

Alaska Department of Natural Resources

Division of Forestry

Annual Report 2016



Alaska Department of
**NATURAL
RESOURCES**

Right: Forest Health Program Mgr Jason Moan checks on a spruce beetle trap in Mat-Su
Photo by Ray Nix



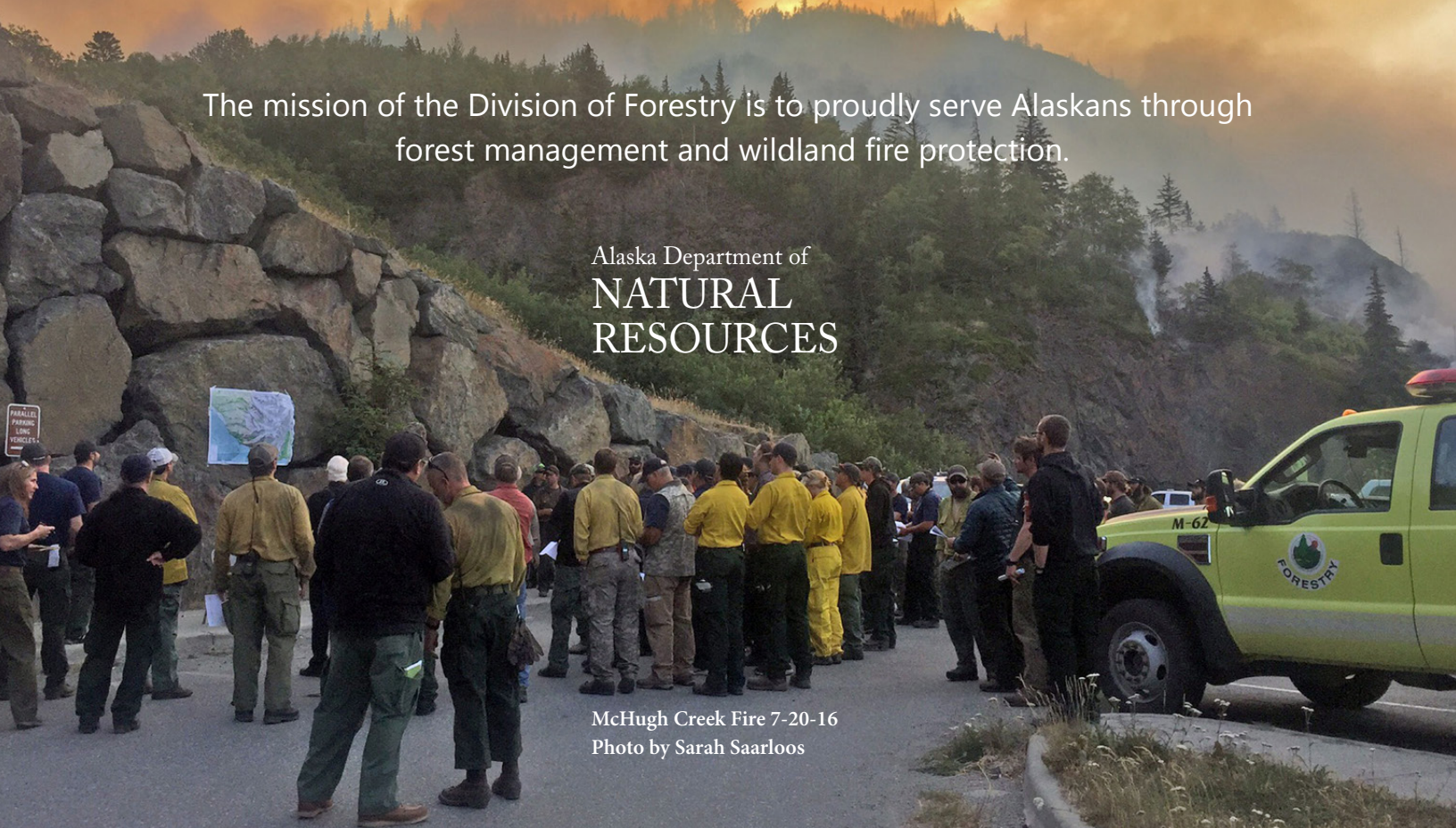
Above: Metlakatla employees Lyn Schwehm and Eddie Brussels inventory tree species, size, and maintenance needs. The information was used to develop a management plan for public trees.
Photo by Stephen Nickel



Celebrating the 50th anniversary of Arbor Day in Alaska at Juneau Museum on May 16. (L to R) State Forester Chris Maisch, U.S. Forest Service Regional Forester Beth Pendleton, Governor Bill Walker, Blue Bird Scouts Neeka Kendall and Farrah Fremlin, Lt. Governor Byron Mallott, Coast Guard Sector Commander Capt. Shannon Greene, and Juneau Assembly member Mary Becker, representing Mayor Ken Koelsch. *Photo by Jenny Fremlin*

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

Alaska Department of
**NATURAL
 RESOURCES**



McHugh Creek Fire 7-20-16
Photo by Sarah Saarloos

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For online copy, visit

<http://forestry.alaska.gov/overview>





Alaska Department of Natural Resources

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 woods;

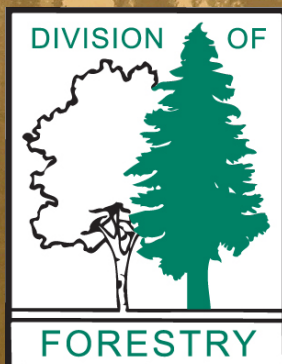
Protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of Forest Resources and Practices Act;

Manages the Southeast, Haines, and Tanana Valley state forests, which cover a total of 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 located in Anchorage. The division also has two regional offices and nine area offices responsible for program support and field work. As of December 2016, the division has 61 full-time employees, 173 part-time/seasonal positions, and 5 non-permanent positions.



State Forester Comments

As I sit down to pen this year's forward for the annual report, I'm struck by how fast this past year has gone by. The 2015 fire season had a major impact on the division and work continues well into 2016/17 to tie up the organizational and fiscal aspects of such a large fire season. Fortunately, our 2016 fire season was a modest one in comparison, at least when you look at just the numbers. There were 572 fires statewide, which is close to our long-term average, but only 500,000 acres burned, well off the ten-year average of 1.2 million acres. The spring portion of the season was very warm and dry with April and May setting a fast pace and big expectations for the summer portion of the season, but a very wet June and July kept activity low to nil in most parts of the state. There were areas that remained dry, but there were only two project fires that required a Type II Incident Management Team response, the Tetlin River fire and the McHugh fire just outside of Anchorage. The Alaska Type II Team responded to both these incidents and as the Tetlin River incident was winding down, successfully pivoted to the McHugh fire. As always, there were some great initial attack actions that stopped new fire starts in their tracks and achieved our core mission of protecting life and property from wildland fire. A big thank you to all our staff for a job well done. Year-after-year you provide a valuable service to the public and I'm always proud to represent you before the legislature, administrative branch, and the public at large.



Despite our continuing struggles with budget reductions and recruitment issues in our Forest Management and Development Program, this section has continued to move projects forward. The biggest challenge has been in our Southeast Area Office where administrative appeals, combined with our budget and capacity challenges, slowed timber sales to an all-time low that is well off our historic average. As a result, we have redoubled our efforts and are poised to offer several large sales in 2017 in Southeast. A road construction project is underway on Gravina Island that will access the Southeast State Forest and other lands owned by the borough, trusts, and private landowners. Southeast staff are also preparing a large timber sale (20 million board feet) that could bring new opportunities to the Haines area.

Our partnership with the U.S. Forest Service continues to grow both in the Interior with the Forest Inventory Analysis (FIA) program and in Southeast with our various Tongass projects. These combined efforts are bringing new staff and funding into the division during a challenging time for our state budget and help offset some of the reductions we have had to undertake. The FIA program is preparing for its second full field season after a very successful launch of the project this year and is providing a good opportunity for staff and new hires to gain experience and skills that will help them advance their careers, while collecting important resource data on Interior forests.

The Tongass projects are varied and range from forest inventory work on young and old growth stands, to developing projects using the Good Neighbor Authority to allow the state to complete timber sales and other projects on federal lands. The initial master agreement was signed in late 2016, so specific projects will be initiated early in 2017. The young growth inventory effort was launched in the spring of the year, and over 4,800 inventory plots were established. This effort is a key part of the transition from old growth to young growth forest management in the Tongass National Forest and will help identify future timber sale locations and the associated economics of this change in management direction. There are significant challenges with this policy change and the state is engaged in numerous ways to help ensure a successful transition.

There are many other positive activities occurring throughout the division in our Cooperative Forestry and Area Office programs. Our staff is innovative and hardworking and know how to get the job done, be it fighting a wildland fire, providing technical services to private landowners and local governments, or managing the forests of our state. I appreciate your efforts and look forward to working with you in the year ahead.

-John 'Chris' Maisch
Alaska State Forester

2016 at a Glance

State General Fund Reductions

The Division of Forestry continues to address challenges caused by the ongoing state fiscal crisis. Since July 2015, reductions in state general funds have resulted in the loss of 25 permanent positions and ten student interns.

Over the past three years, state general funds to the Forest Resources Program have been reduced by approximately 42 percent (\$1.18 million) and the Fire Suppression and Preparedness programs have been reduced by 8 percent (\$1.85 million).

In addition, the Capital Improvement Project budget has been cut 31.6 percent (\$16,100) and the travel budget reduced by 20 percent (\$58,500).

Impacts of Reductions

- Many management positions work in both the Resources and Fire programs and the Area and Regional Foresters are key positions for overall management of wildland fire activity. The division's span of control has been stretched with reductions in the number of these positions.
- A reorganization that included consolidating two regional offices into one and nine area offices into five: Fairbanks/Delta, Tok/Copper River, Mat-Su/Southwest, Kenai/Kodiak, and Southeast.
- Layoffs in all segments of the division from the management team through middle management, to boots on the ground.
- A reduced timber sales program statewide.
- Reduced capacity to produce timber sales in Southeast due to reorganization, resignations, difficulty filling vacancies, and administrative challenges to planned timber sales.
- Loss of capacity to maintain roads and other infrastructure in state forests to appropriate standards and to inspect timber sales on state lands as often; less time by managers in the field.
- Decrease in service levels in Soldotna, Mat-Su, Ketchikan, Haines, Glennallen, and Delta.
- Elimination of agency coordination of input to U.S. Forest Service Tongass Planning and Timber Sales Projects.
- Elimination of the intern program, which trained young people to help support a future workforce.
- To maintain a safe and effective wildland fire response, DOF has relied heavily on short-term emergency hires of retirees and used acting assignments with Lower 48 fire managers to fill the gaps.
- Downsized the McGrath Area to a Forward Operating Base and combined it with the Mat-Su Area.
- Curtailed the fire academy that had been training 30-35 individuals from rural and urban communities each year. The division is seeking substitute funding for the academy because it was a very successful program that served as a recruiting and career development tool.



Resource Management & Development

- The division had 34 timber sales with a volume of 8,315 MBF and issued 911 personal use permits. Timber program revenue totaled \$870,200.
- The Alaska Legislature passed SB32, which made changes to timber management statutes related to negotiated sales.
- DOF introduced new road construction standards that comply with state statutes and regulations for forestry roads with public use.
- The division and the U.S. Forest Service signed an agreement allowing the state to perform watershed restoration and forest management on the Tongass National Forest. The agreement includes \$4.3 million dollars for DOF to coordinate efforts to ensure a transition to a young growth industry, increase economic opportunities for SE communities, and provide technical forestry training to develop a skilled workforce.
- The division and the Alaska Region of the U.S.-Forest Service entered into a Master Agreement that will allow the division to prepare and administer commercial timber sales on national forest system lands as authorized under the Good Neighbor Authority. These agreements, which are largely federally funded, provide benefits such as employing and developing skills for Alaskans, and supporting communities and the local timber industry.
- The U.S. Forest Service granted funds to implement the Forest Inventory and Analysis (FIA) program in interior Alaska in partnership with the DOF, UAF, and Tanana Chiefs Conference and should continue annually. FIA is a USFS program that provides information needed to assess America's forests. In 2016, a \$1.1 million grant allowed DOF to install 188 plots in the Fairbanks and Manley Hot Springs areas. This program and funding will continue and inventories will continue in other areas in 2017.
- The division awarded a grant to Metlakatla Indian Community to implement its community forest management plan; grants to six communities to demonstrate the viability of fruit production in Alaska; and a grant to the Anchorage Parks Foundation to restore forest functions, improve habitat and water quality, and create low impact access in the Campbell Creek Greenbelt.
- Staff members provided training and technical assistance in community forest management, landscape tree installation and maintenance, and insect pest and invasive plant management.
- DOF installed 14 monitoring stations at high risk sites throughout the state to quickly detect and respond to invasive bark beetles or woodborers.
- DOF and the U.S. Forest Service mapped nearly 950,000 acres of forest damage on the 27.1 million acres surveyed. The acreage of damage observed was 65 percent higher than in 2015, due mainly to increases in aspen and willow defoliation and spruce beetle-caused mortality.
- Two Alaska Native corporations were awarded grants to begin forest stewardship plans and four Native corporations completed work on plans for their land.
- Fifteen forest stewardship plans were completed and signed by individual private forest landowners.
- Fifty homeowners completed wildfire fuel reduction projects and were awarded a total of \$79,110 in cost-share grants.

ALASKA STATE FORESTERS

Earl Plaurde
October 1959 to June 1968

William Sacheck
July 1968 to June 1974

George Hollett
July 1974 to June 1976

Theodore Smith
July 1976 to April 1982

John Sturgeon
May 1982 to June 1986

George Hollett (acting)
July 1986 to February 1987

John Galea
March 1987 to May 1988

Tom Hawkins (acting)
June 1988 to December 1988

Malcolm "Bob" Dick
January 1989 to November 1992

Dean Brown (acting)
December 1992 to February 1993

Tomas Boutin
March 1993 to January 1997

Dean Brown (acting)
January 1997 to July 1997

Jeff Jahnke
July 1997 to July 2005

Dean Brown (acting)
July 2005 to October 2005

John "Chris" Maisch
October 2005 to present

Forest Resources & Practices

- The division reviewed 28 new harvest Detailed Plans of Operation, 18 new reforestation/timber stand improvement DPOs, five new road work DPOs and 16 renewals for private, municipal, and state trust lands. New DPOs covered 5,856 acres and 45 miles of road.
- DOF conducted 34 inspections on private, municipal and trust land and 54 inspections on state timber sales.
- The division completed one notice of violation case for harvesting trees in a riparian buffer on Afognak Island and the responsible party paid the \$8,000 fine.
- The DNR Commissioner signed new regulations that update and revise the 1993 FRPA requirements for Regions II and III (Southcentral and Interior Alaska) related to reforestation.
- DOF received a grant for \$187,000 from the Alaska Sustainable Salmon Fund to replace one culvert near Tyonek and remove two others from a closed out road. This work will reestablish natural drainage courses and provide access to six miles of Coho habitat.



Culvert restricting fish passage. Such culverts are being removed in Tyonek to restore natural stream flow.

