ALASKA DEPARTMENT OF NATURAL RESOURCES ❖ DIVISION OF FORESTRY

1998 ANNUAL REPORT

Alaska Department of Natural Resources
Division of Forestry

1998
Annual Report

Alaska State Forester's Office
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Alaska Division of Forestry

The Division of Forestry is one of nine divisions within the Alaska Department of Natural Resources. Prior to November, 1981, it was a section within the Division of Forest, Land and Water Management.

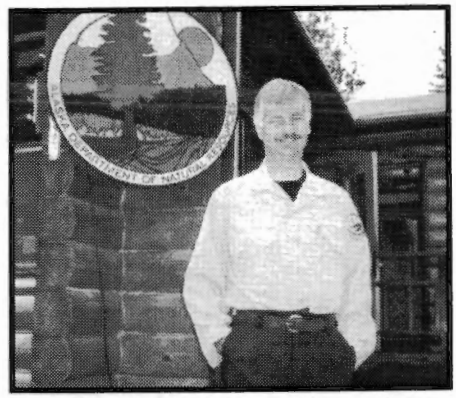
The division's mission is to develop, conserve, and enhance Alaska's forests to provide a sustainable supply of forest resources for Alaskans.

The Division of Forestry:

- Protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act;
- Manages a wildland fire program on public, private, and municipal lands;
- Encourages development of the timber industry and forest products markets;
- Administers the Urban & Community Forestry and Stewardship programs;
- Manages the Haines and Tanana Valley state forests (over two million acres);
- Conducts personal-use and commercial timber and fuelwood sales;
- Gives technical assistance to forest landowners;

The State Forester's Office is located in Juneau. In addition, the division has a central office in Anchorage for policy and program direction, two regional offices, and 10 area offices responsible for program support and field work.

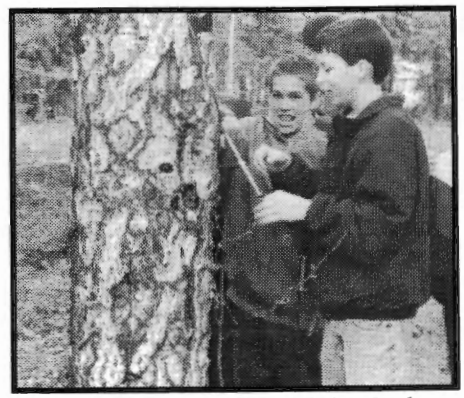
In 1998 the division employed 68 people full-time, 151 seasonally, approximately 733 as emergency firefighters, and 10 as interns.



Delta Area Forester Al Edgren. (Joanne Singer)

Delta Area Administrative Assistant Joanne Singer and burning berm pile. (Bruce Swain)

Admin. Mgr. Chris Christianson (Karen Gordon)



Students participating in the Delta/Ft. Greely Outdoor Classroom (Gary Cooper)

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STATE FORESTER VIEWPOINT

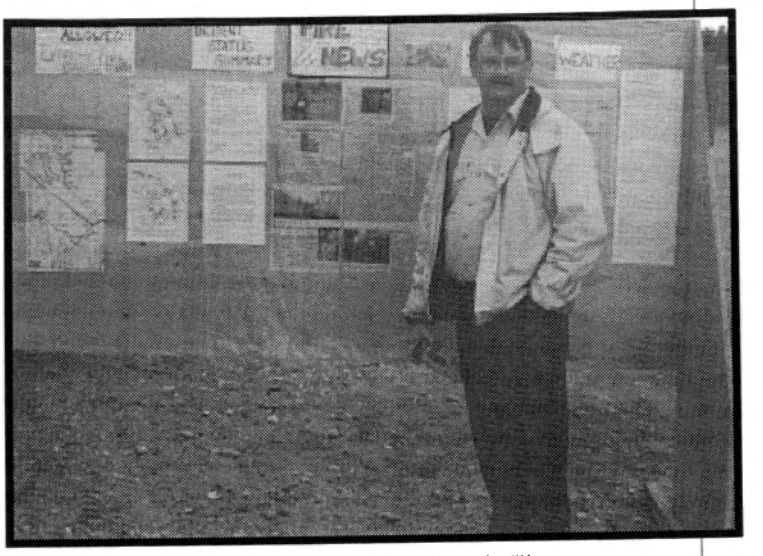
1998 was a year of challenges and opportunities that the Division of Forestry more than met with impressive results. This annual report summarizes the division's mission, describes measures of accomplishment of those missions, and provides additional information on the division's varied products and their costs.

As you would expect with a young state dealing with resource development, the division is facing many challenges. The wildfire threat associated with development in urban and rural areas of Alaska is growing and will require innovation and coordination with local fire departments and federal cooperators. The need to provide for economic stability and growth while protecting the state's bountiful natural resources is a challenge that the division will continue to face. Developing and maintaining diverse forest landscapes capable of sustaining the flow of resources will require continual review and revision of the division's long-term resource management strategies.

The community of Ketchikan saw the first value-added timber sale completed this year, as a direct result of the efforts of the Juneau, Ketchikan, and Haines staff under the leadership of the Regional Forester. This program provides negotiated timber sales for value-added timber products to support a stable in-state economy and jobs in the forest industry. Additional sales are being prepared in Southeast and the Tok area.

Cooperation in addressing resource issues has increased as Alaska's many interest groups seek to address solutions rather than problems. Field trips to look at the impacts of the spruce bark beetle, the boreal forest ecosystem, forest stewardship, and fire prevention have had considerable interest. These on-the-ground discussions provide a foundation for better communications on the difficult issues facing us all.

The Division of Forestry is pleased to have been a part of the Spruce Bark Beetle Task Force. This effort, led by Kenai Peninsula Borough Mayor Navarre, brought together a diverse cross-section of Alaskans. Senator Murkowski provided federal funding for the task force through the USDA Forest Service State & Private Forestry. I think it is a true measure of success that the task force used less than one-fifth of the grant for planning and the remainder to achieve direct, on the ground results! The South Zone and Kenai/Kodiak Area Forestry staff did a great job assisting the development and implementation of this effort.



Alaska State Forester Jeff Jahnke at the Carla Lake Fire. (Chris Christianson)

I commend the Board of Forestry for the Forest Resources & Practices Act legislation that resulted from an extensive evaluation of the effectiveness of the act. The legislation was introduced and received strong bipartisan support but, sadly, failed to be adopted on the final day of the session. The legislation has been reintroduced in the 1999 legislative session. Later in the year the board began a similar process of evaluation for the Interior Region forest practices to establish standards for Type II and III riparian areas. This hard-working board has helped increase understanding of and commitment to forestry issues statewide.

Forestry had a modest reorganization in 1998 that increased emphasis on statewide program direction and provided for a stronger implementation role in the regions and better field support. This change identified program managers for fire management and forest resources, strengthened regions by putting the fire management officers and zones under regional supervision, and eliminated one deputy director. These changes will allow the division to respond more efficiently to challenges the division will face in coming years.

I hope all of you will join me in a look back at the division's accomplishments this past year as documented in this annual report. I think you'll agree with me that it represents a tremendous amount of work by very dedicated employees of the Division of Forestry.

State Forester
Jeff Jahnke

HIGHLIGHTS OF 1998

Resource Management

~ State timber sales provided $522,070 to the state treasury in 1998.

~ The division planted 577,270 seedlings on 2,783 acres of state land. It scarified an additional 2,321 acres in preparation for planting.

~ The division sold 51 of its 60 timber sales in fiscal year 1998 to local processors. Most of the 17 million board feet in these sales will be processed locally for value-added products, contributing to Alaskan jobs and income.

~ The division issued 434 personal use fuelwood permits, made 14 personal use house log sales and 12 personal use saw log sales.

~ The division issued 48 commercial saw log and six commercial fuelwood contracts. It also issued 22 beach log salvage permits.

~ DOF registered 98 log brands, of which 22 were new and 76 were renewals.

~ The division contracted for the collection of 600 bushels of spruce cones. The cones were processed by the Plant Materials Center in Palmer and stored for future reforestation.

~ The Urban & Community Forestry Program awarded 18 Arbor Day grants to 13 communities for a total of $17,600. Communities matched the grants with $53,826 in local funds and in-kind services.

~ DOF staff helped the Kenai Peninsula Global ReLeaf Chapter purchase and distribute 22,000 tree seedlings to private landowners.

~ Urban & Community Forestry staff and volunteers transplanted 680 trees and 2,300 seedlings from the Plant Materials Center to public land throughout Southcentral Alaska.

~ The division provided nine Project Learning Tree workshops for 160 educators around the state. The PLT coordinator also led one 15-hour course for graduate credit for teachers.

~ Forest Stewardship Program foresters helped 45 private forest landowners prepare stewardship plans covering 2,522 acres.

Forest Resources & Practices

~ The division processed 120 forest practices notifications of timber harvest and 59 renewals of harvest on 31,410 acres. Staff conducted 125 field inspections.

~ DOF is participating in three forest practices research projects in interior Alaska. The projects are studying Tanana River fish, riparian buffers, and winter roads in permafrost wetlands.

~ The Board of Forestry held three meetings around the state, talking with the public about the Forest Resources & Practices Act, and working with the administration and the legislature on forestry legislation.

~ A bill implementing an amendment to the Forest Resources & Practices Act was introduced in the legislature. The bill passed both houses and narrowly missed adoption. It will be reintroduced in 1999. The bill strengthens stream protection standards and implements recommendations from the Board of Forestry and the Science & Technical Committee.

Fire Management

~ In cooperation with federal agencies, the division provided fire protection for 150 million acres of private, municipal, and state land.

~ Following two record-setting years, the 1998 fire season had less than average fire activity. There were 413 wildfires statewide, which burned 119,899.8 acres.

~ Emergency firefighters collected more than $4 million in state and federal wages, mostly for fighting fires outside the state.

~ The division worked closely with the Spruce Bark Beetle Task Force in accessing and mitigating wildland fire risk in the urban interface areas of the Kenai Peninsula.

~ DOF administered 20 federal Rural Community Fire Protection Grants totaling $77,071.

~ DOF acquired 143 items for fire fighting, valued at $695,305, through the Federal Excess Personal Property Program.

FOREST RESOURCES & PRACTICES

The Division of Forestry administers the Forest Resources and Practices Act (FRPA) by reviewing notifications of timber harvests, conducting forest inspections, encouraging compliance, and taking enforcement action when necessary. An important aspect of the program is informing forest landowners, harvest operators, and the public about requirements of the act and responsible forest practices.

