822-8600

Mike Trimmer, Fire Mgmt. Officer

822-5534