Photo by Joel Nudelman

Fire Suppression & Prevention

- Alaska's 2016 wildfire season was well below normal in terms of acres burned. A total of 573 wildfires burned 500,794 acres. During an average fire season, about 500 fires burn approximately 1.2 million acres.
- Alaska still ranked second behind only California in total acres burned in a state.
- Fifty-nine percent of wildfires (345) were caused by humans while 41 percent (228) were started by lightning. Human-caused fires burned 10,068 acres and lightning-caused fires burned 490,726 acres.
- There were 374 fires in the Division of Forestry's protection area; 182 fires in the Bureau of Land Management Alaska Fire Service's protection area; and 17 on U.S. Forest Service land.
- The largest fire of the season was the 58,565-acre Hog Fire northwest of Fairbanks, which was part of the Alatna Complex, a group of five fires that burned more than 130,000 acres.
- The first wildfire was reported on February 22 on military land near Delta Junction. The season ended with the Moose Creek Fire north of Palmer, which was reported on October 8 and burned 303 acres near the community of Sutton.
- The Aviation Program completed a 14th year with no accidents or incidents.
- The division was able to offer the Advanced Wildland Firefighter Academy due to staff efforts to secure support and funding from the U.S. Forest Service, Chugachmiut, and Tanana Chiefs Conference.
- DOF and the Houston Fire Department gained equipment from the Fire Fighter Property program valued at \$900,000.
- The Volunteer Fire Assistance Program provided a total of \$238,525 to 29 rural fire departments.
- National Fire Plan grants funded 10 permanent seasonal initial attack firefighters; development of statewide public service announcements addressing fire prevention, safe burning, and Firewise principles; and hazardous fuels mitigation work in the eastern Copper River Basin, Glennallen, Mat-Su, Fairbanks North Star Borough, west Kenai, and State Park land on the Kenai Peninsula.

Resource Management & Development

Forest Practices Implementation on Private, Municipal, & Trust Land

Notifications and Inspections

In 2016, DOF received and reviewed 28 new harvest Detailed Plans of Operation (DPO), 18 new reforestation/timber stand improvement DPOs, five new road work DPOs, no voluntary plans of operations, and 16 renewals for private, municipal, and state trust lands. New DPOs covered 5,856 acres and 45 miles of road. The division conducted 34 inspections (including variation inspections) on private, municipal and trust land and 54 inspections on state timber sales. The number and acreage of new DPOs remained at the low level of recent years, and inspections continued to decline in proportion to funding.

Variations

The Southeast Area received three requests for variations for harvesting in riparian buffers and approved 286 of the 301 trees requested. The Kenai-Kodiak Area received one buffer variation request and approved all of the 36 trees requested. The Southeast Area also had two variation requests for leaving bridges on closed roads; both requests were approved.

Enforcement

DOF issued no new directives, charging documents, or stop work orders in 2016. DOF completed one notice of violation case for harvesting trees in a riparian buffer on Afognak Island and the responsible party paid the fine of \$8,000.

Effectiveness monitoring

DOF continues to work with agencies and affected interests to prioritize new effectiveness research, and seek funding for high priority projects. Funding for effectiveness research is exceedingly difficult to find and recent operating budget reductions have made it impossible for the DOF to come up with the 25 percent project level funding match commonly required.

The final report for the Region II Forest Resources and Practice Act Effectiveness Monitoring project on three streams in the Mat-Su was published in May. The streams were pre-harvest sampled in 2006 and post-harvest sampled in 2015. The Aquatic Restoration & Research Institute (ARRI) conducted the study with support from a Mat-Su Salmon Partnership grant. ARRI reported no differences between the streams that could not be attributed to timber harvest activities. Both streams continue to support rearing juvenile Coho and Chinook salmon and there has been no significant trend in relative abundance over time in either stream. The author concluded that the results from this study are likely representative of conditions in tributaries within the Petersville, Houston, and Rabideux timber blocks subject to similar levels of timber harvest activity.

The Region II-III Reforestation Science & Technical Committee and Implementation Group identified and prioritized research and planning needs for southcentral and interior Alaska. Agencies, universities, and other research partners can use the recommendations and priorities to focus research activity and support funding requests.

Board of Forestry Members

Keith Coulter, Native corporation, Kodiak (from July 1, 2016)

Matthew A. Cronin, Ph.D., non-governmental fish or wildlife biologist, Anchorage (through June 2016)

Denise Herzog, mining organization, Fairbanks

Chris Maisch, Chair, state forester, Fairbanks

Erin McLarnon, recreation organization, Willow

Bill Morris, non-governmental fish or wildlife biologist, Fairbanks (from July 2016)

Eric Nichols, forest industry trade association, Ketchikan

Will Putman, non-governmental professional forester (from March 2016)

Chris Stark, environmental organization, Fairbanks

Mark Vinsel, commercial fishery, Juneau

Ron Wolfe, Native corporation, Juneau (through June 2016)



Board of Forestry field visit to timber harvest sites in the Willer-Kash area. (L to R) Rick Jandreau, DOF; Patrick Kelly, Univ. of Alaska Office of Land Management; Marty Freeman, DOF; Bill Morris, non-governmental fish/wildlife biologist seat; Gino del Frate, ADF&G.
Photo by: Dean Brown

Reforestation exemptions

Harvests that are significantly composed of dead or dying trees may request exemption from the FRPA reforestation requirements. DOF received three new requests for reforestation exemptions in the Kenai-Kodiak Area in 2016; all were approved. Two were in Region 2 for 220 acres, and both of these sales will likely meet reforestation requirements after logging. One request was for 763 acres in Region 1 on Kodiak Island Borough lands that had burned in the Twin Creek Fire. Although the owner applied for and was granted an exemption, they will plant the site in the spring and early summer of 2017. This is the first exemption request for an operation in Region I.

Reforestation review and regulation changes

The Board of Forestry is responsible for ensuring that FRPA and its regulations are effective. The FRPA requirements for Regions II and III (Southcentral and Interior Alaska) were adopted in 1993 when reforestation research for this area was scarce. Better data is now available, and the Board charged ADNRS and ADF&G with reviewing the new information and determining whether the existing standards need updates. The agencies first worked with a Science and Technical Committee (S&TC) to compile and synthesize relevant information, review the existing standards, consider impacts of changing climatic conditions, and recommend changes where needed.

In 2016, the agencies reviewed the S&TC recommendations with an implementation group of stakeholders, including forest landowners and operators, service foresters, wildlife biologists, and interest groups to determine how to implement the scientists' recommendations in a practical and effective manner. The Board endorsed the recommendations from the S&TC and the implementation group in August. The draft regulation changes were out for public review from October 12 through November 23. Comments were received from ADF&G, DEC, and three individuals. There were no requests for changes to the draft and Commissioner Mack signed the regulations on December 21. The Department of Law is conducting its final review of the package prior to transmittal to the Lieutenant Governor for filing.

The amendments:

- add criteria for evaluating a request for a variation to reforestation stocking,
- ensure that all size classes of trees are considered in determining whether reforestation standards are met,
- allow an extended period for natural regeneration where site conditions show that natural regeneration is likely to succeed and mid-period reports show progress toward meeting the standards,
- increase the percentage of a harvest area that may be below the stocking standard to correspond to natural variations in stocking that provide beneficial patches for wildlife,
- allow landowners to include a mix of seed from native tree species grown up to 10 degrees latitude south of the planting area based on research on changing seedling growth and survival as a result of warming climates,
- prohibit planting known invasive tree species on commercial forest operations, and
- allow landowners to use approved remote sensing technologies to document compliance with reforestation standards and document areas of dead and dying trees for reforestation exemptions.



Board of Forestry at site of 2015 Sockeye Fire. (L to R) Chris Maisch, State Forester; Bill Morris, non-governmental fish/wildlife biologist seat; Eric Nichols, forest industry trade assoc. seat; Denise Herzog, mining organization seat; Will Putman, non-governmental professional forester seat; Mark Vinsel, commercial fishermen's organization seat; Chris Stark, environmental organization seat. Not in photo, Erin McLarnon, recreational organization seat. *Photo by: Dean Brown*

Landowner/operator training

Training for landowners and operators is provided by DOF area office and regional office staff. Sessions vary from formal classroom presentations to more informal “tailgate” sessions conducted during field inspections. DOF also provides training in the form of DPO reviews and inspection reports that recommend ways to conduct operations to implement the BMPs. In 2016, DOF conducted a training session in Fairbanks attended by ten people. DOF is drafting training modules on various aspects of FRPA, including changes to the reforestation regulations.

Sustainable Salmon Funds for Tyonek Project

DOF received a grant for \$187,000 from the Alaska Sustainable Salmon Fund to replace one culvert near Tyonek and remove two others. This closed out a road originally constructed in the 1970s for timber harvest on the west side of Cook Inlet. This will reestablish natural drainage courses and provide access to approximately six miles of Coho habitat.

The division will also replace an undersized culvert impeding fish passage for an outlet stream to a lake listed in the Alaska Department of Fish & Game Anadromous Waters Catalog. This replacement will provide improved fish passage to two stream miles and two lake miles.

Forestry has partnered with the Division of Parks and Outdoor Recreation Design & Construction Office for a “stream simulation design” allowing for year-round fish passage. Construction will be complete by September 2017.



Example of culvert that will be installed with Sustainable Salmon Fund grant in Tyonek. *Photo by Joel Nudelman*

Timber Management

Changes to Timber Management Statutes

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

- expanded DOF authorities for negotiated timber sales under AS 38.05.118 by removing requirements for high unemployment, underutilized manufacturing capacity, and excess annual cut. This allows DOF to offer negotiated sales statewide.
- specified that negotiated sales must comply with the requirements for Forest Land Use Plans (AS 38.05.112) and Five-year Schedules of Timber Sales (AS 38.05.113). This ensures that large negotiated sales are developed with adequate notice to the industry and general public, and necessary site-specific design.
- clarified that DNR may negotiate sales to wood fiber users, including biomass energy producers, in addition to wood product manufacturers.
- clarified that the DNR commissioner may determine which applicable sale method is in the best interest of the state for each timber sale (AS 38.05.110(c)). The proposed changes were endorsed by the Alaska Timber Jobs Task Force and the Board of Forestry.

Changes to Timber Management Regulations

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

- Change 11 AAC 71.045(e) to lengthen the maximum time for small negotiated sales under AS 38.05.115 from one to two years. This would provide the state a better tool for addressing the needs of small operators by providing them with longer windows of secure timber for their businesses.
- Amend 11 AAC 71.055(a) to conform to the changes to AS 38.05.118 made by SB 32 (see above) in the 2016 legislative session. This would delete the subsection that limits .118 sales to areas of high unemployment, underutilized manufacturing capacity, and under-utilized allowable cut and provide increased flexibility for the state to use negotiated timber sales to meet local manufacturing needs.



Board of Forestry field visit to Iron Creek road crossing. (L to R) Bill Morris, board member; Gino Del Frate, ADF&G; Marty Freeman, DOF; Will Putman, board member; Chris Maisch, State Forester. *Photo by: Dean Brown*

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

Material sale regulations

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

Fee regulations

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

Timber Sales Sold on State Land

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

Total Sales Sold – FY 2016

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

Roads, Infrastructure, and Bridges

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

In Southeast, Forestry awarded over \$5 million in new road construction contracts in Vallenar Bay, Edna Bay, and Hollis providing access to future state timber sales and landscape scale transportation corridors vital to the timber industry's transition to young growth harvest over the upcoming years. In the Northern Region, DOF spent \$225,000 repairing storm damaged roads on the Tanana Valley State Forest. To harden forest roads and make them more resistant to erosion, engineers are experimenting with schist overlays in different amounts. If successful, repairs will continue on other roads in the Tanana Valley State Forest corridor in 2017.

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

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



Newly constructed Vallenar Road.
Photo by Erik Jordt, HDL

Forest Inventory and Analysis

After more than 15 years of national debate, funding to fully implement the Forest Inventory and Analysis (FIA) program in interior Alaska has finally been realized. FIA is a program of the U.S. Forest Service that provides information needed to assess America's forests. It provides a comprehensive permanent sample plot grid to assess timber and wood product resources, vegetation structure, carbon and biomass accounting, and disturbance and change over time. This is especially important in the Interior where mean annual temperature has increased 3° to 5° since 1950.

FIA plots have been established in southeast and southcentral coastal Alaska but not in the interior. In order for these new areas to be effectively inventoried, the U.S. Forest Service's Pacific Northwest Research Station and the Division of Forestry established a Joint Venture Agreement.

In 2016, a total of \$1.1 million was granted to DOF to install 188 plots in the Fairbanks and Manley Hot Springs areas. Crew work was exceptional and exceeded Forest Service quality assurance inspection targets. DOF managed the project, hiring two permanent foresters and six seasonal technicians. Significant field preparation time was required to establish a field safety program; procure helicopter, camp provisions, and supplies; and provide extensive training in plot installation. This is an ongoing program and DOF expects to increase operations in 2017 and install upwards of 250 plots in the Fairbanks and Delta areas.



Forest Technician Clayton Smalley takes compass bearing.
Photo by Roy Josephson

Federal Land Activity

Challenge cost share grant for inventory & workforce development

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

The Challenge Cost Share Agreement requires DOF to inventory 35,000 acres of second-growth timber in the Tongass National Forest. The inventory will help ensure that young growth forest health is maintained and enhanced as the transition from old growth to young growth forest management proceeds.

During the 2016 field season, DOF completed 4,866 plots on 12,165 acres. The crew included five DOF staff members and five forest technicians local to the area who participated in a field inventory training academy. The plots were all on or near Prince of Wales Island. The USFS and Hollis Forest Science helped provide housing, and the USFS and AD&G provided transportation. This inventory, along with the FIA project, provides an avenue for the state to employ entry level foresters and help develop candidates for upper level forester positions.



Workforce development training. *Photo by Roy Josephson*

One branch of the Challenge Cost Share Agreement provides technical forestry training for Alaskans. DOF is collaborating with the Department of Commerce and Economic Development and other agencies on this program. Program graduates are candidates for forest technician jobs on inventory projects and stand exams with forestry agencies, and restoration work with non-governmental organizations.

The project will also provide internships for college students and career information for high school students in resource management and support fields. Additional equipment and mill operation training may occur as funds allow; the state has applied for additional workforce development grants. The program is reaching out to southeast communities to get as many local people as possible into the training.

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

Good neighbor agreement

The Good Neighbor Authority allows the Forest Service to enter into cooperative agreements or contracts with states to allow the states to perform watershed restoration and forest management services on National Forest System lands. In November 2016, the Division of Forestry entered into a master Good Neighbor Authority agreement with the Forest Service Alaska Region for the purpose of managing forested lands on the Tongass National Forest. This integrated and collaborative approach will enable the transition to a young-growth industry through landscape-scale management efforts. Each individual project under the master agreement will have a Supplemental Project Agreement with provisions guiding specific forest management activities. The first project under consideration as a Supplemental Project Agreement is the Kosciusko Vegetation Management and Watershed Improvement Project. In this project DOF will collaboratively manage 29 million board feet of young growth timber over approximately 1,400 acres of the Tongass National Forest using the state's timber sale program.