The forest practices notification and review process is not the typical permitting process in which a permit is required before an activity is begun. Rather, timber operators submit a harvesting plan (notification) to the Division of Forestry for review. The division then coordinates review of the notification with the departments of Environmental Conservation and Fish and Game. When the review is completed (within 30 days after notification) the operator may begin harvest operations. Timber operators generally submit notifications well in advance of beginning operations.

At times, areas for which notifications have been submitted are not harvested within the one-year notification period. These areas require a renewal notice the following year before operations begin.

FRPA Activity Overview

Notifications and Inspections

The number and acreage of new forest practices notifications decreased significantly in 1998 (see table on page 5). International timber markets were weak, which led to cutbacks in harvesting on private land throughout the state. As a result, the number of inspections also declined. The only category of increased activity was the number of trees reviewed in variation requests, which was 56 percent above last year's figures.

The division issued two notices of violation this year, the same number as in 1997. One violation was for introduction of woody debris to a creek in the Haines area; the other was for road conditions that contributed to mass wasting. Four directives were issued to operations in the Whipple Creek and White River areas. All were for rehabilitation of slope failures.

Effectiveness Monitoring

Effectiveness monitoring assesses whether the existing best management practices (BMPs) successfully protect fish habitat and water quality. DNR has participated in two cooperative effectiveness monitoring projects — the Forest Practices Effectiveness Study and the Michael Creek Study. These projects provide information on the long-term effects of timber harvest on water quality and fish habitat.

The Forest Practices Effectiveness Study has gathered data on channel characteristics and fish habitat before and after harvesting since 1992. Streams in 32 river basins in southeast and southcentral Alaska have been included in the study and more streams may be added. The study has been independently contracted to Martin Environmental, and funded primarily by Sealaska Corporation and the Alaska Forest Association. Through a cooperative agreement, DNR has provided partial funding for data analysis.

In 1998, Martin Environmental released a report on portions of the effectiveness monitoring entitled *The Effectiveness of Riparian Buffer Zones for Protection of Salmonid Habitat in Alaska Coastal Streams, D.J. Martin, M.E. Robinson, and R.A. Grotefendt, May 1, 1998.* Sealaska, Inc. circulated the report for review and convened a meeting to critique the report in December 1998. Participants included staff from the Division of Forestry, timber industry representatives, and fisheries biologists and hydrologists from ADF&G, DEC, USDA Forest Service, and the National Marine Fisheries Service. Comments from the review will be used to help design future data collection and analysis techniques for this continuing study.

The Michael Creek Study is a detailed effectiveness monitoring project on Admiralty Island. The division plans to have Martin Environmental finalize the report on the first four years of this study in 1999. The report will include data on stream water quality, channel characteristics, and riparian conditions. It will also incorporate a report on macroinvertebrates by the University of Alaska.

Forest Resources & Practices Act
Administrative Activities on Private Land

Region	Harvest Plan Notifications			Harvest Plan Renewals			Active Harvest Acreage			Number of Inspections			Number of Variations		
	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
Coastal Region															
Anch/Mat-Su	3	4	4	10	18	15	430	406	5,116	25	27	12	0	1	0
Haines	1	0	0	0	0	0	80	0	0	0	0	0	0	0	0
Juneau	44	34	29	13	11	11	11,710	8,392	4,641	42	12	51	7	8	3
Kenai/Kodiak	45	53	27	14	20	13	23,826	23,374	7,457	60	91	57	1	0	0
Ketchikan	102	89	58	29	21	20	18,799	17,642	11,650	48	30	5	6	3	0
McGrath	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Region Totals	**195**	**180**	**118**	**66**	**70**	**59**	**54,845**	**49,814**	**28,864**	**175**	**160**	**125**	**14**	**12**	**3**
Interior Region															
Copper River	9	3	2	5	0	0	15,355	1,460	2,546	13	4	0	0	0	0
Delta	3	0	0	0	2	0	1,276	0	0	5	2	0	0	0	0
Fairbanks	0	2	0	0	0	0	0	168	0	0	0	0	0	0	0
Tok	2	1	0	0	1	0	5,100	1,020	0	2	1	0	0	0	0
Interior Totals	**14**	**6**	**2**	**5**	**3**	**0**	**21,731**	**2,648**	**2,546**	**20**	**7**	**0**	**0**	**0**	**0**
State Totals	**209**	**186**	**120**	**71**	**73**	**59**	**76,576**	**52,462**	**31,410**	**195**	**167**	**125**	**14**	**12**	**3**

Region	Number of Trees Reviewed			Insects: Acres Reviewed			Regeneration: Acres Reviewed			FRPA Violation Admin. Actions			Road Miles Notifications	
	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998	1997	1998
Coastal Region														
Anch/Mat-Su	0	0	0	0	0	0	0	450	0	0	0	0	13	3
Haines	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Juneau	607	2,376	4,113	0	0	0	0	0	0	2	0	1	76	47
Kenai/Kodiak	0	69	0	10	0	0	5,500	0	0	1	0	0	195	50
Ketchikan	248	195	0	0	0	0	0	0	0	1	2	0	80	57
McGrath	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coastal Totals	**855**	**2,640**	**4,113**	**0**	**0**	**0**	**5,500**	**450**	**0**	**4**	**2**	**2**	**364**	**157**
Interior Region														
Copper River	0	0	0	9,776	0	0	0	0	0	1	0	0	7	5
Delta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairbanks	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Tok	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Interior Totals	**0**	**0**	**0**	**9,776**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**11**	**5**
State Totals	**855**	**2,640**	**4,113**	**9,776**	**0**	**0**	**5,500**	**450**	**0**	**4**	**2**	**2**	**375**	**162**

Implementation Monitoring

Implementation monitoring assesses whether the forest practices regulations (best management practices) are being applied appropriately in the field. In 1998, the division deferred BMP implementation field monitoring because of staff shortages. Although new notifications declined in 1998, the staff available for essential notification review and inspection activities was also down due to vacancies in the Ketchikan and Juneau area offices. Monitoring staff was reassigned to cover essential activities in these areas. Therefore, monitoring work in 1998 focused on compiling the 1997 field monitoring results. In 1999, the division plans to work with the state resource agencies and affected parties to revise and strengthen the implementation monitoring program.

Reforestation Exemptions

FRPA regulations provide for an exemption from reforestation standards when lands being logged have been significantly affected by fire, insect damage, or windthrow. Because salvage timber is often of low value, reforestation costs can make salvage harvest uneconomical. By allowing an exemption to reforestation requirements, the regulations help ensure that landowners can afford to salvage their timber.

Private salvage harvesting of timber killed by bark beetles continued throughout infested areas in 1998. One consequence was an increase in the number of requests for exemptions. In the Kenai area, requests in 1997 and 1998 totaled 30,480 acres. Of these requests, 28,486 acres were approved for exemptions based on the regulations, and 1,994 acres were denied. In the Copper River area, 2,486 acres were requested and approved. DNR reforests all salvage areas on state land.

Alaska Board of Forestry

The nine-member Board of Forestry advises the state on forest practices issues and provides a forum for discussion and resolution of forest management issues on state land. The board also reviews all proposed changes to the Alaska Forest Resources and Practices Act and its regulations. Board members are appointed by the governor for three-year terms, and represent a variety of forest-related interests. Board members are listed on page 45.

In 1998, the board held three hearings. Main topics included completion of the Science/Technical Committee Review of forest practices issues, consideration of forest practices issues in Regions II and III (southcentral and interior Alaska), and funding for forest practices implementation. The board also tracked the Department of Fish and Game's Sustainable Fisheries Initiative and asked that a board member be appointed to the public review panel for the initiative. In December 1998, board member Larry Hartig was appointed to the public panel.

Region II/III riparian standards: The board asked the resource agencies to address riparian management issues in Region II and III, beginning with an assessment of research needs. DOF convened interdisciplinary workshops to determine research priorities. The workshops prioritized research needs in interior and southcentral Alaska. Following the workshops, the board concurred with the agencies' recommendation to begin assessing the effectiveness of the FRPA in Region III. (See "Riparian Standards"on page 7.)

FRPA funding: The board worked with the resource agencies (DNR, DEC, ADF&G) to determine funding needs for adequate implementation of the Forest Resources and Practices Act. All three agencies need additional funding for field work, review of notifications, and monitoring. The board supported additional funding during the 1998 legislative session, although no increases were granted by the legislature. The board also reviewed and supported the joint agency proposals for use of federal Section 319 (Clean Water Act) funding to support FRPA implementation. The board agreed that the top priority for use of Section 319 funds for forest practices work in Alaska is adequate funding of agency implementation programs.

Forest certification Four Board members participated in workshops sponsored by the division on the topic of third-party certification of forest sustainability. The board continues to track developments in forest certification.

Science/Technical Committee

The Board of Forestry discussed the last remaining issue from the Science/Technical Committee process at its January 13-14 meeting. The board reached consensus on a resolution and compiled a package of recommendations to forward for legislative action. The package was introduced in the legislature as House Bill 373. The division is pleased to support this bill and believes it will further strengthen the Forest Resources and Practices Act's effectiveness. The bill incorporated the board's recommendations, which propose the following changes to the act.

Stream classification: The bill revises the stream classification system so that all anadromous streams and tributaries to anadromous streams are classified and have designated riparian areas. Currently as many as 20 percent of all anadromous waters and tributaries to anadromous waters are unclassified. Under the changes, all anadromous waters and their tributaries would be classified and have the appropriate protection measures for each stream class.

Riparian management: The bill establishes buffers on Type B anadromous streams, extends slope stability standards on Type A anadromous streams, and requires retention of low value timber where prudent within 25 feet along wide Type C and D streams. These changes will provide additional large woody debris to anadromous stream systems. Woody debris creates stream pools that are essential for fish habitat, provides cover, and reduces sedimentation.

The proposed changes to the FRPA strengthen riparian management in Alaska and help to ensure that the act satisfies requirements for non-point source pollution prevention under the federal Clean Water Act. The legislature did not reach final concurrence on the bill in 1998, although it passed both houses. The bill has been reintroduced to the legislature in 1999.

Riparian Standards

In 1997, the Board of Forestry asked agencies to address riparian management issues in Region II (southcentral) and Region III (interior), beginning with an assessment of research needs. The division convened workshops in Fairbanks and Anchorage to determine research priorities. Participants included staff from DNR, DEC, and ADF&G, and scientists and managers from the University of Alaska, USDA Forest Service, NRCS, and Tanana Chiefs Conference.