Tongass Land and Resource Plan implementation

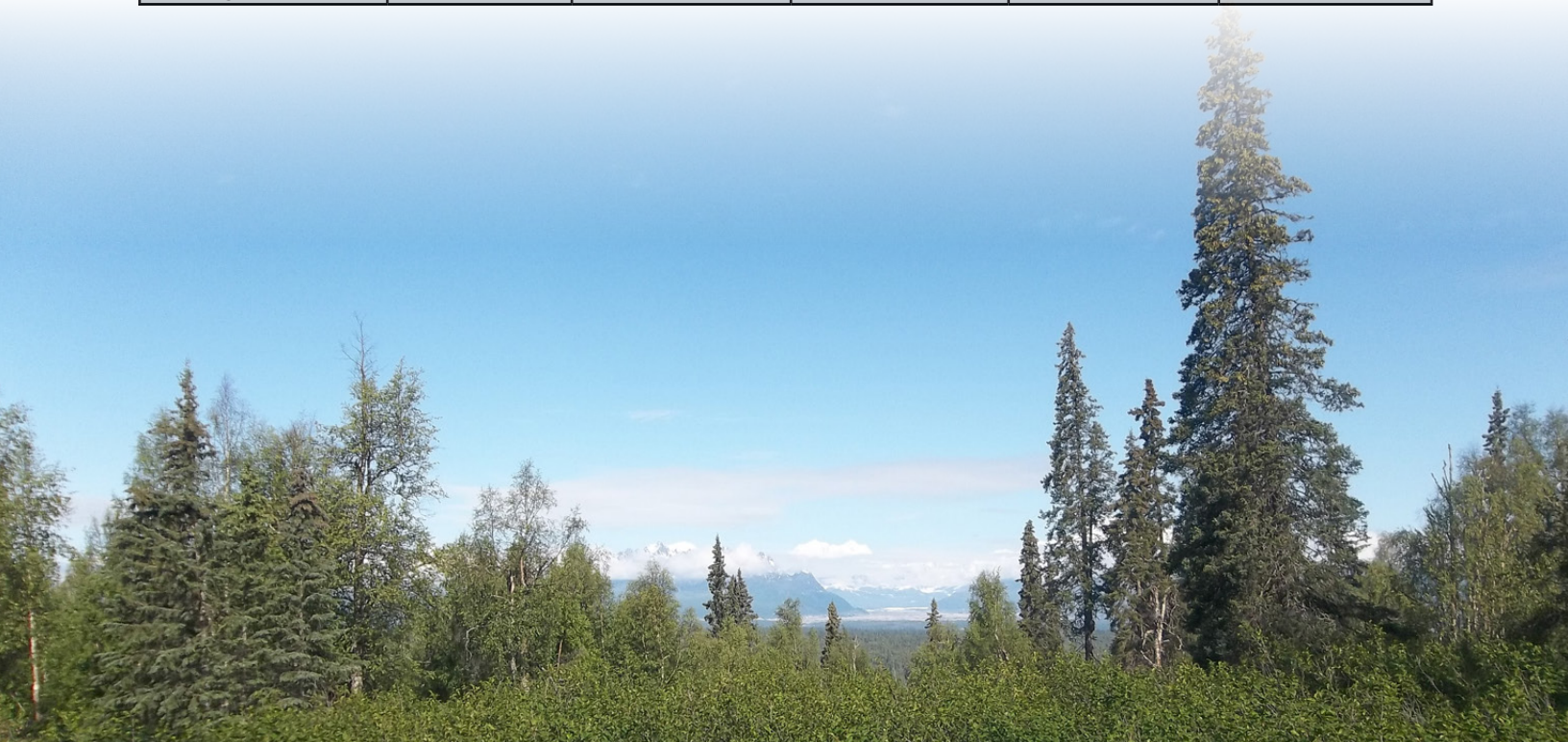
The state provided coordinated comments to the draft Tongass Land and Resource Management Plan and participated in the objection process. DOF raised concerns about the length of time for a transition to young-growth harvesting, the economic analysis for the transition, and the amount of young-growth volume available. The state also objected to treatment of the “seek to meet demand” standard from the Tongass Timber Reform Act and a weak demand study.

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

Tongass National Forest Timber Sale Volume (MMBF)

Volume is the Tongass Timber Reform Act (TTRA) “seek to meet” market demand estimate.

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



Alaska State Forests

The Alaska State Legislature has designated three state forests in Alaska; all are managed by the Department of Natural Resources for a sustained yield of a variety of resources. A management plan guides the use of each state forest and determines how to manage different uses to complement each other while minimizing the possibility of conflict.

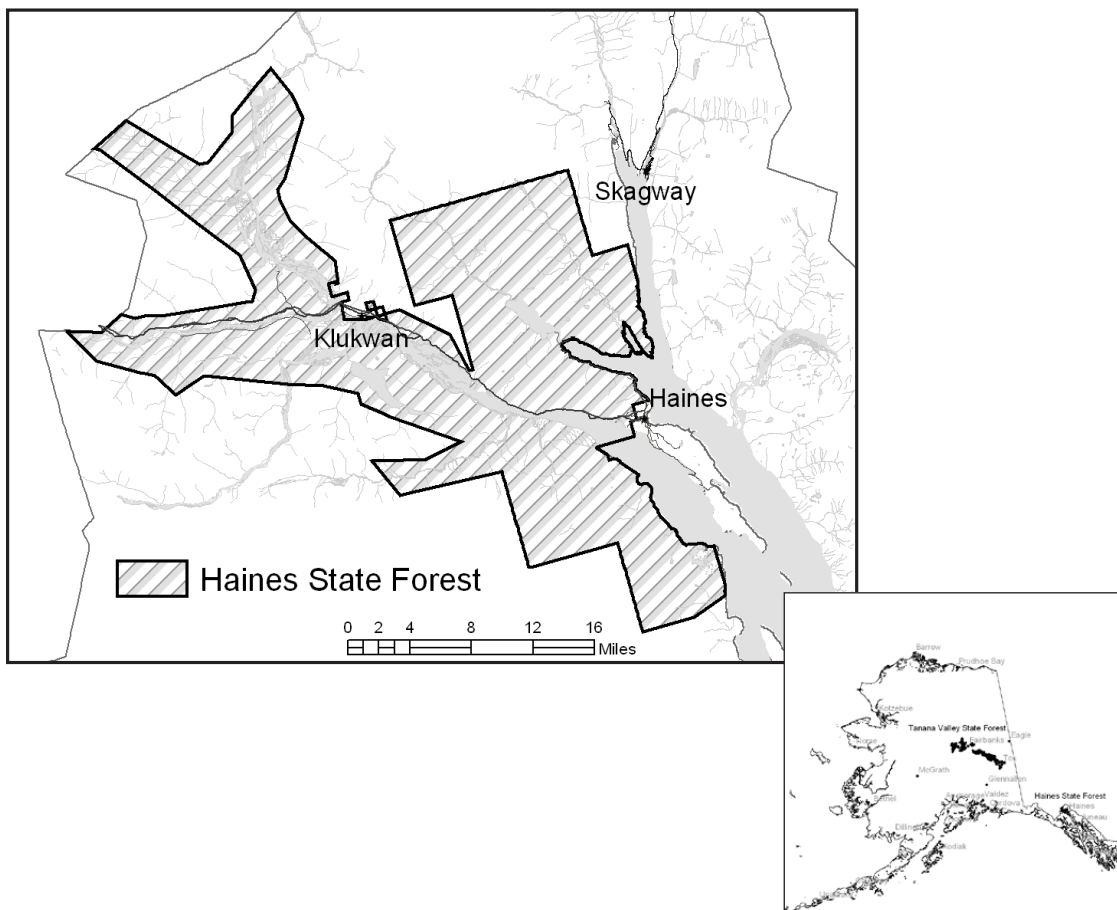
Haines State Forest

Established in 1982

286,208 acres

The Haines State Forest in southeast Alaska includes the watersheds of some of the major tributaries to the Chilkat River. Its location in a transition zone between the moderate, wet coastal climate and the dry, cold interior provides suitable conditions for a diversity of vegetation. The rugged topography ranges from sea level to 7,000 feet.

The forest is composed mostly of two forest types – western hemlock/Sitka spruce, and black cottonwood/willow. Lodgepole pine and paper birch occur as minor species throughout the forest. About 15 percent of the state forest is dedicated to timber harvest, which has occurred in the forest since the 1960s. The annual allowable harvest is 5.88 million board feet. Although natural regeneration occurs readily, all large commercial sales have been replanted since the 1970s to accelerate reforestation.



Tanana Valley State Forest

Established in 1983

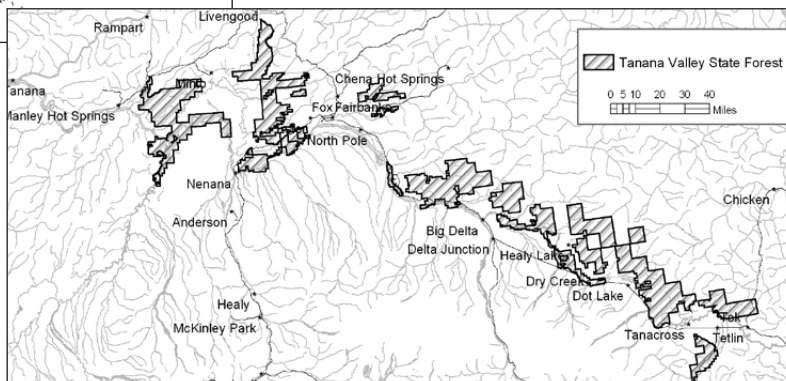
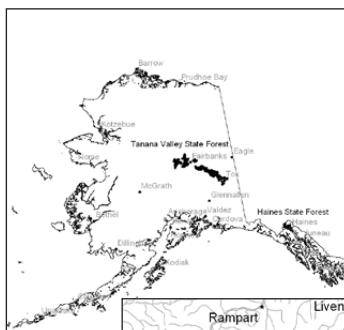
1.78 million acres

The Tanana Valley State Forest lies almost entirely within the Tanana River Basin in east-central Alaska. The Tanana River flows for 200 miles through the forest. The forest extends 265 miles, from near the Canadian border to Manley Hot Springs. About 85 percent of the forest is within 20 miles of a state highway. It varies in elevation from 275 feet along the Tanana River to over 5,000 feet in the Alaska Range.

Nearly 90 percent of the state forest is forested, mostly with paper birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack. About half of the Tanana Basin's productive forest land is located within the state forest.

The TVSF Citizens' Advisory Committee provides recommendations to the DOF on forest management issues on these lands and is a conduit of information between the division and the public.

Timber production is the major commercial activity. The forest is also open to mining, gravel extraction, oil and gas leasing, and grazing, although very little is done. The forest offers a variety of recreational opportunities enjoyed by many residents and visitors. The Bonanza Creek Experimental Forest, a 12,400-acre area dedicated to forestry research, is also located within the state forest.



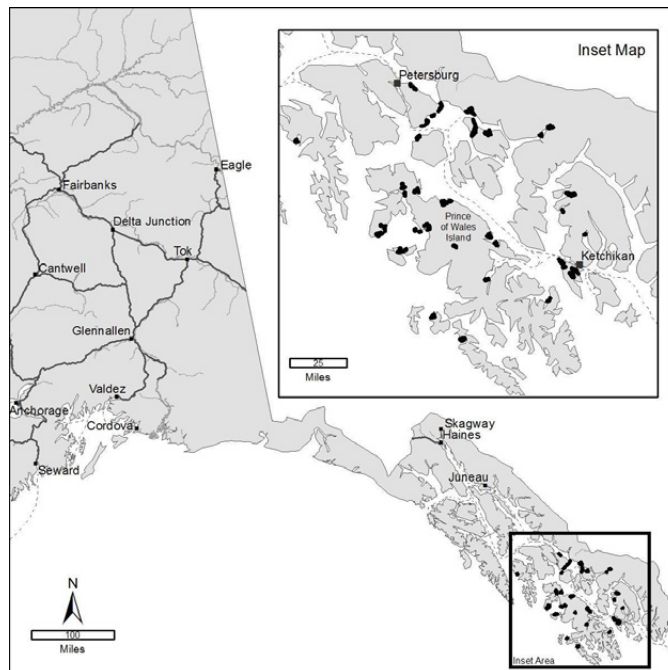
Southeast State Forest

Established in 2010

48,472 acres

In 2010, the Alaska Legislature designated 25,291 acres of land in 20 parcels as the Southeast State Forest. In 2011, the Legislature added an additional 23,181 acres. The state forest includes land on the mainland and the islands of Prince of Wales, Gravina, Hecata, Kosciusko, Revillagigedo, Tuxekan, Suemez, Dall, Mitkof, Kuiu, Zarembo, and Wrangell.

DOF submitted the final forest management plan to the Department of Natural Resources Commissioner early in 2016 and he adopted it on February 29. At the same time the Commissioner signed the Land Classification Order changing the general use lands within the state forest to the Forest classification. This allows the lands to be managed for long term forest productivity. The plan is now guiding forest management within the Southeast State Forest.



Division of Forestry Area Office Activity

Mat-Su/Southwest Area

The 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 DOF managed administrative district. The district also contains the most populous areas as well as the most remote.

The Mat-Su had 83 fires this year on 1,260 acres including the 780 acre McHugh Fire in Anchorage and the 320-acre Moose Creek Fire near Sutton. The Southwest had 58 fires on 73,100 acres. Ninety-five percent of the fires in the Mat-Su are caused by humans while 90 percent of the fires in the Southwest are caused by lightning.

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

The area continues to maintain over 12 miles of road. These roads ensure continued access for the commercial timber sale program as well for the personal use timber sales and the online firewood program.

Kenai & Kodiak Area

Much of the Kenai Peninsula relies on expensive fuel oil for home heating so the demand for firewood is extensive. The Kenai Peninsula Borough has determined that over 10,000 homes on the Kenai Peninsula use wood for heating. DOF addresses this need by providing personal use firewood areas and offering commercial firewood sales.

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

In 2015, DOF staff worked on projects funded by a USDA Forest Health grant to clean up and dispose of spruce beetle-killed timber in Soldotna. The outbreak of spruce aphids (*Elatobium abietinum*) in Homer and across Kachemak Bay are the result of multiple warm winters. Spruce aphid has been a resident of Southeast Alaska since the 1970s but this is the first documented case of it appearing in Southcentral Alaska.

With funding from the U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game and landowner contributions from Cook Inlet Inc., the Kenai Peninsula Borough, and the State Mental Health Trust, a 124-acre fuel break was created between the Kenai National Wildlife Refuge and the community of Sterling. The design and implementation of the project was inspired by the success of the Funny River fuel break established in 2013.

The Kenai Peninsula Borough determined that over 10,000 homes on the Kenai Peninsula use wood for heating

Tok

Timber Harvest

Demand continues for timber sales to supply orders for firewood, lumber, and biomass. Thirteen operators have active sales throughout the area including Moon Lake, Tok River, Porcupine Ridge Road, Johnson Slough, Dry Creek, and salvage from the 1990 Tok River fire. Local biomass production is anticipated to increase this year with the school district planning for a third chip-fired facility. There are two densified wood product producers in the area, the newest one plans to start measurable production in 2017. Local mills continue to produce logs homes that are being constructed locally and in other areas with milled, kiln-dried logs.

Wildland fire fuels heat schools

Work continues on two grant-funded projects in the Tok and Mentasta Lake areas to make structures Firewise and to provide safe passage for residents and safe evacuation sites within the communities in the event of a wildland fire. Most of these hazardous fuels have been made available for use in the Gateway School District's biomass boilers. The Tok School has acquired, and is currently installing, an additional steam generator that runs on low pressure steam, allowing power generation when outside temperatures are warmer, thus having a greater window of opportunity for power generation. The Mentasta School also continues successful operation of their wood fired hydronic boiler using local biomass.

Forest health

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

The area office partnered with the Department of Fish and Game to improve moose and grouse habitat by using a roller-chopper to cut down stands of aspen in the fall, which promotes new growth through coppice regeneration. This treatment not only enhances habitat for wildlife but also breaks up fuel continuity to slow the progress of a wildland fire.

Copper River

Copper River Basin Area Plan

With area planning in the Susitna and Tanana basins now complete, the Division of Mining, Land and Water has turned to the Copper River Basin Area Plan. The public scoping period for the plan ended on April 29. The next step is to prepare an Agency Review Draft, followed by a Public Review Draft. The Division of Forestry will participate in plan reviews and provide input on forestry-related elements.

Timber harvest

The area office continues to offer saw log sales over the counter and three commercial timber sales are currently available. Firewood, however, remains the focal point as heating oil prices begin to rise again in rural Alaska. These sales offer large units of spruce saw log and thousands of cords of spruce fuel wood. Infrastructure created over the past three years is now in place to facilitate access into these sale areas if the saw log market begins to rise.

Beetle-killed spruce for firewood is still the most requested forest product. An estimated 75 percent of homeowners in the Copper River Basin rely on dead, standing, dry wood as their primary or secondary source of heat. With the majority of the accessible beetle-killed spruce removed, local demand for dead standing wood in close proximity to urban areas has become unsustainable. The division provides public education on cutting, storing and properly seasoning green wood and creating new firewood opportunities for the public; remains a high priority. The area office manages 15 different areas for the public to harvest personal use firewood, ranging from Cordova and Valdez to as far north as the native village of Gulkana. Wood cutting permits are available online.