The workshops identified seven areas as the highest priority research needs in interior and southcentral Alaska:

- Regional water body classification system for Region III
- Baseline conditions in Regions II and III
- Identification of fish habitat
- River dynamics
- Winter access
- Buffer function in infested areas
- Monitoring

The agencies and other interests are seeking funding for these projects, with an emphasis on research in Region III.

In 1999, DOF plans to convene an interdisciplinary working group to develop a stream classification system for forest practices in Region III. If funding is available, the division will then map stream classes and develop recommendations for riparian issues that don't require additional research. At its October 1998 meeting the Board of Forestry concurred with this strategy. All recommendations will be presented to the board.

New Regulations

DNR adopted regulations this year implementing AS 38.05.123, Negotiated Timber Sales for Local Manufacture of Wood Products. The regulations became effective on June 21, 1998.

The proposed regulations:

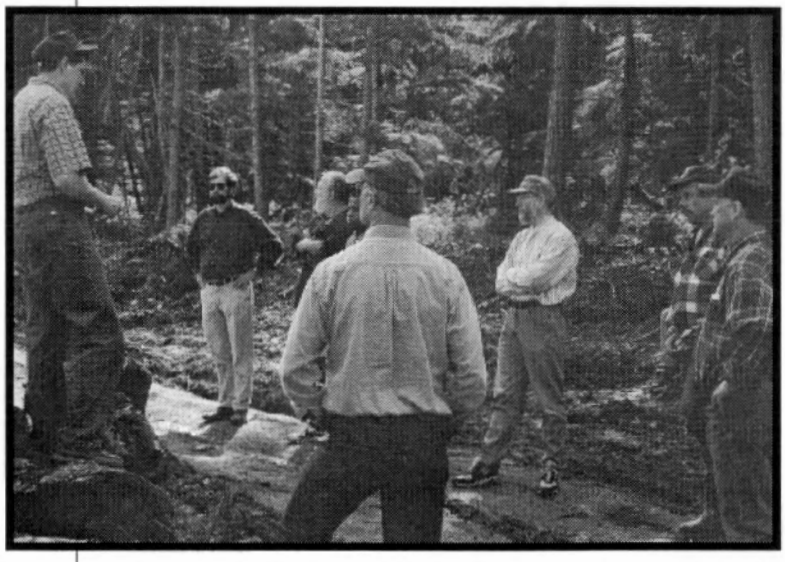
- Establish that two timber sales under this law may be offered annually in Region I and II, and three may be offered annually in Region III
- Add shakes and shingles to the definition of "high-value-added wood products"
- Update pricing procedures for state timber and materials
- Require that facilities for processing timber from value-added sales be operational before the timber is harvested

Research

DNR helped fund three forest practices research projects in Interior Alaska.

Tanana River Fish Study: The final report for this study was issued in March 1998: *Juvenile fish use of selected habitats in the Tanana River near Fairbanks*, by Alvin G. Ott, Jack F. Winters, and Alan H. Townsend, ADF&G Technical Report No. 97-1. This project sampled various types of water courses along the Tanana River near Fairbanks to determine fish use. While some studies have examined fish use of the main Tanana River channel, less is known about the importance of disconnected channels, sloughs, and other water bodies frequently crossed by snow and ice roads during winter. This study should help determine where special considerations are necessary in location and construction of winter roads along the Tanana and its adjacent associated water courses.

Riparian Buffer Study: The division entered into a cooperative study with Tanana Chiefs Conference, Inc. (TCC) to monitor buffer areas in the riparian zone. This long-term monitoring study will help provide information for buffer design for future harvesting. TCC has completed the initial study of tree mortality. The report on this data will be available early in 1999.



Kenai/Kodiak Area Forester Jim Peterson, left, talks to DOF, EPA, and DEC staff during a field trip to the Crown Timber Sale on the Kenai Peninsula. (Martha Welbourn)

Winter Roads in Permafrost Wetlands: The final report for this study was issued in December 1998: *The impact of winter logging roads on vegetation, ground cover, permafrost, and water movement on the Tanana River floodplain in interior Alaska*, by Robert A. Ott, Research Forester for TCC.

This was a cooperative study between DOF and TCC on winter road impacts. Access to much of the forest land in interior Alaska requires wetland crossings. The most cost-effective access uses winter roads on frozen soils, snow cover, and ice. This study analyzed winter road impacts on soils and vegetation at a study site near Nenana.

Section 319 Funding

In the fall, the Department of Environmental Conservation informed DOF that additional federal funds were available for forest practices through Section 319 (Clean Water Act) funding from the Environmental Protection Agency. Under DEC's partnership agreement with EPA, some of the Section 319 money can be used to support staff work that protects water quality.

DNR, DEC, and ADF&G worked closely together to set priorities for the new funds. The agencies agreed that the highest priority for fiscal years 1999 and 2000 was adequate field staffing for project reviews, field inspections, enforcement activities, and monitoring. This is consistent with the Board of Forestry's 1998 report on FRPA funding needs. In fiscal year '99, an additional $81,500 was provided to DOF for field staff. This funding is being used to support FRPA field staffing in southeast Alaska and FRPA field work in the Copper River area.

While the amount of money available from Section 319 funding is less than the total need identified in the board's 1998 report, it is one step toward adequate implementation of the FRPA.

New Forest Practices Staff

This year the division welcomed two new members to the forest practices staff. Mike Curran was named as Ketchikan Area Forester, a position which had been vacant for two years. Mike has worked for Klukwon and, most recently, had his own consulting firm, which had contracts with Sealaska Timber, Klukwon, the Mental Health Trust, and the Division of Forestry.

Joel Nudleman joined the division as a Forester II in the Coastal Region Office. Joel adds considerable computer expertise to the staff, a benefit to the monitoring, forest practices, and resource management programs.

RESOURCE MANAGEMENT

The Division of Forestry manages forests on approximately 20 million acres of state land. This land is managed for multiple use and sustained yield of renewable resources. It includes management of the Tanana Valley State Forest and Haines State Forest with a combined total of more than two million acres. The division conducts personal-use, commercial timber, and fuelwood sales. It emphasizes in-state use of wood for value-added processing.

In cooperation with federal agencies, the division surveys forested lands to assess the impacts of insects and disease, and prescribes preventative measures and treatments. Division staff provide technical assistance and administer federal grants to private landowners and local governments to help them establish and properly manage forested lands in both rural areas and urban communities.

Timber Development

Forest Products Market Overview

In 1998, timber markets for both softwood logs and softwood lumber were poor and there is little indication that they are going to improve soon. Almost all products traded at lower levels than 1997. The Japanese wood products industry is in a slump unlike any previously seen. Oversupply relative to demand dragged pulpwood sales downward.

Southeast: Timber demand in southeast Alaska varies dramatically year-to-year and is difficult to predict with precision. Factors that influence the demand for southeast timber include interest rates, housing demand, value of the dollar with respect to changes in import tariffs, local and foreign export policies, business cycles in the United States and overseas, installed mill capacity, regional and world timber markets, and timber availability and cost.

Closure of the Alaska Pulp Corporation and Ketchikan Pulp Corporation mills drastically reduced the demand for utility and low-grade sawlogs, which have historically been processed into pulp products. Higher-grade sawlog demand remains high despite the pulp mill shutdowns. Timber manufacturers in Southeast are in a state of transition to a strictly independent market. Various entrepreneurs are testing markets and trying new manufacturing techniques.

Western redcedar continued to be sought after and a good contract price was obtained for western hemlock for manufacture into railroad ties.

In order to maintain a stable timber sales program, the division must maintain a sale process to provide a continued flow of timber. The Juneau and Ketchikan areas have sold all timber sales that have been prepared recently, which is evidence that supply has not exceeded demand.

Interior: The export market continued to decline in 1998 with little or no material moving outside Alaska. This resulted in a decline in demand for sales, and no market for low-end material except the local fuelwood needs. There was a limited response to timber auctions and most sales that sold went for the minimum appraised price. Interest has continued in purchasing sales over the counter, although these sales have also moved more slowly than in prior years.

Kenai Peninsula: Most of the timber harvested on the Kenai Peninsula had been killed by the spruce beetle and log quality was low. Log prices plunged in 1996, rebounded somewhat in 1997, and remained steady through 1998. Harvest operations also remained steady in comparison to past years. An estimated 40 to 50 trucks a day are hauling logs or chips to the Homer Spit for export. However, the level of export may change in the near future. Gates Construction is nearing completion of a sawmill near Stariski that will process approximately 12 million board feet per shift annually. This mill should be on line in early 1999 and will supply kiln-dried dimensional lumber to the Alaskan market.

Timber Sold and Cut on State Land
1988 ~ 1998

Year	Annual Sales Volume	Annual Cut Volume	Cut Value
1988	27,475 MBF	25,177 MBF	$515,980
1989	21,600 MBF	22,711 MBF	$514,632
1990	35,783 MBF	18,603 MBF	$477,580
1991	10,156 MBF	16,241 MBF	$236,205
1992	10,044 MBF	26,543 MBF	$1,090,164*
1993	27,169 MBF	9,683 MBF	$342,581
1994	27,695 MBF	27,463 MBF	$783,997
1995	43,812 MBF	27,489 MBF	$2,140,411
1996	32,068 MBF	24,586 MBF	$1,268,656
1997	29,116 MBF	38,393 MBF	$887,380
1998	41,457 MBF	21,450 MBF	$522,070

* Includes a back payment of $413,665

Timber Sold and Cut on State Land by Region
Calendar Year 1998

Coastal Region	Sawtimber MBF	Other Products[1] MBF	Total MBF
Volume Sold	27,687	77	27,764
Volume Cut	12,999	1,961	14,960

Interior Region	Sawtimber MBF	Other Products[1] MBF	Total MBF
Volume Sold	10,258	4,014	14,272
Volume Cut	6,629	2,004	8,633

[1]Other products include fuel wood, house logs, etc.

Timber Measurements

MBF = thousand board feet **MMBF** = million board feet **CCF** = hundred cubic feet

Board foot is the unit used to measure lumber. One board foot equals one foot square by one inch thick. In log scale, one board foot is the amount of wood fiber that, if sawn, is estimated to produce one foot of lumber.

Cubic foot is the unit used to measure volume of wood, regardless of the intended end product.