Forest practices

Forest practices inspections focused primarily on state administered timber sales. Best management practices were implemented on all the active sales overseen by the area office.

Making communities Firewise

The Firewise program in the Copper River Basin continues to be very successful. The division requested and was granted an extension of the program that allows an additional year to make homes and access routes Firewise.

The Glennallen and McCarthy Firewise projects rely heavily on landowner cost share programs. To date 212 homes have been inspected and 179 homes have completed recommended Firewise practices. In addition to the structures, 16.3 miles of access have been made Firewise and over 6,700 feet of shaded fuel breaks have been created.

The success of the program is due to the involvement of community organizations, local volunteer fire departments, and landowner who participated in the cost share reimbursement program. This process enabled McCarthy to become and continue as the first officially recognized Firewise Community outside of an organized borough in Alaska.



Chipping slash and stacking firewood for public use following wildland fire mitigation work.



Thinning trees and removing lower limbs to reduce wildfire hazards.

Cooperative Forestry Programs

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

Economic impact

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

Community Forestry Program

City trees and greenspaces confer many health, social, economic and environmental benefits but they need care to maximize these benefits. The Division of Forestry Community Forestry Program 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 helps set priorities for the program and provides expertise and advice to the division. The fifteen-member council represents the diversity and broad spectrum of interests and experiences in the state, and the members are valuable partners in local community forestry efforts.

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

Alaska Community Forest Council Members

(December 2016)

Paul Guzenski, Anchorage

Nathan Lojewski, Anchorage

Ranya Aboras, Anchorage

Ed Leonetti, Anchorage

Dan Rees, North Pole

Isobel Roy, Anchorage

Stephen O'Sullivan, Wasilla

Hans Klausner, treasurer,
Kodiak

Laura Charlton, chair,
Ketchikan

Gino Graziano, secretary,
Anchorage

Jud Kirkness, Sitka

Nan Mundy, vice chair, Juneau

Patrick Ryan, Anchorage

Jon Gellings, Juneau

Pat Leary, Anchorage

Over one million dollars in federal funds are infused annually into the state economy through these programs.

Right: Anchorage Mayor Ethan Berkowitz talks to the Youth Employment in Parks crew at Taku Lake. The youth crew removed invasive plants, planted native trees and shrubs, and restored eroded sections of the shoreline. The work was part of the project, Fish Need a Forest: Restoring Campbell Creek using Green Infrastructure.
Photo by Stephen Nickel



Community Assistance

Food Forest/Orchard Grants: The CF Program awarded six grants, totaling \$3,650, for organizations to test and demonstrate fruit and nut trees that could be successful in different locations in Alaska. Projects were completed in Anchorage, Fairbanks, Palmer, and Kenai.

Metlakatla: Program staff worked with Metlakatla Indian Community to develop a Community Forest Management Plan based on the tree inventory data collected in 2015. The management plan contains goals and actions to improve the condition of trees in the community, and a plan to diversify the species planted. The CF Program gave a grant to Metlakatla to implement the plan.

Anchorage: Program staff began implementing the project, “Fish Need a Forest: Restoring Campbell Creek Using Green Infrastructure.” The work is funded by a U.S. Forest Service Landscape Scale Restoration Grant and local partners that include municipal, state and federal agencies and nonprofits. The project will restore a seven-mile stretch of Campbell Creek where it runs through a highly developed area in Anchorage. Project partners began work to restore riparian forest functions, improve habitat and water quality, create low impact pedestrian routes at prioritized sites, and engage the community in education and stewardship. The work will continue for two more years.

Soldotna: CF staff provided training on tree inventory procedures, assessing tree conditions and prescribing maintenance tasks for City of Soldotna employees.

Joint Base Elmendorf-Richardson: CF staff provided training on tree inventory procedures, assessing tree conditions and prescribing maintenance tasks for the forestry department, which will complete a base-wide inventory of landscape trees.

Fairbanks: Program staff continued to work with partners to implement the project, “Restore the Chena Watershed Using Green Infrastructure,” which is funded by a U.S. Forest Service Landscape Scale Restoration Grant and numerous partners. The project demonstrates green infrastructure designs as cost effective solutions that decrease runoff and improve water quality for a healthy and sustainable fishery.

Education: The Community Forestry Program provided training for 144 people from 14 communities in 2016: Anchorage, Fairbanks, Girdwood, Homer, Juneau, Kenai, Ketchikan, Metlakatla, Palmer, Seward, Sitka, Soldotna, Sterling, and Wasilla. In 2016 the Community Forestry Program:

- Partnered with Cooperative Extension Service to teach a Managing Landscape Trees class for arborists and landscape installation and maintenance workers in Anchorage, Soldotna and Fairbanks. The classes covered proper tree selection, planting, pruning, common insect pests, pest management, and managing common invasive plants;
- Partnered with Cooperative Extension Service to teach an Understanding Trees Better class open to the public in Kenai. The class covered the biology and physiology of trees, planting, pruning and tree selection, common insect pests and invasive plants of concern;
- Provided technical assistance and information to local governments, state and federal agencies, landscape architects, tree services, utilities and homeowners.
- Served on the Fairbanks Green Infrastructure Group, UAA Tree Campus USA Committee and the Anchorage Cooperative Weed Management Association.
- Held the August Community Forest Council meeting in Fairbanks and invited local partners to attend the meeting and participate on a tour to learn about the recent green infrastructure installations.

Below: Alaska Community Forestry Council members and UAA staff planted a bristlecone pine for the 50th anniversary of Arbor Day in Alaska and the 25th anniversary of the AK CF Program. Front row (l to r) Dan Rees, Steve O'Sullivan, Stephen Nickel, Jud Kirkness, Kimberly Coscia, Isobel Roy, Gino Graziano Back row: Laura Charlton, Patricia Joyner, Justin Lopez, Pat Leary, Allye Brody, Steffany Willhauck, Nathan Lojewski, and Nic Cropper. *Photo by Chris Turletes*



Arbor Day Anniversary

The Community Forestry Program celebrated the 50th anniversary of Arbor Day in Alaska in 2016 with a reenactment of the 1966 ceremony in Juneau. The Juneau Urban Forestry Partnership and Juneau Garden Club deserve special recognition for organizing this special event and the planting of a hawthorn at the original site, the Juneau/Douglas City Museum.

The CF Program granted funds to the Alaska Community Forest Council to support 21 Arbor Day celebrations around the state. The American Society of Landscape Architects Alaska Chapter, Chugach Electric Assn., and the Society of American Foresters Yukon Chapter also donated funds for these events. The funds supported events organized by groups in: Palmer, Fairbanks, Sitka, Eagle River, Ketchikan, Homer, Anchorage, Kenai, Wrangell, Metlakatla, and Bethel.

This was also the 25th anniversary of the Community Forestry Program in Alaska. To celebrate these two milestones, the CF Program brought Pete Smith, Urban Forestry Program Manager for the Arbor Day Foundation, based in Nebraska, to participate in Arbor Day festivities in Fairbanks and Anchorage.



Onlookers watch Chris Mertl, Gov. Walker, Joel Nudelman, and Chris Maisch plant a tree at the Juneau Museum to celebrate the 50th anniversary of Arbor Day in Alaska.
Photo by Michael Penn

Local Community Forest Management

Organizations: In 2016, volunteers donated 1,631 hours to community forestry projects in Alaska. Citizen groups around the state organized volunteers, raised funds, supported tree planting and care, and offered educational programs. The most active organizations are the Alaska Community Forest Council, Fairbanks Arbor Day Committee, Juneau Urban Forestry Partnership, and Sitka Tree and Landscape Committee.

Tree Cities USA: City of Wasilla, Ketchikan Gateway Borough, Joint Base Elmendorf-Richardson, Eielson Air Force Base, Fort Wainwright, City & Borough of Sitka, Municipality of Anchorage, and City & Borough of Juneau

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

Tree Campus USA: University of Alaska Anchorage.

Staff Changes

On June 1, the Community Forestry Program Manager, Patricia Joyner, retired from state service. In 1991, Patricia, an information officer with DNR at the time, assisted with the organization of the Community Forestry Program. In 1992 she became the volunteer/partnership coordinator for the Community Forestry Program and in 2005 became program manager. Since she began, Patricia has been a leader for community forestry and arboriculture in the state. She's helped grow the arborist community in Alaska from single digits to nearly 40 individuals, she's helped eight communities earn the Tree City USA designation, three utilities earn Tree Line USA status, and two campuses become Tree Campus USA. She's led an exhaustive number of classes, workshops and other training events, inspired hundreds and changed the way trees are planted and cared for in the state. She also represented Alaska at the national level serving on the Western State Urban and Community Forestry Committee. The accomplishments she helped make possible are numerous and she set a high standard for what an effective community forestry assistance program should be. She will be missed by many.

Forest Health Protection Program

The Division of Forestry forest health survey program in cooperation with the U.S. Forest Service – Forest Health Protection (USFS-FHP) is a key component in the forest health protection strategy in Alaska; it includes both aerial and ground surveys. Aerial detection surveys take place across all ownerships and cover about 15 percent of the forested acres in the state in a given year. Aerial detection mapping documents the location and extent of many active forest insect infestations, abiotic damage events, and some disease damage. The damage numbers recorded from the aerial surveys offer a snapshot of statewide conditions though they generally do not represent the acres affected by pathogens, many of which are not visible by aerial survey.

DOF Forest Health personnel are involved in all facets of forest health in the state, however, focus is directed towards forest insects and aerial detection surveys. More detailed information pertaining to surveys and monitoring efforts for forest insects, tree diseases, invasive plants, and abiotic disorders is included in the annual Forest Health Conditions in Alaska report published by USFS-FHP in collaboration with DOF and other cooperators. The reports are available on the Forest Health Program webpage, <http://forestry.alaska.gov/insects/index>



Beetle-killed white spruce in the Susitna Valley. Photo by Jason Moan

Program Highlights

Early Detection Rapid Response monitoring

Fourteen monitoring stations to allow for early detection of and rapid response to invasive bark beetles and woodborers were installed at high risk sites throughout the state. This DOF-led annual program has been in place since the early 2000s; no target invasive species have been found to date.

Surveys Overview

In 2016, DOF and USFS-FHP staff collectively mapped nearly 950,000 acres of forest damage on the 27.1 million acres surveyed (pg. 25). The acreage of damage observed is 65 percent higher overall than in 2015 and includes damage from insects, diseases, and abiotic agents. Substantial increases in defoliation of aspen and willow, as well as spruce beetle-caused mortality contributed to the overall increase.

State Forest Survey Updates

Each year, the annual aerial detection surveys cover portions of the Tanana Valley, Haines, and Southeast state forests. In 2016, roughly 64,000 acres of damage was noted within or partially within the three forests, with the majority occurring within the Tanana Valley State Forest (63,000 acres). The top three damage types, in terms of acres affected, for each forest are listed below; all acreages are rounded:

Tanana Valley State Forest - Aspen leaf miner (50,700 acres), northern spruce engraver (5,900 acres), and birch leaf roller (5,400 acres). The 5,900 acres of northern spruce engraver (NSE) activity observed is a substantial increase over the 500 acres observed here in 2015. For more detailed information about ongoing NSE activity in interior Alaska, see the bark beetle summary below or refer to the Forest Health Conditions in Alaska 2016 publication.



Forest Health Program Manager Jason Moan at a stop on the Yukon River during aerial surveys. Photo by Stephen Burr

State Forest Survey Updates (continued)

Haines State Forest – *Dothistroma* needle blight (263 acres), spruce beetle (104 acres), and defoliation, causal agent unknown, (95 acres). *Dothistroma* needle blight, which affects shore pine, has been active in the area over the last few years. The spruce beetle activity in the Haines State Forest has been ongoing for several years.

Southeast State Forest - Yellow-cedar decline (489 acres) and spruce aphid (5 acres). Yellow-cedar decline continues to be prevalent in Southeast Alaska.

Bark Beetles

Spruce beetle

Spruce beetles continue to be the leading non-fire mortality-causing pest of spruce in southcentral, southwest, and southeast Alaska. Spruce beetle activity was observed on nearly 194,000 acres in 2016, an increase of roughly 500 percent over that observed in 2015. This marks 2016 as the year with the most spruce beetle damage mapped in a given year since 1999. A variety of projects to monitor and mitigate spruce beetle damage are underway and/or in development.

Notable areas of activity: Susitna River valley and Beluga Lake area; northwestern Kenai Peninsula; Lake Clark and Katmai national parks; Chilkat, Endicott, and Stikine river valleys.

Northern spruce engraver

Mortality caused by northern spruce engravers was mapped on 14,400 acres in 2016, an increase over the 9,300 acres observed in 2015 and the most activity mapped since 2010. NSE activity increased markedly within the 2012 windstorm area along the Tanana River, with scattered damage observed on more than 8,000 acres; less than 1,000 acres of damage was observed in this area in 2015. Projects to monitor and mitigate damage from NSE in the Interior are ongoing in several locations.

Notable areas of activity: (areas are a collection of scattered small sites of damage) Kobuk River valley: Kiana east to Ambler; Fairbanks area, Salcha River, Chena River: near Pleasant Valley and 2012 Tanana windstorm area; Yukon Flats: Beaver Creek; Yukon River: Beaver to Deadman Island.

Defoliating Insects

In 2016, approximately 680,000 acres of damage observed during the aerial detection surveys was attributed to defoliating insects, with nearly 95% of that damage being the result of a variety of hardwood defoliating pests. More than half of these defoliation acres can be attributed to two insects, the aspen leaf miner (208,000 acres) and willow leafblotch miner (145,000 acres), both of which increased considerably from 2015.

The generalist defoliator responsible for extensive hardwood defoliation in parts of the Alaska and Aleutian ranges and western Alaska was observed causing damage on 160,000 acres in 2016. Damage had occurred in the same locations as it had in the past one to two seasons: upper Yentna River valley, Lake Clark National Park, Wood-Tikchik State Park, and the Holy Cross area. As the causal agent was previously unconfirmed, DOF and USFS-FHP staff conducted a field visit to collect larvae for rearing. USFS-FHP sent a portion of the specimens for DNA identification and they were determined to be *Orthosia hibisci*. Numerous cooperators and concerned citizens contributed to the efforts to determine the cause of this defoliation event. Further investigations will continue in 2017.

Roughly 39,000 acres of softwood defoliation in spruce and hemlock was also observed. The non-native green spruce aphid, a pest of Sitka spruce, accounted for 34,200 of these acres. Green spruce aphid was active in coastal forests in Southeast, Prince William Sound, parts of the Kenai Peninsula, and in the Kodiak Archipelago. Green spruce aphid was confirmed on the western Kenai Peninsula in 2015 and aphid-caused defoliation around Kachemak Bay has been severe.



Larvae of at hardwood defoliator at Lake Telaquana.
Photo by Jason Moan

2016 FOREST INSECT AND DISEASE ACTIVITY (TABLE 1)Forest insect and disease activity detected during aerial surveys in Alaska in 2016 by land ownership and agent. All values are in acres¹.