Commercial and Personal Use Contracts Issued
Calendar Year 1998

	Commercial Use			Personal Use		
	Fuelwood Sales	Saw Log Sales	Beach Log Salvage	Fuelwood Permits	House Log Sales	Saw Log Sales
Coastal Region						
Anchorage/Mat-Su	0	2	0	30	8	6
Kenai/Kodiak	0	4	0	0	3	1
Haines	0	4	0	0	0	0
Juneau	0	5	8	0	0	0
Ketchikan	0	15	14	0	0	0
Southwest (McGrath)	0	0	0	0	0	4
Region Totals	**0**	**30**	**22**	**30**	**11**	**11**
Interior Region						
Delta	0	3	0	66	0	0
Fairbanks	6	11	0	277	2	1
Tok	0	0	0	47	0	0
Valdez/Copper River	0	3	0	14	1	0
Region Totals	**6**	**17**	**0**	**404**	**3**	**1**
Grand Totals	**6**	**48**	**22**	**434**	**14**	**12**

Average Stumpage Price by Species
Calendar Year 1998

	Redcedar	Birch	Hemlock	Sitka Spruce	White Spruce	Yellow-Cedar
MBF	$30.64	--	$8.36	$58.02	$11.51	$26.37
CCF	--	$5.56	--	--	$10.99	--

State Timber Sales

Interior

In response to AS 38.05.123, which authorizes longer-term negotiated timber sales for value-added processing, DOF is preparing a sale near Tok that will offer approximately six million board feet of timber. In 1997, staff from the Tok Area Office and the Interior Region Office used aerial photos and high altitude imagery to locate the stands. They also established unit boundaries and cruised the areas to determine volume. The division coordinated field analyses with local ADF&G staff to select units that provided the required timber while optimizing habitat for wildlife, such as moose.

In January, DOF began work on the Forest Land Use Plan, incorporating information gleaned from the pre-cruise and evaluation inspections, timber cruise, agency contacts, public input, and staff knowledge of the area. The division spent additional time with local forest users, ADF&G personnel, and other agencies with expertise and interest in the project.

The division finalized the GIS work, including detailed maps of the stands, access, land ownership patterns in adjacent areas, and wildlife considerations. Staff also prepared an extensive title report and a 60-page draft Forest Land Use Plan and sent it out for agency and public review. The deadline for public comments was in December.

Some field work remains, including painting of sale boundaries and marking access routes. To comply with volume limitations in the Tanana Valley State Forest Management Plan, the ongoing review of the plan (or an amendment) must be completed. The proposed volume exceeds the allowable sale quantity currently listed. The management plan review is expected to be completed in the fall of 1999. Finally, the division will develop and publicize a formal request for proposals, review proposals, and negotiate and finalize a sale contract.

Surprise Side Timber Sale: The proposed Surprise Side Timber Sale, near the Tenderfoot area, drew extensive public comment this year for numerous reasons. The initial Forest Land Use Plan was not complete, having omitted consideration of fish use in the area. Local residents were concerned about commercial logging operations using subdivision roads. Permanent and seasonal users of the area were concerned about increased access and the impact to fish and wildlife habitat. The sale was listed as a salvage of windthrown timber but some of the units did not appear to the public to be severely impacted, which raised a trust issue about the reasons for the sale.

This sale was placed on hold at the end of 1998. Several issues have been addressed. However, some members of the public and ADF&G remain concerned that the sale could adversely affect fish habitat, particularly chum salmon spawning grounds. The Division of Forestry, at the suggestion of a UAF fisheries biologist, will work with an interdisciplinary group to synthesize existing research, and determine if sufficient scientific information is known for a professional decision on possible effects. If not, this project will identify what further data gathering and experimentation is essential.

This sale and others along the same stretch of the Tanana River depend on the results of this effort. Surprise Side and the other sales remain on the Five-Year Schedule of Timber Sales, but will not go forward until agreement is reached that protection of fish habitat can be achieved.

Southeast

Foresters in the Haines, Juneau, and Ketchikan offices worked together on timber sales near Haines, Petersburg, Wrangell, Ketchikan, and Prince of Wales Island in 1998. They prepared and sold 24 sales ranging in size from 12,000 to 4.4 million board feet with a total of 9,847,000 board feet.

One small sale on the Petersburg road system offered to a local operator required value-added processing. The sale harvested standing green trees in two small units of three and six acres.

Most of the timber sale preparation took place on Wrangell Island. Sales on Wrangell took more time to prepare because they required engineering nearly two and one-half miles of road. The four sales offered required value-added processing of the spruce and hemlock. Jim McAllister, Jim Eleazer, Chris Foley, John Winters, Joel Nudelman, Roy Josephson, Greg Palmieri, and Mike Curran participated in the Wrangell layout. DOF will continue to lay out sales on Wrangell Island and all future sales will require new roads.

The Wrangell timber sales enabled the Age Cedar Products sawmill to remain open until it was destroyed by fire. The sawmill was rebuilt and production resumed.

Two sales offered south of Ketchikan and adjacent to the Tongass Highway required value-added processing. These sales totaled 14 acres and 272,000 board feet.

Seley Family Partnership was awarded a 4.4-million-board-foot timber sale at Kitkun Bay on Prince of Wales Island. The sale required processing the timber into high value-added and value-added products at the company's new sawmill on Gravina Island, north of the Ketchikan Airport. This was the first authorized timber sale under provision of SB-180 (AS38.05.123). The sale area included 159 acres of standing timber and required 0.9 miles of new road construction.

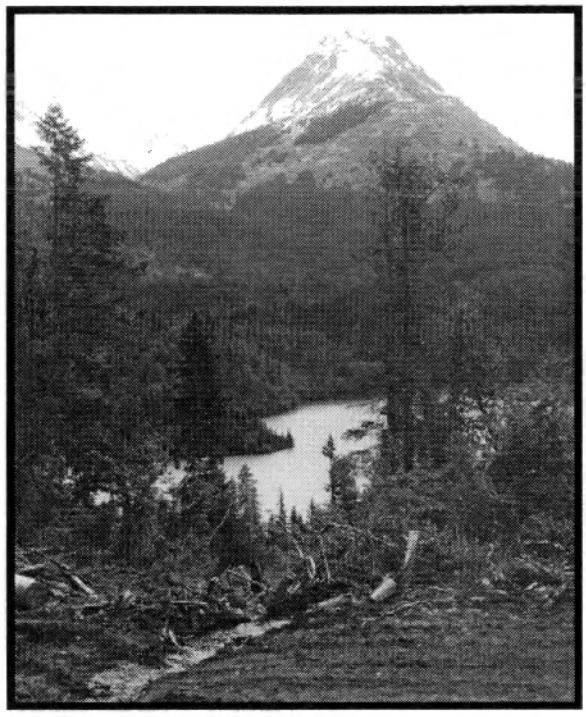
Thirteen small sales were offered on Prince of Wales Island, ranging in size from one to nine acres. All sales required manufacture in existing small sawmills.

Timber harvest operations in the Haines State Forest continue to focus on salvaging beetle-killed spruce trees. The number of small sawmill operations in the Haines Area continued at about the same level as in 1997. Operators harvested 179,000 board feet to produce primarily rough cut lumber for local sale. One operator sold locally constructed log homes in Haines and Juneau and another sold processed firewood in Juneau, Skagway, and Haines.

Rayonier completed harvest of the Klehini Beetle Salvage Sale between Porcupine and Glacier creeks, removing 1.7 million board feet of spruce killed by beetles. Rayonier replaced the Bear Creek and Porcupine Creek log stringer bridges with prefabricated steel I-beam bridges as part of their timber sale contract requirements. These new bridges will provide continued access for the public and for future timber sales. These sales are scheduled for replanting with Sitka spruce seedlings in the spring of 1999. Two additional sales, totaling 505,000 board feet, remain available for purchase over the counter.

Kenai Peninsula

The Kenai-Kodiak Area Office sold four timber sales for approximately 17.4 million board feet in 1998. All four sales focused on the salvage of beetle-killed trees and reforestation of the harvested sites. The sales sold were End of the Road and Small Lake II located near Clam Gulch, the Caribou Hills Timber Sale located east of Ninilchik, and the Clam Sale located south of Ninilchik. The Island Timber Sale, also located near Clam Gulch, with a volume of 71,000 board feet did not sell.



Madson Timber Sale, located near Moose Pass on the Kenai Peninsula. Harveted units have been scarified and planted with spruce seedlings. (Martha Welbourn)

The end product value of these sales is estimated at $6,695,850. The total contribution to the region's economy from the sale of logs, chips, and other products is estimated at between $7.2 and $7.9 million. In addition, the sale purchasers are responsible for reforestation at an estimated value of $572,000.

Timber harvest operations on the Kenai Peninsula were quite active in 1998. The Crown Timber Sale in Moose Pass, and the End of the Road Sale were completed, removing a total of 1,027,000 board feet. The Tower Timber Sale located near Moose Pass, the Small Lake II, and Falls Creek timber sales near Clam Gulch, and the Caribou Hills Timber Sale were substantially harvested in 1998.

Harvested units on the Crown, End of the Road, Tower, Madson (located near Moose Pass), Small Lake II, and Falls Creek sales were scarified and planted with spruce seedlings. Units harvested on the Caribou Hills Sale will be planted in the summer of 1999. On the Falls Creek sale, an experimental effort is underway to test survival of seedlings planted before the harvest. Once the snow depths are sufficient to protect the planted seedlings, early in 1999, timber harvest operations will begin on the planted units.

Valdez/Copper River

There were two state timber sales in the Valdez/Copper River Area. Both were purchased over the counter by Compass Timber Products Corporation in February. The sales are located in the Tazlina River drainage and include over six million board feet, half of which is sawlog timber. The two sales will add more than $100,000 to the state's general fund.

Compass Timber plans to use the state timber as pulp and will export the wood in the round or as chips to a brown paper mill in Port Townsend, Washington. Compass hopes to export as much as 250,000 tons per year to the mill, and is purchasing timber from the Ahtna and Chitina Native corporations as well as from the state.

Compass Timber has yet to harvest any of the timber purchased as the company president is arranging financing, logistics, and an operational plan. Once operations commence, Compass plans to hire local loggers that were laid off by Copper River Forest Products when pulp markets became depressed. Many of the timber stands throughout the Copper Basin are beetle infested so the proposed timber operations could provide landowners an opportunity to salvage beetle-killed spruce.