Category	Agent	Total Acres	National Forest	Native	Other Federal	State & Private
Forest diseases	Alder dieback	8,393	43	524	1,213	6,614
	Dothistroma needle blight	4,850	225	144	3,630	853
	Willow dieback	2,750	0	962	1,554	238
	Spruce broom rust	151	0	0	91	60
Defoliators	Aspen leaf miner	207,926	478	56,576	51,191	99,833
	Speckled green fruit worm	160,000	0	47,265	37,124	75,709
	Willow leaf blotch miner	145,000	134	46,045	77,251	21,514
	Birch defoliation	52,500	103	7,225	8,466	36,679
	Spruce Aphid	34,200	12,628	1,916	1,036	18,662
	Birch leaf roller	27,000	0	2,687	2,868	21,395
	Aspen defoliation	18,900	0	1,447	14,921	2,516
	Willow defoliation	15,916	5	4,051	5,732	6,124
	Spear-marked black moth	4,650	0	110	54	4,490
	Conifer defoliation	3,100	1,336	36	1,666	62
	Alder defoliation	2,911	101	0	581	2,227
	Hardwood defoliation	1,890	0	524	881	488
	Birch leaf miner	1,790	0	41	718	1,027
	Cottonwood defoliation	1,326	701	37	169	419
	Spruce defoliation	1,000	680	229	0	93
	Large aspen tortrix	930	0	0	623	307
	Spruce budworm	786	0	529	0	257
	Spruce bud moth	87	0	0	0	87
	Cottonwood leaf beetle	7	0	0	7	0
Insect mortality	Spruce beetle	193,479	319	38,014	12,035	143,592
	Northern spruce engraver	14,400	3	2,223	1,720	10,435
	Western balsam bark beetle	27	8	0	0	19
Abiotic and animal mortality	Yellow-cedar decline	39,300	34,800	2,272	145	2,121
	Porcupine damage	3,530	390	2,304	205	632
	Flooding/high-water damage	2,650	322	323	633	1,370
	Windthrow/blowdown	232	52	26	40	113
	Landslide/avalanche	195	61	38	2	93

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

2016 FOREST STEWARDSHIP COMMITTEE

Glen Holt
University of Alaska
Fairbanks Cooperative
Extension Service

James Durst
Alaska Department of Fish
and Game, Fairbanks

Danny Consenstein
USDA Farm Service Agency

Clare E. Doig
consulting forester,
Anchorage

Dan Parrent
USDA Forest Service,
Anchorage

Tom Dearlove
Kenai Peninsula Borough,
Soldotna

George Matz
private forest landowner,
Homer

Jeff Hetrick
landowner representative,
Moose Pass

Will Putman
Tanana Chiefs Conference,
Fairbanks

Jeff Graham
Forest Stewardship Program
Manager, Alaska Division of
Forestry

Forest Stewardship Program

The Forest Stewardship Program provides private landowners with information for making decisions about forest resources. At the request of landowners, division staff members prepare forest stewardship plans that include field reconnaissance and the best available forest resources information. Alaska Native corporations are provided grants for natural resources professionals to prepare forest stewardship plans. Limited financial assistance is available for implementing projects consistent with the forest stewardship plans and best management practices. The Forest Stewardship Program is a federally funded program administered by the Division of Forestry.

The Division of Forestry receives guidance from the Forest Stewardship Committee, which is comprised of representatives from a broad range of Alaska private landowner interests. Areas of discussion include grant and cost-share rates, eligibility criteria, and forest stewardship plan requirements. The committee met twice in 2016. Due to changes in the status of several members of the committee, an updated roster of members will be built in 2017.

2016 Highlights

- Two Alaska Native corporations were awarded grants to begin forest stewardship plans.
- Four Alaska Native corporations completed work on forest stewardship plans for their land.
- Fifteen forest stewardship plans were completed and signed by individual Alaska forest landowners.
- Fifty Alaska homeowners completed wildfire fuel reduction projects and were awarded a total of \$79,110 in cost-share grants.
- A final report on the success of poplar regeneration for biomass use under an Alaska Energy Authority competitive grant was completed for publication in 2017.

Planning by Alaska Native Corporations

Native corporations are the largest private landowners in Alaska, and providing grants to the corporations for forest planning is an important part of the Forest Stewardship Program. In 2016, two forest stewardship planning grants were awarded to ANCSA corporations: The Kijik Corporation is developing a plan covering approximately 126,000 acres, and Sealaska Corporation is developing a plan covering 362,000 acres. Four forest stewardship plans were completed by ANCSA corporations in 2016: Tatitlek, Haida, Sealaska, and Cook Inlet Region, covering a total of 311,715 acres. Biomass energy development and commercial timber production were primary objectives of these plans, with secondary goals of enhancing the overall health and resilience of the forest, promoting wildlife habitat, reforestation, and sustainability.

Since 1992, 58 forest stewardship plans have been prepared for ANCSA corporations covering 6,614,658 acres.

Planning by Individual Landowners

Plans were prepared by staff and signed by 15 private land owners covering 244 acres. Wildfire defensible space, firewood production, wildlife habitat, and property aesthetics are primary goals for individual landowners.

- Since 1992, 915 individual landowners have adopted forest stewardship plans for a total of 46,562 acres.
- The Kenai Peninsula and Fairbanks area have the highest participation with the Matanuska-Susitna Borough also having many participants.

Cost-Share Assistance

Forest Stewardship Program personnel continued to assist private forest landowners by providing advice on ways to mitigate the risk of catastrophic wildfires impacting their homes. Cost-share funding for practices has come from Wildland Urban Interface (WUI) fuels reduction grants from the Western States Fire Managers.

Accomplishments reported here are home inspections, written defensible space plans, and cost-share grant agreements. In 2016, final inspections were performed for 50 landowners paying \$79,110. WUI grants are an important outreach method for increasing participation in the Forest Stewardship Program and can be used to increase conservation education delivered by the division.

Competitive Grant Projects

In 2016, the Forest Stewardship Program received approval for a WUI fuels reduction grant program in Delta Junction. This will continue to increase the ability of Stewardship foresters to contact private forest landowners and deliver educational programs and outreach in an area that has not been reached recently.

Additional Accomplishments

Forest Stewardship Program staff participated in a variety of public information and conservation education events offering forestry and fire prevention information. Events included fairs where literature on the Stewardship Program and WUI defensible space was distributed.

Forest Stewardship Staff

There were notable changes in the program's professional forester staffing in 2016. Following the retirement of Jeff Graham after 25 years as the Forest Stewardship Program Manager, the new program manager is Trevor Dobell-Carlsson. Judy Reese also retired in 2016, and John Winters was hired as the Stewardship Forester for the Kenai Peninsula. Jim Smith continued as the Stewardship Forester in Fairbanks, where Jim Schwarber also provides assistance. Steve Nickel continued to provide Stewardship Program assistance in the Mat-Su area.



Jeff Graham receives a gold pan from Dan Parrent, USFS, in recognition of his 25 years as the Alaska Stewardship Program Coordinator. Jeff retired in July. *Photo by Judy Reese*

Fire Suppression & Preparedness

Fire Activity in 2016

Despite an early start and late finish, Alaska's 2016 wildfire season was well below normal in terms of acres burned. A total of 573 wildfires burned 500,794 acres in Alaska in 2016, making it the 36th largest fire season on record dating back to 1939, according to the Alaska Interagency Coordination Center in Fairbanks. It was a far cry from 2015, when 768 fires burned more than 5.1 million acres, the second-largest fire season on record in Alaska. During an average Alaska fire season, about 500 fires burn approximately 1.2 million acres.

Despite the below-average fire season, Alaska still ranked second behind California in total acres burned in a state. No structures were lost and there were no major injuries to firefighters or civilians.

As is usually the case, the majority of wildfires in Alaska in 2016 were human caused. Fifty-nine percent of wildfires (345) were caused by humans while 41 percent (228) were started by lightning. Human-caused fires burned 10,068 acres and lightning-caused fires burned 490,726 acres.

There were 374 fires in the Division of Forestry's protection area; 182 fires in the Bureau of Land Management Alaska Fire Service's protection area; and 17 fires on U.S. Forest Service land. The largest fire of the season was the 58,565-acre Hog Fire northwest of Fairbanks, which was part of the Alatna Complex, a group of five fires that burned more than 130,000 acres.

Early Start

Due to the lack of snow and warm, dry conditions in the spring, the season got off to an early start. The first wildfire was reported on February 22 near Delta Junction as the result of live-fire training on military land. In the last 10 years, only 2011 had a wildfire reported earlier. While the fire was estimated at only one acre and was quickly extinguished by firefighting personnel from Fort Greely, it was a harbinger of things to come.

There were 66 fires reported in April, all of which were human caused. While most of those fires were very small – only four were larger than one acre – it was the highest number of fires reported in April in the previous 10 years. The first significant fire of 2016 was the Leaf Lake Fire along the Knik River near Palmer on April 16. A load of Alaska Fire Service smokejumpers was deployed to that fire on April 17, making it the earliest smokejumper deployment in the 57-year history of the Alaska Smokejumpers.

Lots of Lightning

As is typical, there were spikes in fire activity in June and July that kept firefighters busy, albeit briefly. These upticks in activity were usually associated with a combination of dry, hot weather and lightning. Conditions would dry out, there would be a small lightning bust that ignited new fires, and firefighters were left scrambling to keep up until rain knocked the fires down. That scenario played out multiple times during 2016. For example, there were 111 new fires reported from July 14 to 16, which accounted for roughly 20 percent of the total fires for the season. Almost all those fires were a result of lightning strikes. Ironically, the number of lightning strikes recorded in 2016 – approximately 200,000 – was roughly the same as 2015 when nearly 800 fires burned 5.1 million acres. The strikes, however, didn't result in nearly as many fires in 2016 because of the heavy rain that fell in Interior Alaska in June and July.



Wacky Weather

Rain put a damper on the fire season in much of the Interior starting in mid-June and running through the month of July. Fairbanks International Airport totaled almost five inches of rain in July, which was more than twice the average and the fourth-highest July rainfall in 110 years of observations. Other locations in the Interior received even more rain. Firefighters on the Mid Salcha Fire near Fairbanks were nearly forced to evacuate their spike camps because of flooding on the Salcha River in July. Firefighters resorted to building bridges to reach the fire line in some places while landing zones for helicopters on gravel bars along the river disappeared under water.

However, warm, dry conditions persisted south of the Alaska Range, evidenced by the fact that Anchorage recorded its warmest summer ever. Those conditions resulted in the lightning-caused Tok River Fire on July 14 and the human-caused McHugh Fire southeast of Anchorage on July 16. The Alaska Incident Management Type 2 Green Team was mobilized to manage both fires. The IMT spent only three days in Tok before transitioning to the McHugh Fire. The McHugh Fire north of Turnagain Arm along the Seward Highway was the highest-profile fire of the summer in Alaska. Smoke plumes could be seen and smelled in Alaska's largest city and the fire disrupted a major transportation corridor and threatened residences to the north and south of the fire. Timely rains and hard work by firefighters helped contain the fire to the south side of the ridge by July 20, however.

Holdover Fires

This was the year of "holdover fires," that is fires that carried over from previous years. There were 26 holdover fires reported that burned in 2015 and 2014. The majority of holdover fires (14) came from the Card Street Fire on the Kenai Peninsula. Most of the holdover fires were nothing more than smoke reports that were quickly extinguished but one fire developed into one of DOF's five project fires for the season, the 10,500-acre Medfra Fire, which started as a result of the 16,500-acre Soda Creek Fire in 2015. Holdover fires were also reported from the 198,000-acre Funny River Fire in 2014, the second year in a row that fire had produced holdover fires. Sixty percent of the holdover fires were identified in May.

Lower 48 Deployments

With the arrival of rain in July, much of Alaska's firefighting workforce headed south. Several hundred personnel from Alaska were mobilized to the Lower 48 in July, August and September to assist with the national firefighting efforts in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington and Wyoming. Seven agency crews and five Type 2 crews were mobilized to the Lower 48, in addition to dozens of overhead. The Alaska Type 1 Incident Management Team was ordered to the Soberanes Fire near Big Sur, California on Aug. 23. The Alaska IMT was the third Type 1 team to take command of the high-profile fire that was burning in the Carmel Valley along Highway 1 on the Pacific Coast. The team spent three weeks managing the Soberanes Fire, which earned an asterisk as the most expensive fire in history at more than \$260 million.

In November, more than 100 Alaska personnel traveled south to help fight fires in Alabama, Georgia, Mississippi, North Carolina, South Carolina, Tennessee and Virginia due to prolonged drought conditions that resulted in a historic fire year in that part of the country. Many of those firefighters spent the Thanksgiving holiday fighting fire instead of eating turkey and pumpkin pie.

Late Finish

While most Alaska personnel arrived back in the state in September thinking the fire season in Alaska was history, that didn't turn out to be the case. Conditions in Southcentral Alaska remained dry well into the fall. The Moose Creek Fire north of Palmer was reported on October 8 and burned 303 acres near the community of Sutton, disrupting traffic along the Glenn Highway and threatening some local residences. With most of Alaska's seasonal workforce laid off at that point, fire managers had to scramble to mount a unified response but were able to do so thanks to assistance from multiple federal agencies. Firefighters had to contend with below-freezing temperatures that produced challenges not usually associated with fire in Alaska. It took firefighters a week to contain the late-season fire and it wasn't until Mother Nature lent some assistance in the form of much-needed snow and rain that the fire, and the Alaska fire season, was put to bed.

DOF Project Fires for 2016

MEDFRA FIRE

Start date: May 29

Location: 50 miles northeast of McGrath

Cause: Holdover fire from 2015

Final Size: 9,607 acres

The Medfra Fire was reported on the morning of May 29 approximately 50 miles northeast of McGrath along the north bank of the North Fork Kuskokwim River. The fire started as a result of a holdover fire from the 16,500-acre Soda Creek Fire in 2015. A helicopter from McGrath responded within an hour to begin dropping water on the fire when it was only about 1½ acres but those suppression efforts proved futile due to high winds that caused the fire to grow rapidly. By the time a load of smokejumpers from McGrath arrived 2½ hours after it was reported, the blaze had grown to 3-5 acres. An hour later it was estimated at 10 acres and spreading rapidly to the southwest due to high winds and heavy fuels. The fire continued to grow and was estimated at 1,650 acres less than 12 hours after it was reported. The fire continued to grow due to winds and was estimated at more than 8,000 acres on June 1 after it merged with another smaller fire, the Berry Creek Fire, which started a few miles to the north. The fire grew to a final size of approximately 9,607 acres before rain moderated fire behavior on June 2-3. At its peak, approximately 90 personnel were assigned to the Medfra Fire. The fire was declared 100 percent contained on June 13.



Medfra Fire 5-29-16.
Photo By Alaska Division of Forestry

TOK RIVER FIRE

Start date: July 14

Location: Approximately 8 miles southwest of Tok near Mile 115 of the Tok Cutoff

Cause: Lightning

Final Size: 669 acres

The Tok River Fire started on July 14 as the result of a lightning strike. The fire was burning parallel to the Tok Cutoff near Mile 115, approximately eight miles southwest of Tok. Because of its proximity to the road and the community, the Alaska Incident Management Type 2 Green Team was brought in to coordinate the firefighting efforts on July 16. Initially, south winds pushed it 3½ miles toward the Tok Cutoff and Tok River. It burned on a combination of state and Tetlin Village Tribal Council land between the Tok River and Tetlin Hills. Two structures – one residential and another commercial –were threatened by the fire. At its peak, there were 161 personnel working on the fire. The fire was turned over to a Type 3 management team on July 19 after cooler, wetter conditions arrived and personnel were reassigned to other incidents. The last crew was demobilized from the fire on July 27.



Tok River Fire.
Photo By Alaska Division of Forestry

MOOSE CREEK FIRE

Start date: October 8

Location: Approximately 12 miles north of Palmer along the Glenn Highway

Cause: Unattended debris burn

Final Size: 303 acres

The fire was reported at 10 acres early on Saturday morning and grew rapidly because of high winds. The fire, which was started by an unattended burn pile, was approximately 100 acres by the time DOF could mount a unified response later in the day. With most of Alaska's seasonal workforce laid off at that point, fire managers had to scramble to find adequate resources to battle the blaze but they were able to do so thanks to assistance from multiple federal agencies. Firefighters had to contend with below-freezing temperatures that produced challenges not usually associated with fire in Alaska, such as freezing hoses and pumps, as well as darkness. More than 100 firefighters were assigned to the incident and it took a week to contain and only then with the help of much-needed snow and rain.