Log Brands

In 1998, the Division of Forestry registered 98 log brands. Of these 22 were new and 76 were renewals. This was a significant increase over 1997 when 27 new log brands were issued and 35 were renewed for a total of 62.

Reforestation on State Land - 1998

Areas	Seedlings Planted	Acres Planted	Acres Scarified
Delta	20,000	90	50
Fairbanks	96,000	155	0
Kenai/Kodiak	402,270	2,300	2,151
Haines	37,000	118	0
Mat-Su	12,000	90	120
Tok	0	0	0
Total	**577,270**	**2,783**	**2,321**

Beach Log Salvage

The beach log salvage program in southeast Alaska allows operators to recover valuable forest products from the coastal waters and beaches of the state.

The activity level dropped to more traditional levels in 1998, reflecting changes in the timber market and the lower volume of logs being towed. During the year, DOF issued or renewed 22 beach log salvage licenses. The division streamlined the renewal system to provide up to four years on a license with annual renewals and fee payments.

At the end of the year, 30 of the 59 identified salvage areas in southeast Alaska were under license. This is more than 50 percent of the areas identified by DNR as suitable for salvage activity. Nearly 100 percent of identified areas were licensed a few years ago when a strong market for logs created a greater demand. Multiple applications were then received for open areas. However, DOF still receives inquiries about the beach log salvage program on a regular basis.

Reforestation

Regeneration of harvested or naturally disturbed areas is an essential component of the state forest management program. In order to achieve a sustained yield of wood fiber from forest lands, the division collects cones for seed processing and grows seedlings to plant in harvested areas and for other regeneration projects. DOF cooperates with other agencies to conduct research for better success in seedling survival.

Reforestation activities are funded by the annual operating budget, the reforestation fund, capital improvement projects and, most recently, the Kenai Peninsula Spruce Bark Beetle Task Force for seed collections on the peninsula. The division combined these funds to collect 600 bushels of spruce cones this year. The cones were processed by the Plant Materials Center in Palmer and stored at its germ plasm facility. Seed lots are being tested for germination and cataloged for future reforestation.

This year, 577,270 seedlings were grown from the division's seed depository and planted on 2,783 acres statewide, including an area adjacent to Fairbanks where a controlled burn was done in 1997. DOF scarified 2,321 acres in preparation for planting. The division also surveyed regeneration rates on 830 acres where seedlings were planted in past years or where natural regeneration had occurred.

Cooperative Habitat Enhancement

Outstanding Year For Ruffed Grouse Habitat Improvement

The Division of Forestry, Department of Fish and Game, and the Ruffed Grouse Society have continued to improve habitat in the Nenana Ridge Ruffed Grouse Project Area. The 6,000-acre project area is located in the Tanana Valley State Forest, south of the Parks Highway, between Fairbanks and Nenana. This project provides a unique opportunity for long-term cooperative management by the state's foresters, wildlife biologists, and the Ruffed Grouse Society.

Because of active fire suppression over the last 40 years, there are few young, vigorously growing aspen and birch stands, which are important sources of food and cover for wildlife. Timber harvesting is being used to create this type of habitat. In addition to ruffed grouse, the project also benefits snowshoe hares, lynx, moose, goshawks, great horned owls, and several species of migratory songbirds that use early to mid-successional habitats.

The Department of Fish and Game allocated $18,124, appropriated by the Alaska Legislature for improving wildlife habitat, to the project. The Ruffed Grouse Society also donated money that it raised at its annual banquet in Fairbanks. DOF used the funds to contract with T & J Landclearing to cut 80 acres of aspen on Nenana Ridge in September.

Over the 40-year cycle of the project, 800 acres will be harvested to create habitat for 100 breeding pairs, which will produce 20,800 ruffed grouse and improve conditions for many hunters. The goal for the entire first decade has been met in just four years. More than 250 acres of mature aspen have been felled in 22 cutting units, ranging in size from six to 20 acres and five miles of forest roads have been constructed. DOF and ADF&G completed several small prescribed burns, averaging seven acres each, in the spring to test the feasibility of burning as another management tool.

A new ruffed grouse project located north of Fairbanks off the Chena Hot Springs road was begun this year. The division used $10,416 allocated by ADF&G to contract with Nip & Tuck Logging to cut 42 acres of aspen in September.

DOF, ADF&G, and the Ruffed Grouse Society dedicated the Nenana Ridge Ruffed Grouse Project on October 9 by unveiling a new sign and giving a tour of the project. Senator Bert Sharp, a sponsor of legislation that provided funding, helped celebrate the dedication. The 10-year goal of clearing 200 acres to improve wildlife habitat was met in just four years. (Cathy Harms)

Fairbanks Willow Planting

The Division of Forestry and the Department of Fish and Game planted felt leaf willow on eight acres of a Standard Creek timber sale in 1998. ADF&G staff cut the willow in March and stored it under a mound of snow and sawdust until June when they moved the seedlings to a cold storage facility at the Fairbanks Area Office. In July, DOF staff removed the willow cuttings from cold storage, cut them to one-foot lengths, soaked them in rooting hormone, and took them to the planting site. The Fairbanks Area contracted with Earth Reclaimers to plant the cuttings on an eight-foot by eight-foot spacing interspersed with white spruce seedlings.

This is the third year the division has planted willow cuttings in harvested units. Willows planted in 1997 have shown 90 percent survival and growth of two to three feet. The winter survival increased to about 70 percent, compared to the 40 percent survival from the planting the year before. Several changes such as planting the cuttings deeper in mineral soil, using smaller more vigorous cuttings, and a pre-plant soak in growth hormone improved survival and growth for the 1997 and 1998 plantings. Moose and, in turn, hunters will benefit greatly by adding willow to harvested areas.

East Fork Prescribed Fire

On July 21, Division of Forestry fire managers and Department of Fish and Game biologists conducted the largest prescribed burn ever accomplished in Alaska. On that one day, they burned 52,000 acres within a boundary of 390,000 acres 45 miles northeast of Tok. The fire met all the objectives set out in the burn plan.

The controlled burn was requested and funded by ADF&G to improve habitat for moose and other wildlife. Before the burn, the area was covered with black spruce and older willow that was of little use to wildlife. New plant growth will provide abundant moose forage for many years to come.

Nearly perfect burning conditions allowed the fire to burn with varying intensities and speed, producing a textbook mosaic. Of particular note was that fire managers were able to burn at several elevations, including alpine areas. The prescription was designed to carry fire into higher elevations where a lack of woody vegetation made burning conditions difficult.

Once weather conditions were found to be within burn plan parameters, a helicopter began the firing process, using a device owned and operated by the U.S. Fish and Wildlife Service. The National Weather Service and the Alaska Department of Public Safety also participated.

Area Forester Dick Malchow reported that while some smoke drifted into Fairbanks on July 22, air quality was never worse than moderate and no air quality alert was issued. The pattern of firing created a strong convection column that drew fire in the intended direction and transported smoke high into the atmosphere. The weather cooperated to such a degree that at one point the column rose to 20,000 feet.

Forestry Partnerships

Spruce Beetle Task Force

Spruce beetles have spread across Alaska at unprecedented levels during the last decade. An estimated 2.3 million acres have been impacted over the last seven years. Concerns over the impact on forests, public safety, and the ecosystem prompted the U.S. Senate Appropriation Committee to appropriate $500,000 to the USDA Forest Service. The Forest Service was directed to establish a multi-party task force to develop an action plan to manage spruce beetle infestations in Alaska and to rehabilitate infested areas.

The Kenai Peninsula Borough was designated the lead agency and Borough Mayor Mike Navarre was named the task force chair. The task force was comprised of eleven representatives from the private sector, and six agency representatives who served as advisory panelists. All meetings were open to the public and three hearings were held to solicit public input. The task force met for a total of ten days between March 11 and May 8 and developed 50 policy recommendations, which it prioritized into an action plan.

The task force identified eight major policy areas: forest management, public education, fire protection, risk/hazard assessments, public assistance, science and research, long-term planning, and continuity of efforts. Specific actions were recommended under each policy area and an agency was designated responsibility for implementation of each area.

Based in part on a report prepared by DOF detailing the increase in fire hazard associated with beetle-killed trees, fire protection and risk/hazard assessments were given high priority. The division plays an important role in implementing these recommendations.

The USDA Forest Service gave DOF a $100,000 grant to quickly begin actions identified by the task force. By January 1999, the division had accomplished the following:

- Conducted six defensible space workshops in 1998 to help homeowners protect their homes from wildfire.
- Begun development of a community action kit to help communities become *firewise.*
- Worked with local fire departments to increase use of the federal excess property program for wildland fire engines and other supplies.

- Prepared the McNeil Canyon Elementary School, located on East End Road in Homer, to serve as a safe zone in case of a wildfire evacuation. This project is about two-thirds completed with the remainder of the work to be done in May 1999.
- Sponsored additional fire training courses for local fire departments.
- Provided additional training to enhance the prescribed fire qualifications of the area fire management officer.
- Provided caches of loaned fire equipment to local fire departments and helped them purchase fire protection equipment and supplies through state and federal contracts.

In response to recommendations by the task force, the U.S. Forest Service provided $25,000 to DOF for spruce cone collection. The rapid loss of seed producing spruce in some areas of southcentral Alaska heightened the need for substantial seed reserves. Fortunately, the spruce cone crop in 1998 was excellent throughout much of Alaska.

Cone collection contracts were awarded through competitive bid to Charton Contracting of Kenai and the Kachemak Heritage Land Trust of Homer. Collections were made over a three-week period in spruce beetle impacted forests of the Copper Valley, Matanuska Valley, and Kenai Peninsula. A total of 470 bushels of cones were collected, dried, and processed for clean seed. This seed is now in cold storage and available for reforestation projects in the collection areas.

The ecosystem changes and fire hazards created by the beetle-killed timber will require development of a long-term action plan, particularly in the urban/wildland interface. Actions recommended by the task force are moving landowners, homeowners, and fire management agencies towards addressing these issues. The division will continue action on the recommendations in the spring of 1999.

Volunteers for Kachemak Heritage Land Trust help pick spruce cones. The division collected 470 bushels of cones on the Kenai Peninsula, which were processed and stored for future reforestation in the collection areas. (Ole Andersson)

Senator Murkowski Visits the Kenai Peninsula

On August 21, the U.S. Senate Committee on Energy and Natural Resources held a field hearing regarding the spruce beetle epidemic on the Kenai Peninsula. Senator Frank Murkowski, the committee chairman, chaired the hearing and heard testimony from witnesses about the forest health problem. State Forester Jeff Jahnke testified about actions taken by the division to address forest health concerns.

The division hosted an afternoon field trip to show participants and Senator Murkowski how the forests are changing due to the beetle infestation and some of the actions the state is taking to treat infested stands and reforest impacted areas. Participants visited untreated infested stands, sites that had been harvested and reforested, and a state timber sale that was being harvested by Circle DE Pacific Corporation. A representative from Circle DE Pacific discussed how his operations were successfully using the beetle-killed trees to make chips for paper products.

Student Intern Program

The Division of Forestry Intern Program gives students from the Anchorage School District King Career Center on-the-job training in natural resource management. The division and school district have successfully administered this summer program for over 10 years and 200 students have participated. Over the years the intern crew has been supervised by Bill Beebe, Jim Eleazer, Frenchie Malotte, and Steve Strube, the current supervisor.

In 1998, ten students served as interns for a nine-week period in the Mat-Su/Anchorage Area. The students were given hands-on training in timber cruising, reforestation, road surveying, and stand examination.

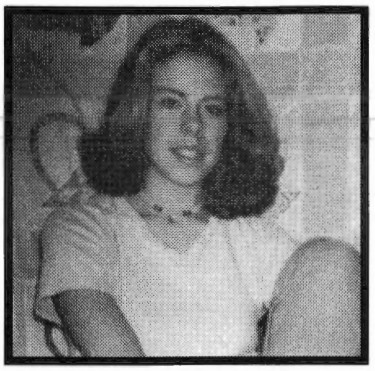
The students completed the following projects:

- Measured trees and recorded data for a timber cruise on two commercial timber sales and surveyed three miles of forest road
- Planted 8,000 white spruce seedlings on a cut-over timber sale within the Deception Creek Planning Area
- Lifted 600 seedlings from the Division of Agriculture Plant Material Center in Palmer for the Urban and Community Forestry Program.
- Performed a stand exam in a park near Palmer to help the Matanuska-Susitna Parks Department determine the condition of the trees.

The division provided resource management training for the interns on:

- Forest insects and diseases
- Silviculture
- The Stewardship and Urban and Community Forestry programs
- Bear awareness and safety
- Proper tree planting methods and use of forest measurement equipment
- Reforestation methods and requirements
- the Forest Resources and Practices Act

It is noteworthy that under the leadership of Debbie Bronesky, there were no injuries from accidents. This excellent safety record can be attributed to weekly safety meetings and a physical training program that Debbie maintained.



Krista was a dear, sweet member of the 1998 Forestry Student Intern Program. She was the knot that tied the eleven of us together. Krista was an inspiration to our daily "have fun while working" motto. We are proud to have shared life with her and carry her in our hearts. We have dedicated the seedling forest we planted together in Houston to her. A wooden sign, made by her fellow students, has been erected in her honor.

~ Student Interns

In Memory of Krista Jean Buckland

Student intern Krista Buckland died on Sunday, July 19 in an ATV accident. Krista graduated from high school in May and would have begun college in the fall. The accident did not take place during the interns' work week, but they each felt the loss, as the group had developed a close working relationship.

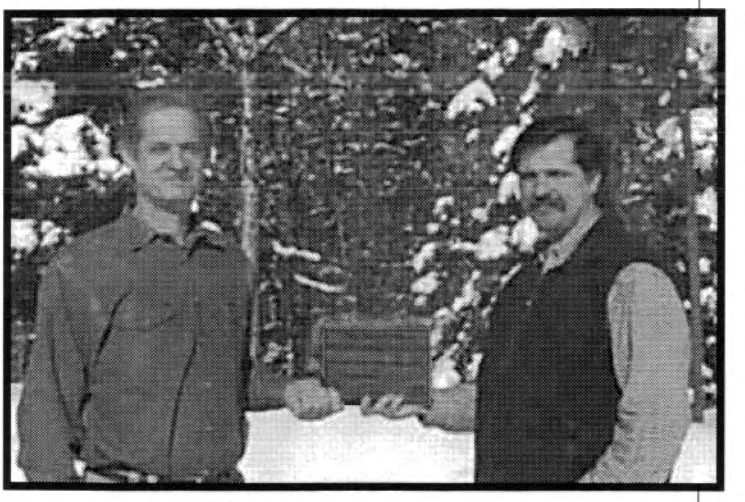
Student interns received hands-on training and completed important projects for DOF. (Steve Strube)

Intern Program Receives STAR Award

The Division of Forestry and the King Career Center received the STAR award for their school/business partnership in 1998. The award was presented by the Anchorage Chamber of Commerce, the Board of Education, and the Anchorage School District.

This is the third year that this award for school/business partnerships has been given. Forestry joined past recipients, the Alaska Railroad and the National Bank of Alaska, in accepting this honor. Three hundred fifty businesses participate in the program. The award was presented at a luncheon attended by over 200 people and was coordinated by the Anchorage Convention & Visitor's Bureau.

Deputy Director Dean Brown accepted the award along with Mike Woods, the teacher at the King Career Center. Mike, who works in Forestry's Logistics Office during the summer, was also named as a British Petroleum teacher of the year, for the outstanding job he has done in developing and leading the natural resource management class at the career center.



Steve Strube (left), DOF Mat-Su Area Office; and Mike Wood, King Career Center teacher, share the STAR award for school/business partnerships. (Dennis Ricker)

Heritage Forest

Heritage Forest is a 2,640-acre parcel of land that the Fairbanks North Star Borough leases from the Bureau of Land Management. The forest, located just east of Fairbanks, is bisected by the Chena River. It is intended for school district and public use for educational and recreational purposes.

Land managers use the forest to increase public awareness and understanding of sound renewable resource management techniques, challenges, and benefits. The management goals are to:

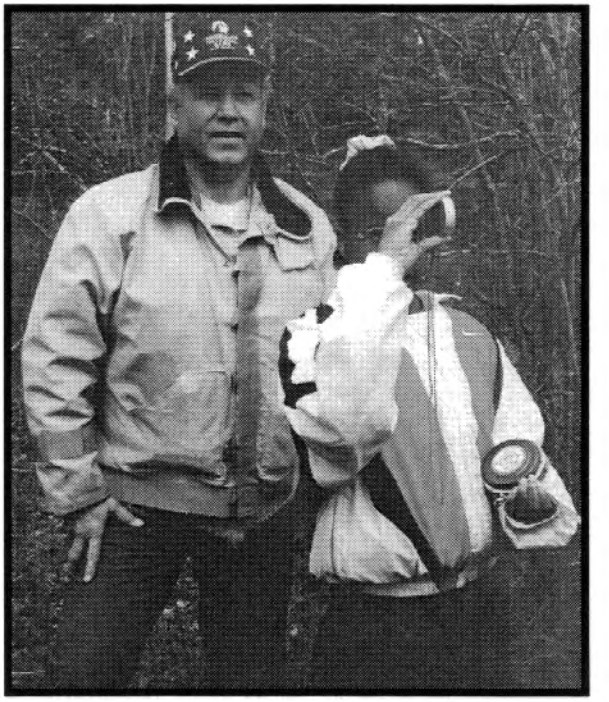
1. Demonstrate resource management techniques related to forestry, recreation, wildfire, agriculture, wetlands, water, and fisheries.

2. Inform the public about renewable resource management.

3. Provide opportunities for recreation, such as skiing, hiking, camping, dog mushing, snowmobiling, canoeing, and hunting.

Division of Forestry staff in Fairbanks have been instrumental in developing the management plan and demonstration projects in the forest.

In 1998, BLM and the Fairbanks North Star Borough signed an updated development plan for the forest. A new website includes the management plan, maps, and current information about activities. The address is www.co.fairbanks.ak.us. The Heritage Forest information is listed under Land Management.



Richard Tefoya, Forest Technician III with the Delta Area Office, helps a student use logger's tape and a clinometer to measure the height of a tree during the Delta/Fort Greely Outdoor Classroom. (Gary Cooper)

Haines State Forest

The Haines State Forest Resource Management Area was designated by the Alaska State Legislature in 1982. The forest was established for *the use, perpetuation, conservation, and protection of the land and water, including the use of renewable and nonrenewable resources through multiple-use management.*

The state forest contains 270,410 acres including the watersheds of several major rivers. The Chilkoot and Ferebee rivers and portions of several major tributaries to the Chilkat River lie within the forest. Most of the rivers begin in a region of glaciers and ice fields along the Alaska/Canada boundary northwest of Haines. The rivers flow through broad floodplains composed of deep deposits of sand, silt, and gravel alluvium.

The rugged topography ranges from sea level to over 7,000 feet. Located in a transition zone between the moderate and wet coastal climate and the dry, cold interior, the forest provides suitable conditions for a diversity of vegetation. 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.

Timber has been harvested in the forest since the 1960s when two large sawmills were in operation. Several small mobile dimension mills still operate on wood purchased from the forest. Much of the wood now harvested is shipped or barged to mills outside the Haines area. About 18 percent of the state forest (49,231 acres) is dedicated to timber harvest with an annual allowable harvest of 6.96 million board feet. Although natural regeneration occurs readily, all large commercial sales have been replanted since the 1970s.

Prospecting and mining have occurred in this mineral-rich area since the turn of the century and continue today. Backcountry logging roads, rivers, and hiking trails provide access to remote areas and abundant recreational opportunities. Hunting, fishing, berry-picking, sight-seeing, camping, hiking, snowmobiling, and skiing are popular activities. Several commercial operators provide tours in the forest.

Both photographers and hunters pursue the forest's moose, black and brown bears, and mountain goats. Wolves, marten, lynx, wolverine, porcupine, beaver, river otter, and many small mammals are also found in the forest. Trumpeter swans, geese, ducks, and a variety of song birds are present. The American bald eagle is abundant, especially in the 49,000-acre Chilkat Bald Eagle Preserve, surrounded by the state forest.