Frozen bucket used in the Moose Creek Fire. The October fire presented difficulties not usually experienced during the Alaska fire season – frozen equipment and darkness.

Photo by Doug Ritchie

TETLIN RIVER FIRE

Start date: June 17

Location: Near the village of Tetlin, approximately 20 miles south of Tok and 10 miles south of the Alaska Highway

Cause: Human

Final Size: 818 acres

This human-caused fire started on June 17 and quickly advanced toward the village of Tetlin as a result of high winds, threatening approximately 120 residences in the village. The fire came less than a mile from the village before firefighters were able to stop it at the airstrip on the outskirts of the village. The fire spread to a total 818 acres, with most of the growth happening in the first 72 hours. A Type 3 team was brought in to manage the fire on June 19. At its peak, 334 personnel were mobilized to fight the fire, including hotshot and Type 2 initial attack crews, as well as several Type 2 hand crews. Multiple helicopters and air retardant tankers were used to aid in suppression efforts during the course of the fire. No structures were lost and the fire was declared fully contained on July 3.



Members of the Pioneer Peak Interagency Hotshot Crew sort their food after receiving a fresh food delivery on the Tetlin River Fire. The crew was camped in a safe area near the fire line close to where they were working



Pioneer Peak Interagency Hotshot Crew members listen to their evening debriefing around the fire in their spike camp on the Tetlin River Fire.



Fire camp crew members, from left, Rowena Paul, Meranda Sam, and Gary David Sr., all from Tetlin, work at the Tetlin Airstrip staging area in support of fire suppression operations.

Photos by Sam Harrel

TETLIN RIVER FIRE (continued)



Firefighters unload fresh food boxes for the Pioneer Peak Hotshots near where the crew is camped on the Tetlin River Fire.



Members of the Buckland Type 2 crew unload their gear on the boat ramp in Tetlin.



Sign in Tetlin Village thanking firefighters for saving the village.

Photos by Sam Harrel

MCHUGH FIRE

Start date: July 16

Location: Approximately 15 miles south of Anchorage in Chugach State Park along the Seward Highway

Cause: Abandoned campfire

Final Size: 778 acres

The fire was reported to the Anchorage Fire Department late on Saturday night but firefighters were not able to reach the fire due to steep, hazardous terrain. The Division of Forestry used air tankers and helicopters to drop retardant and water on the fire until they could mobilize ground forces. The fire increased to approximately 40 acres by the time firefighters on the ground were able to begin attacking it on the afternoon of July 17. The fire was visible from the Seward Highway, disrupting traffic on one of Alaska's main highway corridors. At one point, traffic on the highway was reduced to one lane with a pilot car because the fire approached the road and posed a danger in the form of falling rocks and debris. Despite the efforts of aerial and ground resources, the fire continued to grow and was estimated at more than 500 acres on July 19. The growing fire posed a threat to residences to the north and south of the fire, prompting the deployment of the Alaska Type 2 IMT on July 20. The steep, hazardous terrain posed a challenge to firefighters and five hotshot crews from northern California and Oregon that were familiar with that kind of country were ordered to assist with suppression efforts. Two UH-60 Blackhawk helicopters from the Alaska Army National Guard were also called in to drop water on the fire. At its peak, more than 300 personnel were assigned to the fire. Firefighters received a major assist from Mother Nature in the form of heavy rain and the fire was declared 100 percent contained on July 24.



Dropping fire retardant on McHugh Creek Fire.
Photo by Shiloh Powell



Above: McHugh Creek fire response
Photo by Shiloh Powell

Right: A squad of sawyers with the Tahoe Hotshots climb up the left flank of the McHugh Fire
Photo by Sam Harrel

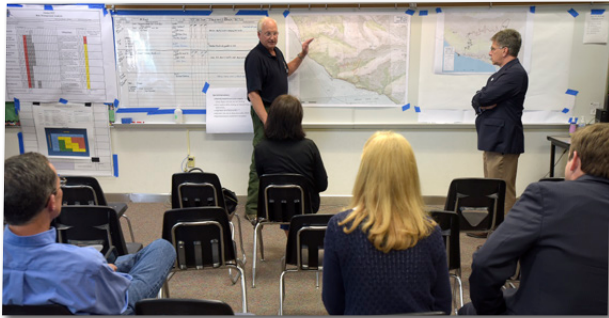


Above: Firefighter pets a National Crisis Response Canine.

MCHUGH FIRE (continued)



Left: Firefighter's tents pitched on the football field of Goldenview Middle School. Firefighters from across Alaska and from the lower 48 responded to the McHugh Fire just south of Anchorage.



Above: McHugh Fire Incident Commander Tom Kurth briefs Anchorage Mayor Ethan Berkowitz, right, before the start of an open house at the incident command post.



Left: A member of the Chena Interagency Hotshot Crew hauls hose out of the Rainbow Valley subdivision

Right: Members of the Tahoe Hotshots prepare to go back to work after a lunch break. They were working in steep, rocky terrain littered with large downed trees.



Above: A member of the Tahoe Hotshots sharpens his saw.

Below: Members of the National Crisis Response Canines and their handlers listen to the morning firefighter briefing. The group is a certified crisis response canine team that provides safe compassionate support to people affected by crisis. The canines visited personnel at the McHugh Incident Command Post on 7-23-16.



Photos by Sam Harrel

State Fire Support

Fire Fighter Property Federal Excess Personal Property

The Houston Fire Department was the first department to screen and secure equipment through the Fire Fighter Property (FFP) program. They gained numerous pieces of equipment ranging from washing machines and office furniture to a fire rescue truck. The State Fire Warehouse secured a D-7 dozer and a low boy truck trailer through the program.

The total value of property screened by the fire department and the division through the FFP program in 2016 was almost \$900,000. Some of the property needs work but the program is saving the fire fighting agencies a great deal of money.

The division also continues to use the Federal Excess Personal Property program to surplus property that is no longer being used by the division. The property goes through the General Services Administration and is often sold to the public. The amount of excess property has diminished significantly in the past three years.



D-7 dozer that DOF acquired through Firefighter Property Program.
Photo by Martin Mariche

Ground Support Operations

The Northern and Coastal Ground Support operations were much less busy in 2016 than in 2015. Russ Smith, Northern Ground Support Manager, retired after working for the state and federal governments for more than 30 years. His position was filled by Alysa Johnson who had worked as an assistant to Russ for the last several years.

Another change was that the Coastal Ground Support operations moved from Eagle River to Palmer in the spring. The shop mechanics relocated to the Palmer Supply Facility so the Ground Support operation moved as well. The Palmer Ground Support was located at the Academy Charter School across the street from the Palmer forestry office. The division may operate out of the forestry parking lot in the upcoming season and use the school for additional parking.



Low boy that DOF acquired through Firefighter Property Program.
Photo by Martin Mariche

State Fire Warehouse

The main state fire warehouses are located in Fairbanks and Palmer. In 2016, the State Fire Warehouse issued \$6 million in supplies and equipment to in-state incidents.

The warehouse sent personnel to Copper River, Delta Junction, and McGrath to help during times of high fire activity in those areas. Ten warehouse employees also traveled to the Lower 48 as either single resource or Incident Management Team members to help other states.

The warehouse hired Richard Dunham as a mechanic in the small engine shop in Fairbanks. Rich brings a wealth of knowledge and experience from years in the private sector and is a great addition to the team. The Palmer warehouse will complete the hiring process for a mechanic in their small engine shop in the spring.

Aviation Program Highlights

Congratulations are in order to all in the Aviation Program who helped attain a 14th year with no accidents or incidents. Safety and the training required to remain safe are always the division's top priorities.

The four division aircraft totaled 580 flight hours this year, with the two turbine commanders flying well over half those hours. Pilot Doug Burts and Air Attack Tim Whitesell took the Commander 1000 on assignment to the Lower 48 from late July into October. A USFS Federal Excess Property Program DHC-2 Beaver and the division's Commander 500S provided logistical support and ATGS training, aerial firing, and INFRARED mapping missions.

This was the fourth year of a five-year contract for two of the Convair 580, type 2 air tankers. One was based in Palmer and the other at the Ladd Army Air Base in Fairbanks. These air tankers had 120 flight hours and dropped over 374,000 gallons of retardant in Alaska. In late July the air tankers and a Convair 580 were ordered by the U.S. Forest Service for duty in the Lower 48. Through contract extensions they remained on duty until the end of September.

Erickson Helicopters provided two long-term contracted type 2 helicopters located in Palmer and Fairbanks. Rogers Helicopters provided three type 2 helicopters, one each in Soldotna, McGrath, and Delta. Temco Helicopters provided a contract helicopter in Tok. These rotor craft provided platforms for both initial attack helitack and logistical support. Total flight time for these aircraft was 340 hours.

The Aviation Program bid farewell to two long-time employees this year. Steve Edwards retired in May with 30 years of state service and is enjoying his retirement. Wes Walker, the maintenance technician with 17 years of service, resigned from state service to take a teaching position at the University of Montana, teaching future airframe and power plant technicians.

The Aviation Program also welcomed two new employees. Rob Hoecheras, the new aircraft inspector, came from Erickson Helicopters where he was the director of maintenance. He has also worked with ERA as a Convair and helicopter pilot and mechanic. Galen Gaunt, the new maintenance technician, came from the Copper Valley where he had his own maintenance shop and flying service for many years.

The Aviation Program appreciates Pilot Chuck Greer's attention to detail and his willingness to go the extra mile in caring for the aircraft he flies. In Bettles this summer, Chuck was getting his aircraft refueled when he noticed that even though the fuel truck had the correct fuel placard, the color and smell of the fuel did not seem right. Due to his persistence, it was determined that jet fuel was loaded incorrectly into the aviation gas truck, and then loaded into his aviation gas aircraft. Had Chuck not noticed the error and tried to fly with the wrong fuel, he would have experienced a double engine failure just as he became airborne with dire, if not fatal, consequences.

The division also appreciates the ongoing work by Candy Simmons to ensure that all the administrative requirements are met, which is key to a smooth-running program.



A CL-415 water scooping aircraft drops its load on the fire along the Tetlin airstrip Saturday, 6-18-16.

Photo by Glenn Rich/Isaac Hofstetter

National Fire Plan & Wildland Urban Interface Projects

The National Fire Plan provides grants to states, some 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. Funding from the U.S. Forest Service to DOF supports a variety of educational and mitigation projects. NFP grants funded the following projects in 2016:

Initial Attack Fire Fighters

National Fire Plan funding continues to enable the 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 governments, and volunteer fire departments in wildland/urban interface areas. Effective initial attack of a fire reduces overall suppression costs and minimizes threats to private and public property from wildland fire.

Hazardous Fuels Mitigation

Eastern Copper River: The community of Kennecott/McCarthy held a Firewise day and renewed its application to continue to be a nationally recognized Firewise Community. Thirteen landowner assessments were completed; of those four were finalized and five are pending submittal. All remaining funds will be spent on these projects and all work will be completed by the end of March, 2017.

Glennallen: In September 2016, a modification was submitted and approved for the budget and the boundaries associated with the cost-share portion of this grant. Assessments have been completed for 21 landowners; four have been finalized and the landowners have until March 2017 to finish all projects. The division will continue to advertise the program and conduct assessments and, as time allows, offer Firewise information and training until the grant period ends on March 31, 2017.

Butte Recreational Trails & West Lakes, Mat-Su: The project entails creating 110 acres of shaded fuel breaks on two sites and installing Firewise educational kiosks. In 2016, the Pioneer Peak Interagency Hotshot Crew, Gannet Glacier Type II Initial Attack Crew, and Forestry technicians treated 6.6 acres and offered firewood to the public for free. Pioneer Peak also installed a kiosk at the trail head near Maud Road. Treatment will continue in 2017.

Fairbanks North Star Borough: Phase III of this project reduces hazardous fuels on 80+ acres and provides prevention education to approximately 5,000 residents living in wildland urban interface areas in the Gilmore, Goldstream, and Nordale subdivisions. In 2016, 20 acres of hazardous fuels were hand thinned and slash piles were burned. The project will wrap up in 2017.



Information about fuel mitigation work on kiosk

West Kenai: This project was designed to remove 200 acres of hazardous fuels identified in Community Wildfire Protection Plans. All fuel will be removed by hand including hauling slash from the site and chipping or burning in place if suitable conditions exist. Hand treatments are preferred because mechanical equipment would be limited by slope stability, access, and the proximity to surface waters.

During 2016 DOF treated 50 acres, which consisted of hand felling and bucking dead standing trees and thinning and removing lower limbs of live trees within 50 feet of public access corridors. The dead trees were cut up and about 40 cords were offered for the public to gather for firewood. Other woody debris was chipped and spread along public corridors to reduce the risk of a wildfire being started. Work will resume in 2017 and the remaining 50 acres will be treated by December 1.

Kenai Peninsula State Parks Land: This project began in late October and personnel treated 10 acres by hand before Mother Nature put an end to the season. Treatment consisted of hand felling, removing lower limbs, and thinning dense stands of spruce intermixed with hardwoods. DOF will maintain a 10-foot spacing between tree crowns. Debris is chipped in high public use areas and along public road corridors to reduce the risk of a fire starting. Dead, standing, beetle-killed trees will be hand felled and cut for the public to gather for firewood. Work will resume in late summer and early fall of 2017, with a goal of completing 50 acres of the 133-acre project by December 1.

Statewide Prevention and Education

The Division of Forestry uses National Fire Plan funds to develop statewide public service announcements (PSA) that address fire prevention, safe burning and Firewise principles in conjunction with local fire departments, the Alaska Fire Chiefs Association, and the Alaska Wildland Fire Coordinating Group Prevention & Education Committee. In 2016, DOF filmed a fire prevention PSA with musher DeeDee Jonrowe and another with Governor Walker that will air during the 2017 wildfire season.

New Project Funding

The following projects will be funded if the U.S. Forest Service receives National Fire Plan funding in federal Fiscal Year 2017 to pass through to the state.

McGrath, Takotna, Nikolai, Telida -

\$300,000: Project will mitigate hazardous fuels on a total of 196 acres. The work will be done by a combination of DOF and local labor and will include:

- Creating a 95-acre shaded fuel break in McGrath to protect utility corridors, homes, and businesses.
- Creating a 63-acre shaded fuel break around the village of Takotna to reduce the risk to homes, businesses, the school, and other infrastructure.
- Treating 10 acres in Telida to protect the historic Russian Orthodox Church.
- Clearing a total of 28 acres around the dumps in McGrath, Takotna and Nikolai.

Caswell - \$300,000: The division will reduce fuels on approximately 320 acres of state and borough land within a designated high fire risk zone in Caswell, creating safe passage in and out of the community. DOF will also provide information and education on Firewise principles and emphasize the benefits to homeowners of creating defensible space.

Delta - \$74,392: This project will fund Firewise education and 50/50 cost share grants to homeowners to create defensible space. The work will break up the continuity of fuels in high risk areas by treating 60 acres on approximately 25 ownerships.

Fire Education & Outreach - \$67,259: DOF will award a sub-grant to Alaska Natural Resources & Outdoor Education to deliver 12 one-credit fire education and prevention courses and online teaching resources for K-12 educators. The program is directed toward communities, both on and off the road system, where wildland urban interface areas are growing and where the risk of wildfire is increasing.

Volunteer Fire Assistance Grants to Rural Fire Departments

The Volunteer Fire Assistance Program provides funds to increase firefighter safety, improve the firefighting capabilities of rural volunteer fire departments, and enhance protection in the wildland urban interface. The funds come from the U. S. Forest Service and are administered by the Division of Forestry.

In 2016, the division received requests for equipment, training and prevention activities from 39 volunteer fire departments and provided a total of \$238,524.51 to 29 departments.