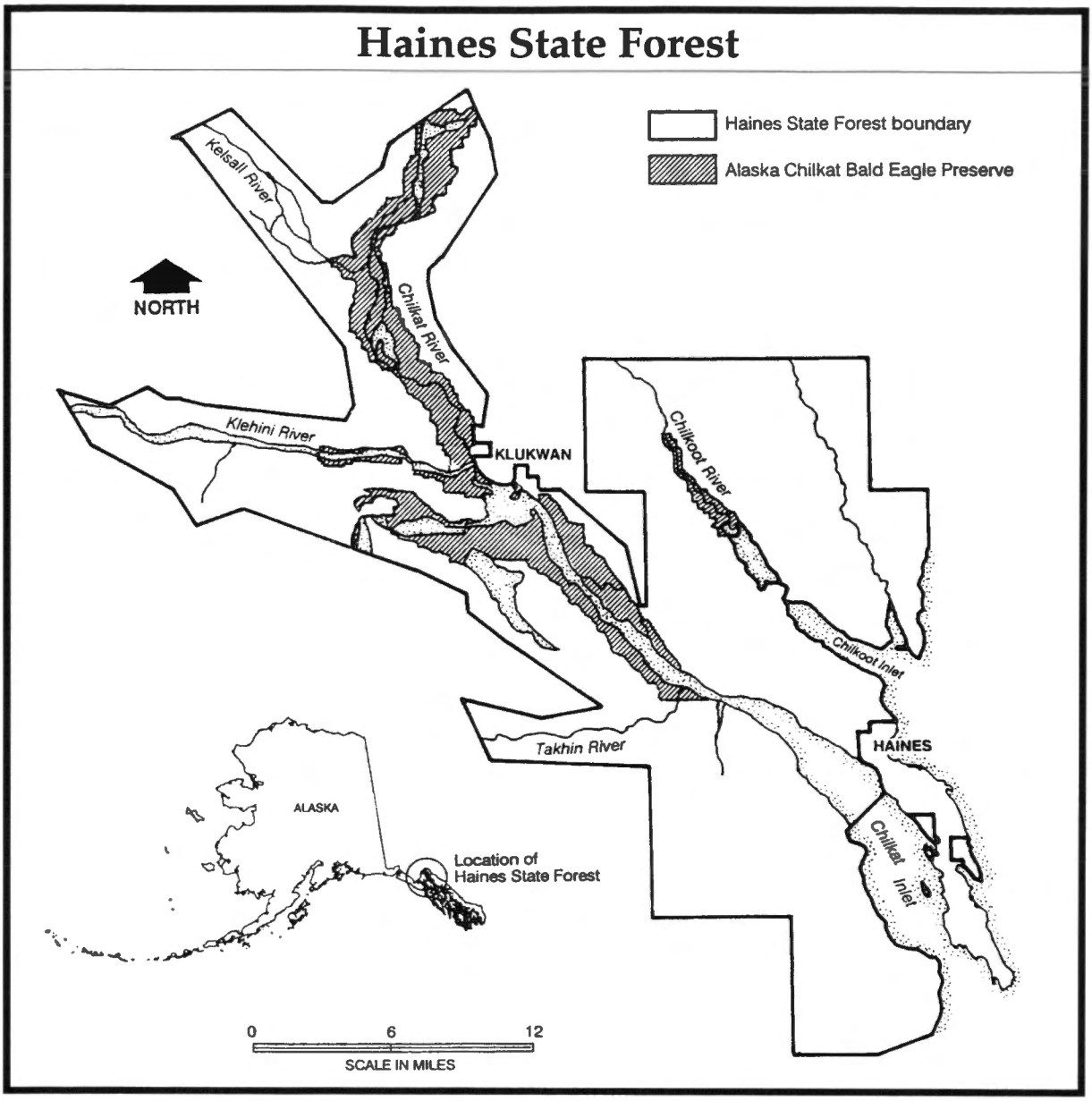
The Division of Forestry has had an office in Haines since 1961. The division has brought in over $2 million in stumpage receipts during the past ten years and provided jobs for many Alaskans.

Timber Stand Improvement

Haines has an active timber stand improvement program and has pre-commercially thinned 1,150 acres of second growth timber stands since 1993. This thinning has occurred in the Kelsall area of the state forest in areas that were originally harvested in the late 1960s and early 1970s.

Unmanaged second growth stands naturally go through a thinning process but growth is slowed and the trees are smaller. Pre-commercial thinning of second growth timber stands at an early age greatly increases the size and value of the trees in a shorter period of time.

For inventory purposes DOF uses a rotation age of 120 years but by thinning stands, the division can begin to harvest trees at 50 to 60 years. Thinning has side benefits of providing employment for local contractors and improving habitat for moose for several years following thinning by increasing browse production.



The Haines State Forest contains 270,410 acres of rugged topography. The forest is composed mostly of two forest types—western hemlock/Sitka spruce, and black cottonwood/willow. About 18 percent of the state forest (49,231 acres) is dedicated to timber harvest with an allowable harvest of 6.96 million board feet per year.

Tanana Valley State Forest

The primary purpose of the Tanana Valley State Forest is *multiple use management that provides for the production, utilization, and replenishment of timber resources while perpetuating personal, commercial, and other beneficial uses of resources.* The forest is managed on the sustained yield principle to guarantee that it will provide timber and other renewable resources to meet current needs and those of future generations.

The forest consists of 1.81 million acres and lies almost entirely within the Tanana River Basin, located in the east-central part of Alaska. The forest extends 265 miles, from near the Canadian border to Manley Hot Springs. It varies in elevation from 275 feet along the Tanana River below the Kantishna River confluence, to over 5,000 feet in the Alaska Range south of Tok. The Tanana River flows for 200 miles through the forest.

Almost 90 percent of the state forest (1.59 million acres) is forested. The principal tree species are paper birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack. About half of the Tanana Basin's productive forest land (1.1 million acres) is located in the state forest.

The state forest is relatively productive and accessible compared to other state lands in the Tanana Valley. About 85 percent of the forest is within 20 miles of a state highway. Adjacent to the forest are 18 communities with a total of 70,000 residents.

The forest is open to mining, gravel extraction, oil and gas leasing, and grazing, although very little is done. Timber production is the major commercial activity in the forest. The Bonanza Creek Experimental Forest, a 12,400-acre area dedicated to forestry research, is located within the state forest.

The Tanana Valley State Forest offers many recreational opportunities including hunting, fishing, trapping, camping, hiking, dog mushing, cross-country skiing, wildlife viewing, snowmobiling, gold panning, boating, and berry-picking.

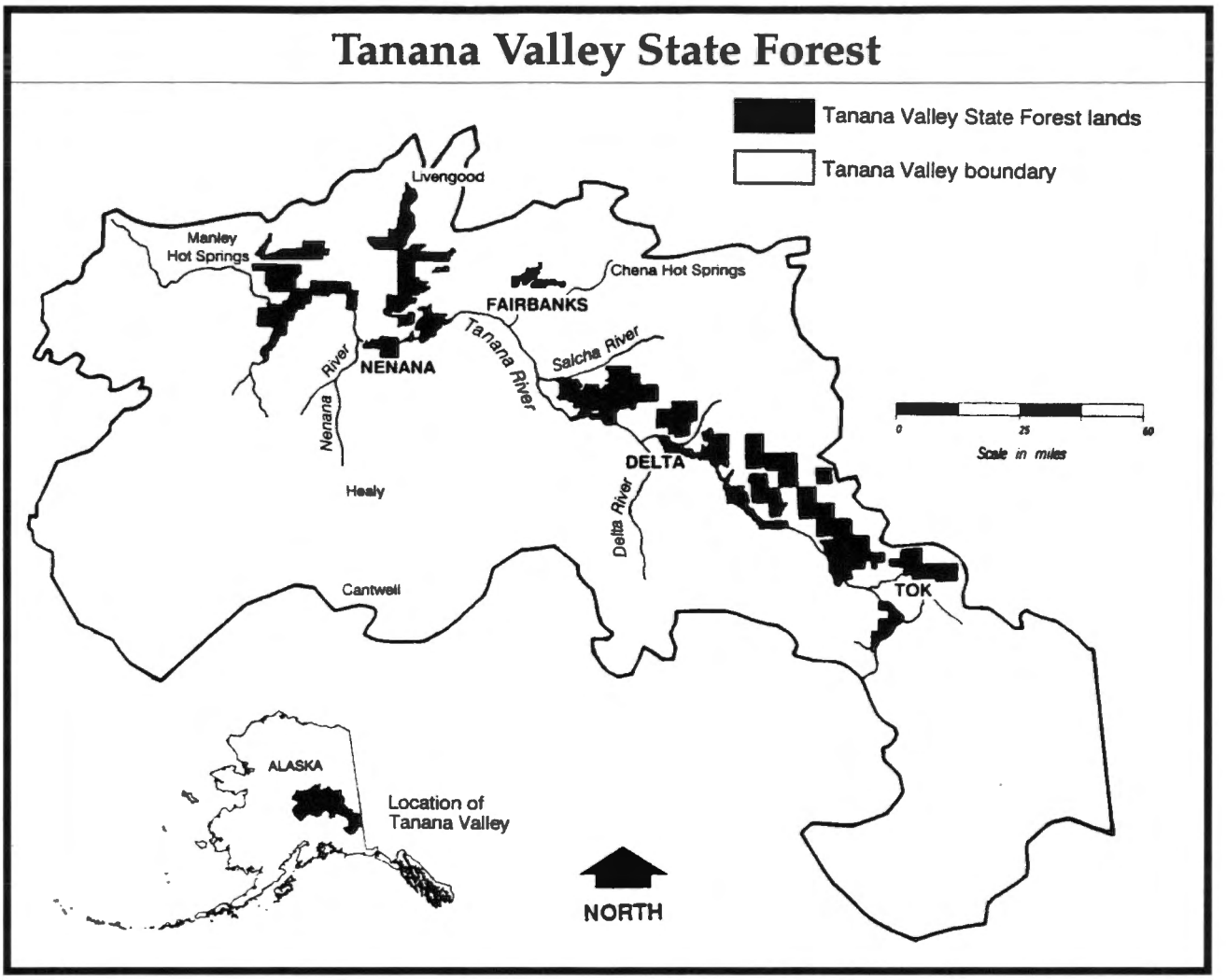
A 12-member citizen's advisory committee, representing a variety of state forest users, reviews and comments on proposed plans for development in the state forest and other forested state lands in the Tanana Basin. The committee is an active and important participant in forest planning in the Tanana Basin. Current committee members are listed on page 45.

Management Plan Review

The Tanana Valley State Forest management plan, which is mandated by the legislature, is nearing completion. Five working groups formed to address topics related to the plan completed their work in 1997. The TVSF Citizens' Advisory Committee reviewed the groups' recommendations on 50 issue questions in 1998. The planning team will now consider the various recommendations and begin redrafting portions of the plan. A draft for public review is expected in mid-1999.