Fire Department	Amount Awarded
Anderson	\$8,983.62
Anchor Point VFD	\$10,000.00
Bear Creek VFD	\$9,366.00
Bethel VFD	9,900.00
Butte VFD	\$9,000.00
Caswell Lakes VFD	\$9,762.95
Craig VFD	\$9,777.60
Egegik VFD	\$10,000.00
Galena VFD	\$6,661.29
Gakona VFD	\$2,556.00
Gustavus VFD	\$6,739.00
Haines VFD	\$10,000.00
Kennicott/McCarthy VFD	\$9,000.00
Klawock VFD	\$7,655.10
McKinley VFD	\$7,323.41
North Slope VFDs	\$5,768.10
Ninilchick VFD	\$9,816.48
Northway VFD	\$9,324.00
Nunapitchuk VFD	\$6,415.62
Palmer VFD	\$6,576.40
Panuique VFD	\$2,700.00
Port Alsworth VFD	\$7,000.00
Rural Deltana VFD	\$10,000.00
Salcha VFD	\$10,000.00
Seward, City of VFD	\$7,987.50
Strelina VFD	\$8,978.49
Talkeetna VFD	\$9,676.00
Tok VFD	\$7,704.00
Willow VFD	\$9,762.95
Grand Total	\$238,524.51

Fire Training Program

The division provides training to maintain a qualified and safe workforce, ready to respond to wildland fires and other emergencies as needed. Interagency courses are open to federal cooperators, structure fire departments, local governments, other state agencies, emergency firefighters, other geographic areas, and Canadian fire agencies. Statewide training staff were nominated for the Governor's Denali Peak Performance Award this year.

National Level Training in the Lower 48

Training offered in the Lower 48 by other geographic areas, the National Advanced Fire and Resource Institute, and the National Prescribed Fire Training Center help the division meet the need for advanced level training. Thirty-seven students attended 27 courses for 1,400 hours in 2016. The courses provide advanced leadership training for employees and participants sponsored by the division and prepare personnel to serve on Alaska's Incident Management Teams and to become instructors. DOF provided an instructor for the Supervisory Dispatcher class.

Instate Training

Most training in state is provided cooperatively by DOF, the Alaska Fire Service, U.S. Forest Service, fire departments, and local governments. Training was provided for fire departments, local governments, DOF, federal cooperators, emergency firefighters, the Division of Homeland Security, the Alaska Railroad, and military students. The training helps to meet national standards in the Incident Command System, suppression, aviation, dispatch, logistics, leadership, prevention and wildland fire investigation positions.

DOF also supports cooperators by issuing red cards, tracking training and experience records, and assisting with mobilization. These cooperators are a valuable source of trained and experienced firefighters who support responses to fires and other emergencies both in and out of Alaska.

Division of Forestry staff delivered many basic firefighter courses, sharing their years of experience and expertise. Interagency cooperation and support from Lower 48 subject matter experts support interagency training in Alaska.

Structural fire departments across the state assist the division in fire suppression in populated areas through cooperative agreements. Forestry also supports Native Corporation crews through agreements with the Tanana Chiefs Conference and Chugachmiut Corporation.

The division garnered funding and support for the Advanced Wildland Firefighter Academy from the U.S. Forest Service, Chugachmiut, and Tanana Chiefs Conference. This two-week course taught in partnership with the University of Alaska Fairbanks and held at the UAF campus offers college and occupational endorsements in Wildland Fire Science and qualifications needed for wildland fire assignments. The academy would not have been possible in 2016 without the effort training staff made to secure this funding.



UAF Nanooks Wildland Fire Crew Helicopter Crew Member trainees Matthew Munnely, left, and Ben Shrage calculate the weight of their equipment to sling load by helicopter to the Tetlin River Fire. *Photo by Sam Harrel*

Alaska statewide course accomplishments

Class	Courses	Instructors	Hours	Students
ICS	4	3	80	119
Suppression	27	46	800	502
Dispatch	6	13	144	120
Prevention	1	4	32	14
Leadership	1	0	40	24
Totals	39	66	1,096	779

Students

Class	DOF	Local Gov't	EFF	Federal	Other	Totals
ICS	12	28	5	47	27	119
Suppression	176	15	87	201	23	502
Dispatch	43	0	17	60	0	120
Prevention	12	0	1	1	0	14
Leadership	8	0	0	16	0	24
Totals	251	43	110	325	50	779

The Incident Command Type 3 and Type 4 simulation course was held to train future instructors. Dispatchers and staff from all area offices attended. The simulations provide an early season refresher and practice for the coming fire season. A course in methods of instruction was held to prepare students to become effective instructors.

Priority Trainee Program

The mission of the Priority Trainee Program is to develop an interagency workforce by sending trainees to incidents, assisting them in gaining critical experience for fire management positions, and succession planning for the Incident Management Teams. There is a shortage of qualified applicants for fire management and incident management positions. This program trains employees to ensure a sufficient workforce in the future.

In 2016, there were 181 Priority Trainee applicants and 65 were sent to the Lower 48 for training at least once.

Additional information

- http://training.nwcg.gov/sect_transition_information.html
- <http://training.nwcg.gov/online.html> –Online NWCG courses
- <http://training.fema.gov/is/> - FEMA Independent Study (IS) courses
- <https://www.iat.gov/> - Interagency Aviation courses
- <http://www.nationalfiretraining.nwcg.gov> –National Interagency Training

Employee Recognition

Dean Brown – 35 years of service

Dean Brown has been Forestry's Deputy Director and, at times, Acting Director since 1990. She has worked for four State Foresters and been Acting State Forester for significant periods during those 26 years. She began work for DNR as a temporary employee in Minerals and Energy Management in 1978 as a Geologist II in Oil and Gas. She subsequently worked as a geologist in Mining, a hydrogeologist in Water, as the District Water Officer, then District Lands Officer in Southcentral Region. She moved up to Chief of Water Management statewide and then Deputy and/or Acting Director of Agriculture for six years until being laid off in the 1987 statewide recession.

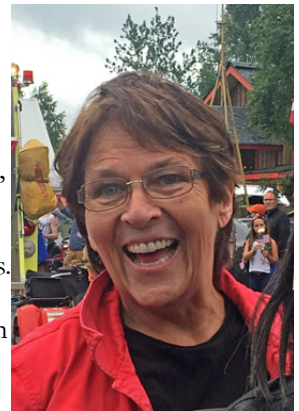
Dean rejoined state service in 1989 as a non-perm NRM I for Mining, Land and Water Management and was hired permanently as Northern Regional Manager for Lands in Fairbanks. In 1990 Dean became Forestry's Deputy Director of Operations, working with Deputy Director George Hollett.

Dean was in the thick of many of the milestones of DNR, including oil and gas development, land disposals, the Beirne initiative, navigability determinations, native claims and allotments, the sea lift from Prudhoe Bay, closing the Deadhorse Store (which got her mentioned in USA Today), the Delta barley projects, Point McKenzie, the Miller's Reach Fire and the record fire years of 2004 and 2015. She was the Incident Commander for the 2006 National Association of State Foresters' annual meeting in Anchorage, for which she and her team received numerous accolades. She was awarded a medal by the Department of State Foreign Service Institute for assisting their executive leadership program. She has served on the Statewide Emergency Response Commission since 1996 and on AWFCG since 1994 with four terms as chair. She frequently acts for DNR on the Governor's Disaster Policy Cabinet, has been in Who's Who in American Woman, and is in Who's Who in America.

Her career has included challenging and interesting work – field construction engineer for Fluor on the Trans-Alaska Pipeline, Placer Dome geologist on Rock Creek, retained R&M Consulting geologist, Amax Coal Company geologist, Natural Resource Economics adjunct professor at Alaska Pacific University, natural science and meteorology adjunct professor at Indiana University-Purdue University, travel/accounting administration at University of Wisconsin Center System, and other jobs including a flight school, a union carpenter on Bradley Lake Dam, Wien Alaska Airlines, soils lab analysis, subdivision soils work, and thoroughbred farm caretaker.

Born and raised in Alaska, Dean comes from a pioneer Alaska family. Beginning with a prospector in the Brooks Range in 1887 and jointing the Gold Rush to Nome in 1901, her family stories (some of which are published) are part of Alaska's history in mining, aviation, and the businessmen and women from the gold rush, through pipeline construction and oil development, to the present day.

Dean has eclectic interests. She is an artist, photographer, sometimes pilot, horsewoman, carpenter, bibliophile, late blooming pianist and itinerant traveler. Her trip to Africa in 1991 started her thinking of retirement (she is still thinking) and was followed in 2006 by a month in Ecuador and Peru where she visited Macchu Picchu, the Galapagos, the Avenue of Volcanoes (closely followed by eruptions) and stood astride the equator. She traveled to Jordan and Egypt in 2010, visiting Petra, the Seven Pillars of Wisdom, the Pyramids, Valley of the Kings, and traveled the Nile. She also visited London and parts of England, venturing through Scotland to Loch Ness and plans to return. As part of an international group of 50, Dean went on the Geological Society of America 150th anniversary expedition of the Antarctic Peninsula, including the Falklands, South George, and Patagonia – geology was riveting, wildlife was fantastic. A year later she sailed to Antarctica again – this time to see all the base camps Antarctic explorers left after their quests for the South Pole. She spent time at McMurdo Base, Scott Base, visited the sub-Antarctica Islands, and traveled to New Zealand. There were close calls with a leopard seal, Southern sea lions, and killer whales, which make for good stories. She is saving Europe for when she gets old – that may be a while! Her last short trip was riding horses and cutting cattle on a ranch.



Dean Brown hitchhikes a ride on a motorcycle in the Talkeetna Independence Day parade in 2016

Michelle Demaline – 30 years of service

Michelle Demaline was born in Dillingham and raised in Tanana, Fairbanks, Anchorage, and Eagle River. She began her career with the State of Alaska in 1986 at the Department of Labor working for Occupational Safety and Health in the administrative field. After four years she moved into the accounting field at the Department of Military & Veterans Affairs where she remained for 11 years. In 2001 an opportunity arose that she couldn't pass up and it was back to the Department of Labor for four years. In 2003 after receiving notification that her position was being transferred to Juneau as a cost savings measure she was rehired into the position she vacated at DMVA. Michelle remained at DMVA for another seven years.

At that point she had been living in Palmer for eight years and commuting to Anchorage or Fort Richardson. When the position at DNR opened she jumped at the chance. Michelle joined Forestry in April 2010 as Coastal Region administrative officer for two years and then as a Central Office accountant for five years. She has found her niche in the field of accounting. With more than 30 years working for the state, Michelle has become a valuable asset to the Division of Forestry.

Michelle moved to Palmer in 2002 and loves it so much she has no plans to live anywhere else. In her free-time she enjoys traveling the state in her motorhome, reading, vacationing out of state, and spending time with family and friends. While Michelle is eligible for retirement she plans to remain in state service until her daughter graduates from college.



Michelle Demaline

John Winters – 25 years of service

John arrived at Fort Wainwright in 1985 and worked for the Alaska Fire Service for five years. He began his career with the Division of Forestry in 1990 as the Kenai/Kodiak Suppression Foreman. He has worked two careers throughout the state - in forest resource management and fire. John has worked in Tok, McGrath, Juneau, and Soldotna, fighting fires, inspecting logging and working on projects in the Interior, Southcentral and Southeast.

John received a program excellence award in 2010 for his Forest Resources and Practices Act work in Tok, Icy Bay, Southeast, and Afognak and Kodiak islands.

John said, "Someday, the smoke, the slopes, the rain, and the bugs will win. Until then, I plan to enjoy every day I strap on my boots or pick up a Pulaski. Every muskeg, helispot, and shoreline is a place in the heart. I want to thank all I have met on this wild journey."



John Winters on a site visit in Homer

Valerie Hendrickson – 20 years of service

Valerie Hendrickson began her career with the State of Alaska in 1982 as a clerk typist for the Department of Environmental Conservation. After a five-year stint at DEC, she took time off to backpack in Europe and attend the University of Alaska, Anchorage. Valerie eventually returned to state service and worked as an administrative clerk for the departments of Revenue and Health & Social Services. She was promoted to a publications technician for the Division of Public Health, where she remained for six years.

Moving back to Fairbanks, Valerie's introduction to the world of forestry and natural resources management began in the late '90s while working as a publications tech for the Agroborealis magazine at UAF's School of Agriculture and Land Resources Management. Two years later she relocated to Kenai to work as staff assistant to the safety manager at Tesoro's refinery. Four years later, opportunities brought her north again, this time to the Mat-Su Valley. She began work as an EFF for Forestry in 2005, issuing burn permits for the Mat-Su Area Office in Palmer. She joined the Coastal Region administrative support team in 2006 as a permanent employee and was responsible for hiring, payroll, and travel transactions for the Regional Office and for coordinating and auditing these transactions for the Coastal Region's area offices.

In September 2009 Valerie accepted a lateral transfer back to the Mat-Su area office to provide administrative support to the Fire and Resources Management programs. Valerie remains in that position in what is now the Mat-Su/Southwest Area Office.

"We've experienced some major changes in the last few years, from combining area offices to mastering the new technology needed to do our jobs," she noted. "Fortunately, the one thing that hasn't changed is the phenomenal group of people I work with. It's awesome to be part of a great team that, despite the circumstances, can always make it happen."

In her spare time (depending on the fire season) Valerie enjoys fishing, gardening, baking, canning, reading, hiking, traveling, and taking long walks with her dogs. During the winter months she likes to tackle home projects, walk or ski in the fresh air, and catch up on sleep.



Valerie Hendrickson and Tasha

Greg Palmieri – 20 years of service

Greg began his career with the state in 1989 as a Library Assistant in Seward. In 1995, Jim McAllister, Marty Freeman, and Roy Josephson interviewed him for a position that intrigued him due to the range of tasks it covered in the Haines State Forest. He did not expect an offer and was prepared to accept a less desirable job when Roy's call kicked off his 20 years with DOF. Greg's story provides a good history of the area where he works—a beautiful and productive forest that few Alaskans have visited.

During his first five years he and Roy sold and administered over ten million board feet of timber and built six plus miles of road. Greg completed two inventories, one in southern southeast in 1997 and a second in central and northern southeast in 2000. He identified forested land on state lands across the region classified as General Use, both with and without management plans. DOF recognized Greg for his outstanding work on this project, which Marty described as benefitting the whole division. She wrote, "your analysis of the potential timber supply in Southern Southeast was the catalyst for the whole SE forest project...this project will result in a larger and more stable state timber base...". The inventory led to designation of the SSE State Forest many years later.

Greg did the preliminary design work on the first large SSE sales of red cedar to new mills with value added processing. The sales in Coffman Cove and Kitkun Bay totaled 20 million board feet. The work by Mike Curran and associates in Kitkun Bay led to DOF's bridge timber program. Greg also began a small sale program to local operators on Prince of Wales Island. His wildland fire management skills were tested in 1998 when an aggressive fire (for SE) burned near Skagway. His crews contained the 80-acre wind and slope driven fire with seven days of steady work.

In the next five years he ran the silviculture program on the Haines State Forest and he and Roy built the small sale program to provide timber for a local market in Haines that is still growing today. From 2000 to 2002, Greg assisted in the first revision of the Haines State Forest Management Plan and a related project to build the base of the Haines Area GIS data. He still works on and shares it with other agencies.

2005 was an unusual fire season in that two large fires broke out at the same time along the Haines Highway. The fires taxed the two-person and 10-EFF office to its limits and required support from Whitehorse and Palmer. Greg is proud of his DOF award recognizing his performance in Incident Command.

In 2006, Greg began working with the local government and Alaska Energy Authority to develop biomass demand in Haines that would require processing local chips. It took a decade of work but the borough has now gone to bid to install three biomass boilers to supply heat for the school, swimming pool and vocational education building. This is a critical step in developing a regional biomass industry that will create a stable market for low end wood. He hopes this will stimulate the southeast economy. Greg was recognized in 2009 as one of three members of the Northern Southeast crew that was honored for regional biomass development, Forest Practices work at Icy Bay, and the bridge timber program, in addition to their regular duties.

Recently, the largest timber sale offered on state land in 44 years, might be the start of a new regional industry in Haines but that story is yet to be told. Greg has a good working relationship with other state agencies based on a common desire to serve the public and manage state resources in a professional manner.

Greg's career continues to grow much like the trees on his first harvest unit in 1995, a living sign of the good work he has done. He believes it takes 20 years to see the value of a forester's work. Greg wrote, "I only hope that the Haines State Forest will still be here to be managed when my grandchildren are looking to a future in this valley. Forests are the true renewable resource!"



Greg Palmieri and children (L-R) Dylan, Brennan, and Keegan at a Seattle Sounders game

Forestry Participates in Event for National Guard Reserve Member Employers

The National Guard holds an event for employers of National Guard Reserve members to showcase what the Guard and Reserves do and how military members integrate their military service with their civilian careers. Employers get to see how military experience can bring added benefits to their organization and how they can best support the employee during military service.

Ed Soto, a member of the Alaska Air National Guard and an engineer for Forestry, nominated the Division of Forestry for an award as an extraordinary employer. As a result, he received an invitation for State Forester Chris Maisch and Deputy Director Dean Brown to attend the event, called “Bosslift,” in May.

Soto, Maisch, and Brown toured Air National Guard facilities on Joint Base Elmendorf/Richardson including the fire station that provides warm winter storage for one of Forestry’s Type 6 wildland fire engines under an MOU with the Guard. The group then boarded an HC-130 Hercules to Kodiak where they toured U.S. Coast Guard facilities and the Alaska Aerospace missile launch facility.

As a bonus, the trip provided the opportunity to see Lesnoi Native Corporation log decks ready for export and the area affected by an unusual late fall fire on Kodiak the previous year.



Dean Brown and Chris Maisch with HC-130 Hercules in Coast Guard Air Station hangar in Kodiak *Photo by Ed Soto*



Ed Soto and Chris Maisch with fire engine at JBER.
Photo by Dean Brown

State of Alaska Governor's Denali Peak Performance Award Nominations

The following Division of Forestry employees were nominated to receive a Governor's Denali Peak Performance Award and each received a certificate from the DNR Commissioner. The nominations were made early in 2016 for performance during the very busy 2015 fire season.

Innovation in Cost-Saving Award: Division of Forestry Training Section:

Cindy Forrest-Elkins, Anchorage

Carrie Hale, Glennallen

These employees ensured that critical wildland firefighting training programs were offered in Alaska despite limited state funding. They made it possible to hold the very popular Advanced Wildland Fire Academy by garnering support and funding from other agencies and organizations. This two-week course taught at UAF offers college and occupational endorsements in Wildland Fire Science and qualifications needed for wildland fire assignments.

Exceptional Performance by a Team Award: Division of Forestry Regional Administration

Jacquelyn Bailey, Fairbanks

Betsy Torres, Fairbanks

Dawn Sloan, Palmer

RaDonna Turner, Palmer

Heather Feters, Fairbanks

Lynette Doscher, Palmer/Anchorage

The team kept everything running smoothly during the near record fire season, processing over 12,000 invoices for services and supplies worth \$24 million and processing 700 hiring packets. The team proved able to meet the additional challenge of the change in accounting systems from AKSAS to IRIS during this busy period.



Acting DNR Commissioner Marty Rutherford congratulates Training Officer Cindy Forrest-Elkins on her Denali Award nomination. *Photo by Dean Brown*

2017 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	\$2,844.4	\$15,334.2	\$5,973.0	\$24,151.6
Federal Funds	\$4,827.0	\$1,486.6	\$11,960.4	\$18,274.0
Capital Improvement				
Receipts (Fed, GF, & SDPR)	\$260.5	\$850.8	-	\$1,111.3
Interagency Receipts	\$500.4	\$395.0	-	\$895.4
Timber Receipts	\$989.3	-	-	\$989.3
Other (SDPR)	\$55.0	-	\$1,500.0	\$1,555.0
TOTALS	\$9,476.6	\$18,066.6	\$19,433.4	\$46,976.6

POSITIONS

Permanent Full-Time	30	29	-	59
Permanent Part-Time /Seasonal	4	169	-	173
Non-Permanent	7	-	-	7
				239

FOREST MANAGEMENT & DEVELOPMENT COMPONENT

RENEWABLE RESOURCE DEVELOPMENT & SALES	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Board of Forestry	-	-	\$14.3	\$14.3
Forest Practices	-	-	\$222.5	\$222.5
Forest Management	\$374.3	\$652.1	\$1,085.3	\$2,111.7
Interagency Receipts	-	-	500.4	\$500.4
Stat. Desig. Program Receipts (SDPR)	-	-	\$55.0	\$55.0
Federal Cooperative	-	-	-	\$0.0
Forestry Assistance	-	-	\$4,827.0	\$4,827.0
Timber Sale Receipts	-	-	-	\$0.0
Capital Improvement Receipts (Other)	-	-	\$989.3	\$989.3
	-	-	\$260.5	\$260.5
Director's Office	\$374.3	\$652.1	\$7,954.3	\$8,980.7
COMPONENT TOTALS	-	-	\$495.9	\$495.9
	\$374.3	\$652.1	\$8,450.2	\$9,476.6

FIRE SUPPRESSION PREPAREDNESS COMPONENT

	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Preparedness	\$375.4	\$653.5	\$14,305.3	\$15,334.2
Interagency Receipts	-	-	\$395.0	\$395.0
Federal Cooperative				
Forestry Assistance	-	-	\$1,486.6	\$1,486.6
Capital Improvement Receipts (Other)	-	-	\$850.8	\$850.8
COMPONENT TOTALS	\$375.4	\$653.5	\$17,037.7	\$18,066.6

2016 Actuals NOTE: Dollar figures are in thousands (e.g., \$40.5 is \$40,500.00)

FUNDING SOURCES	FOREST MGMT & DEVELOPMENT	FIRE PREPAREDNESS	FIRE ACTIVITY	TOTALS
General Funds	\$2,453.1	\$1,641.2	\$43,255.5	\$47,349.8
Federal Funds	\$1,048.5	\$15,255.8	\$26,440.3	\$42,744.6
Capital Improvement	\$2.1		204.3	\$206.4
Receipts (Fed, GF, & SDPR)			-	\$0.0
Interagency Receipts	\$331.7	\$376.9	9	\$717.4
Timber Receipts	\$352.1	-	-	\$352.1
Other (Fire Support FY16)	\$158.7			\$158.7
TOTALS	\$4,346.2	\$17,273.9	\$69,908.9	\$91,529.0

POSITIONS

Permanent Full-Time	30	29	-	59
Permanent Part-Time /Seasonal	4	169	-	173
Non Permanent	7	-	-	7
				239

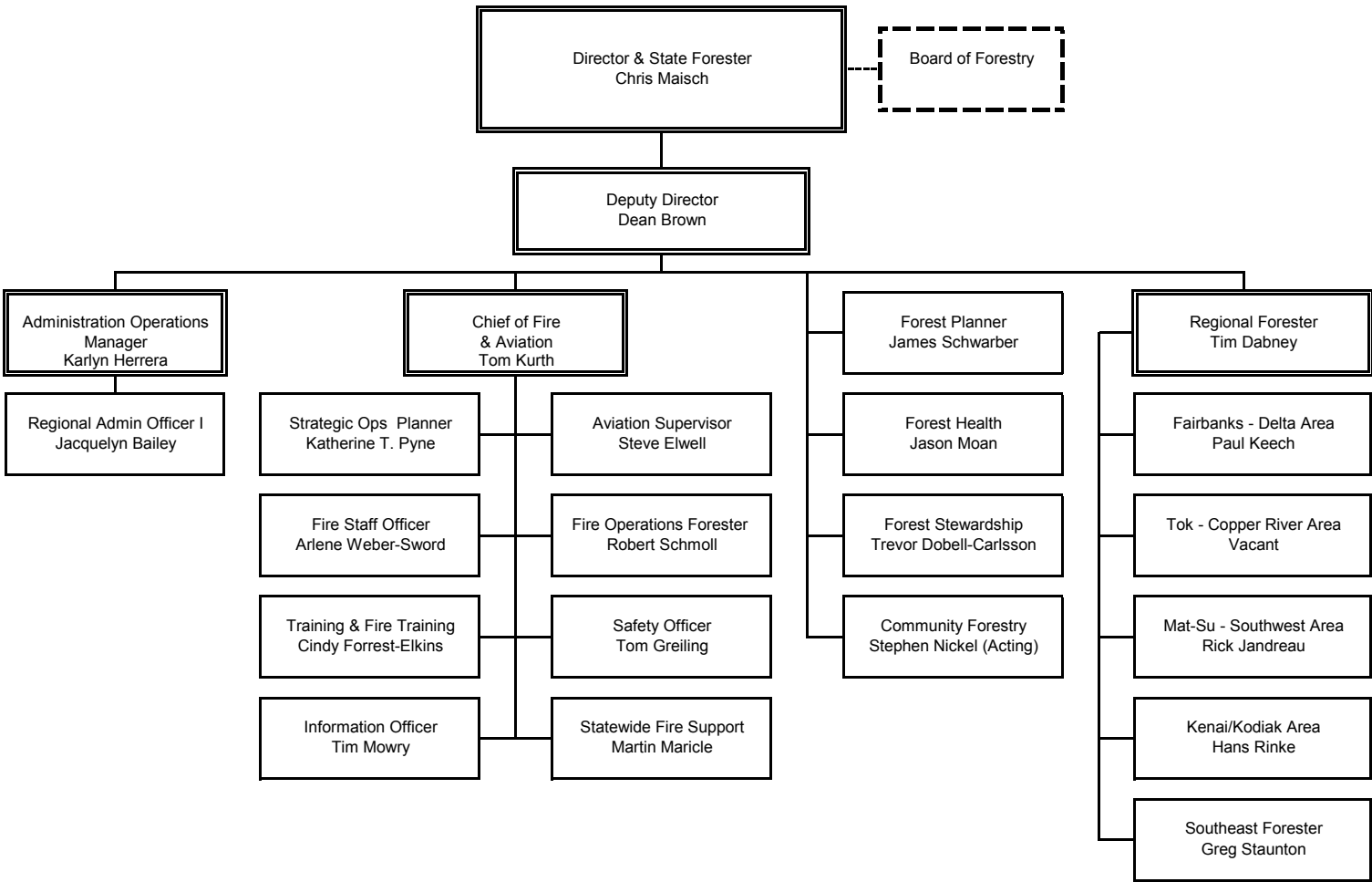
FOREST MANAGEMENT & DEVELOPMENT COMPONENT

RENEWABLE RESOURCE DEVELOPMENT & SALES	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Board of Forestry	-	-	\$6.5	\$6.5
Forest Practices	\$0.0	-	\$65.7	\$65.7
Forest Management	\$693.6	\$418.6	\$816.0	\$1,928.2
Interagency Receipts	\$0.0	\$0.0	\$331.7	\$331.7
Stat. Desig. Program Receipts (SDPR)	\$0.0	-	\$2.1	\$2.1
Timber Receipts	\$214.0	\$110.8	\$27.3	\$352.1
Federal Cooperative Forestry Assistance	-	-	\$1,048.5	\$1,048.5
Capital Improvement Receipts (Other)	\$0.0	\$0.0	\$158.7	\$158.7
<i>Subtotals</i>	\$907.6	\$529.4	\$2,456.5	\$3,893.5
Director's Office	-	-	\$452.7	\$452.7
COMPONENT TOTALS	\$907.6	\$529.4	\$2,909.2	\$4,346.2

FIRE SUPPRESSION PREPAREDNESS COMPONENT

	COASTAL REGION	NORTHERN REGION	STATEWIDE	TOTALS
Preparedness	\$3,182.1	\$3,668.9	\$8,612.2	\$15,463.2
Interagency Receipts			\$175.0	\$175.0
Federal Cooperative			\$1,635.7	\$1,635.7
Capital Improvement Receipts (Other)				\$0.0
COMPONENT TOTALS	\$3,182.1	\$3,668.9	\$10,422.9	\$17,273.9

Division Organizational Chart



2016 Division of Forestry Directory
December 2016

DIVISION OF FORESTRY - 12/31/2016

State Forester's Office

550 West Seventh Avenue, Suite 1450
Anchorage, Alaska 99501-3566
269-8463 fax: 269-8931

State Forester

John "Chris" Maisch, 451-2666

Deputy State Forester

Dean Brown, 269-8476

Admin. Services Manager

Karlyn Herrera, 269-8477

Chief of Fire and Aviation

Tom Kurth, 451-2675

Forest Planning

Jim Schwarber, 451-2704

Community Forestry Program

Stephen Nickel (Acting), 269-8466

Forest Health & Protection

(Insects and Disease)
Jason Moan, 269-8460

Forest Stewardship Program

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

State Fire Operations

P.O. Box 35005
Ft. Wainwright, Alaska 99703
356-5850 fax: 356-5855
Robert Schmoll, Operations Forester

AICC Logistics: 356-5645
Intelligence: 356-5671
Training, Anchorage: 269-8441
AICC Coordinator: 356-5682
Strategic Operations Planner: 356-5858
Fire Behavior: 356-5847

State Fire Support

3700 Airport Way
Fairbanks, Alaska 99709-4699
451-2608 fax: 451-2690
Martin Maricle, State Fire Support Forester
State Logistics: 451-2680
State Fire Warehouse: 451-2640

Aviation Program

101 Airport Road
Palmer, Alaska 99645
761-6271 fax: 761-6273
Steve Elwell, Aviation Mgr.
Northern Aviation Mgmt: 451-2691
Coastal Aviation Mgmt: 761-6229

Northern Office

3700 Airport Way
Fairbanks, Alaska 99709-4699
451-2660 fax: 451-2690

Fairbanks-Delta Area

Fairbanks Office
451-2600 fax: 458-6895
Paul Keech, Area Forester
Fire line: 451-2626
Fire Ops. fax: 451-2633
Logistics: 451-2627
Dispatch: 451-2623

Delta Office

P.O. Box 1149
Delta Junction, Alaska 99737
(Mi. 267.5 Richardson Hwy.)
Paul Keech, Area Forester
895-4225 fax: 895-2125
Fire line: 895-4227

Tok - Copper River Area

Tok Office
Box 10 (Mile 123.9 Tok Cutoff)
Tok, Alaska 99780
883-1400 fax: 883-5135
Vacant
Fire line: 883-3473

Valdez/Copper River Office

P.O. Box 185
Glennallen, Alaska 99588
(Mi. 110 Richardson Hwy.)
822-5534 fax: 822-8600
Gary Mullen, Fire Management Officer

Coastal Office

101 Airport Road
Palmer, Alaska 99645
Reception 761-6200
Tim Dabney, Regional Forester

Mat-Su/Southwest Area Office

761-6301 fax: 761-6319
Rick Jandreau, Area Forester
Dispatch: 761-6220
Fire line: 761-6311
Burn Permit: 761-6338

Southwest Area Office (Seasonal)

Box 130
McGrath, Alaska 99627
524-3010 fax: 524-3932
Fire Management Officer, Norm McDona
Fire line: 524-3366

Kenai-Kodiak Area Office

42499 Sterling Highway
Soldotna, Alaska 99669
(Mi. 92.5 Sterling Hwy.)
260-4200 fax: 260-4205
Hans Rinke, Area Forester
Fire line: 260-3473
Burn Permit: 260-4269
Dispatch: 260-4232

Southeast Area Office

2417 Tongass Avenue, Suite 213
Ketchikan, Alaska 99901
225-3070 fax: 247-3070
Area Forester, Greg Staunton



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