Cache Creek Drainage Review

DOF is doing additional planning in the Cache Creek area due to public concerns about multiple use issues. The 37,000-acre area is located about 20 miles west of Fairbanks. The nine-member subcommittee of the TVSF Citizens' Advisory Committee met 13 times between November 1997 and May 1998, and then began meeting monthly in August 1998. The citizens' committee has reviewed a number of recommendations from the subcommittee. The TVSF Planning Team will consider these recommendations for incorporation in the public review draft of the management plan.



The Tanana Valley State Forest consists of 1.81 million acres and lies almost entirely within the Tanana River Basin. Nearly 90 percent of the area (1.59 million acres) is forested, mainly with paper birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack.

Forest Insect & Disease Conditions

1998 Aerial Survey Results

Aerial detection mapping is done annually to document the location and extent of active forest insect and disease damage. These surveys usually cover about one third of the forested land in Alaska. Unlike 1997, when smoke from large wildfires in the Interior and inclement weather precluded flights into many areas of concern, conditions this year allowed a survey of 26 million acres. Despite declines in spruce beetle activity, overall insect activity for the state increased 13 percent; 1,082,750 acres of damage were recorded. The most important diseases and declines in Alaska are characterized as chronic conditions and remain relatively unchanged from 1997.

Insects

Spruce beetle activity continues to decline, falling by 42 percent in 1998. Since 1996, when the spruce beetle epidemic peaked at 1.13 million acres, levels fell to 563,000 acres in 1997 and to 316,800 acres in 1998. This is the lowest figure since 1978. Lack of suitable hosts within susceptible stands (i.e., stands of mature, even-aged, slow-growing spruce) most likely accounts for this continued decline. It is expected that spruce beetles will remain active in limited areas, such as the west shore of Cook Inlet. The Kenai Peninsula from Ninilchik south to Homer, experienced a slight increase in activity.

Total spruce beetle activity in southeast Alaska decreased from 35,700 acres in 1996 to 19,050 acres in 1997, and to 4,220 acres in 1998, mostly in the Haines area. There was no new beetle activity in Glacier Bay National Park or on the ridge east of Gustavus. The infestation at the mouth of the Stikine and Taku rivers has almost completely collapsed.

Spruce needle aphid occurred on 44,300 acres in Southeast from the southern end of Prince of Wales Island to Cape Fairweather. Though much of the acreage affected was along the beach fringe on Chichagof and Baranof Islands, Sitka spruce within the Verstovia stand in Sitka were infested to the highest elevation of the spruce-hemlock forest type.

Spruce budworm activity increased by 128 percent over 1997 levels. An outbreak at Tanana is largely responsible for this increase, which had declined in 1997 by 84 percent over 1996 levels. Once again, nearly all the intense budworm activity is concentrated along the Yukon River and continues its westward migration toward Ruby and Galena.

Willow leaf blotchminer, which was at endemic levels in 1997, rose dramatically in 1998 to over 120,000 acres. Most of the blotchminer activity is in the upper Yukon and Porcupine river valleys. The 120,000-acre figure is considered conservative. Most of the muskeg along the aerial survey flight lines were affected and it is reasonable to assume that the blotchminer is active throughout much more of this area. However, due to budget and time constraints, staff were unable to survey non-timbered areas off the major river drainages.

Defoliation attributed to the **large aspen tortrix** increased by over 300 percent in 1998. Most of the tortrix activity was concentrated in two areas—the central Kenai Peninsula and the vicinity of Northway along the Alaska Highway and Nabesna River.

Larch sawfly continues to be quite active throughout the range of larch in interior Alaska, resulting in 461,800 acres of defoliation. This is the sixth consecutive year of major larch sawfly activity. In many of the defoliated areas, patches of larch mortality are beginning to appear. The major area of sawfly activity continues to be from the Alaska Range west to the Kuskokwim River.

In southeast Alaska, **hemlock sawfly** defoliation levels decreased from 8,250 acres in 1996, to 6,640 acres in 1997, and 3,920 acres in 1998.

Black-headed budworm populations have collapsed in Southeast and no acres of damage were recorded this year. Adverse flying conditions did not allow a survey of Prince William Sound where budworm defoliation occurred in 1996 and 1997.

Diseases

The most important diseases and declines of Alaskan forests were wood decay of live trees, root disease of white spruce, hemlock dwarf mistletoe, and yellow-cedar decline. Except for yellow-cedar decline, trees affected by these diseases are difficult to detect by aerial surveys. Nonetheless, all are chronic factors that significantly influence the commercial value of the timber and alter key ecological processes including forest structure, composition, and succession.

Wood decay fungi, hemlock dwarf mistletoe, and spruce broom rust provide important wildlife habitat through the formation of tree cavities and witches' brooms.

In southeast Alaska, approximately one-third of the gross volume of forests is defective due to **stem** and **butt rot fungi**.

Hemlock dwarf mistletoe continues to cause growth loss, top-kill, and mortality in old-growth forests; its impact in managed stands depends on the abundance of large infected trees remaining on site after harvesting.

Approximately 477,000 acres of **yellow-cedar decline** have been mapped across an extensive portion of southeast Alaska. Snags of yellow-cedar accumulate on affected sites and forest composition is substantially altered as yellow-cedar trees die, giving way to other tree species. Salvage opportunities for this valuable resource are now being recognized.

In southcentral and interior Alaska, **tomentosus root rot** continues to cause growth loss and mortality of white spruce. Tomentosus root rot is the most important disease of young-growth spruce in the boreal forests. Several heart and butt rot fungi continue to cause substantial decay of mature white spruce.

Sap rot decay of spruce bark beetle-killed trees, primarily caused by the **red belt fungus**, continues to rapidly degrade dead spruce trees, particularly those trees with sloughing bark and wood checks. A high incidence of stem decay and root rot, caused by several fungi, occurs in mature birch and aspen stands.

Cone and foliar diseases of conifers were generally at low levels throughout Alaska in 1998. **Canker fungi** caused substantial, but unmeasured, damage to hardwood species in southcentral and interior Alaska.

Animal Damage

In localized areas of southeast Alaska, porcupines and brown bears continue to cause damage to several conifer species by feeding on the trees.

Statewide Aerial Surveys

USDA Forest Service and Division of Forestry entomologists conduct annual aerial mapping to document areas where forest damage is occurring, that is, areas with current defoliation or recently killed trees. Trained observers in fixed-wing aircraft prepare a set of sketch maps depicting the extent of various types of forest damage including recent bark beetle mortality, defoliation, and abiotic damage such as yellow-cedar decline. Flooding, wind damage, and landslides are also noted. The extent of many significant diseases, such as stem and root decays, are not included since this damage is not visible from aerial surveys.

DOF and USDA Forest Service entomologists question state and federal agencies and other landowners to determine the high priority areas for mapping each year. In addition, they select some areas to map over several years to establish year-to-year trends.

Forest damage information is sketched onto 1:250,000 scale USGS quadrangle maps at a relatively small scale (one inch would equal about eight miles on the ground). Larger scale maps are sometimes used for specific areas to provide more detailed assessments when specialized surveys are requested. The sketch map information is later digitized and computerized in a Geographic Information System for permanent storage and to allow retrieval by a number of users.

Due to the short Alaska summers, long distances, high airplane rental costs, and the short time frame when common pest damage is most evident (usually July and August), mappers must strike a balance to cover the highest priority areas with available personnel and funding.

1998 Forest Insect Activity, Disease, and Damage by Land Ownership and Acreage

These figures are from *Forest Insect and Disease Conditions in Alaska - 1998*, prepared by the USDA Forest Service, State and Private Forestry, Forest Health Management, Region 10 Alaska. The number of acres given are estimates based on surveys of about 20 percent of Alaska's forested land during 1998.

These figures do not give the total accumulated pest damage over several years. They report visible, new pest activity for the year. Some damage is not immediately apparent or the cause cannot be determined from the air. Spruce bark beetle damage is not visible from the air until the foliage begins to turn red.

Aerial survey acreage figures should be compared with other information, such as previous years' condition reports and on-the-ground surveys, for the most reliable picture of damage severity and trends. More information is available from entomologists at the Division of Forestry (269-8460) or the USDA Forest Service (271-2575).

Pest/Damage	State/Private	National Forest	Other Federal	Native	Total Acres	% change from 1997
Spruce beetle	178,930	3,470	58,410	75,010	316,800[1]	-246,941
Larch sawfly	71,170	0	297,100	93,870	461,780	+193,919
Willow defoliation	9,910	290	56,720	56,150	123,070	+119,569
Spruce budworm	5,420	0	41,640	30,820	87,800	+49,384
Spruce needle aphid	8,650	30,680	4,650	2,300	46,340	+45,819
Large aspen tortrix	4,750	0	8,170	8,905	21,830	+16,747
Engravers/spruce beetle	1,950	0	8,700	2,535	13,170	+4,224
Cottonwood defoliation	3,690	90	720	2,110	6,610	+3,574
Yellow-cedar decline[2]	22,015	434,920	323	21,823	479,082	+1,542
Willow rust	90	0	450	0	540	+540
Landslide damage	20	20	100	80	220	-229
Porcupine damage	0	80	0	0	80	-1,083
Water damage	300	160	60	320	830	-1,219
Blowdown/windthrow	10	50	90	0	150	-2,075
Hemlock sawfly	90	3,820	0	10	3,930	-2,708
Winter damage	0	0	0	0	0	-2,948
Spruce needle rust	0	0	100	0	100	-10,676
Black-headed budworm	0	0	0	0	0	-30,842
Total Acres	**306,995**	**473,580**	**477,233**	**293,933**	**1,562,332**	**+136,597**

[1]Combined total of spruce beetle activity over all ownerships, including state-owned and private forested lands. Computerized data bases are available for a few regions in the state (e.g., western Kenai Peninsula, Tanana Valley State Forest, Haines State Forest) where area plans are being developed.

[2]Totals for yellow-cedar decline are not restricted to acreages with a high concentration of dying trees in 1998. They include stands with some healthy trees, some trees that died recently, and others that died long ago.

Forest Insect Activity 1993 - 1998

This chart shows damage by year since 1993 and cumulative acreage figures for the last seven years. The cumulative total is the number of newly infested acres from 1993 to 1998, not the sum of infested acres each year. The same stand may have had an active infestation for several years.

Totals do not include diseases or other damage such as cedar decline or blow-down. Acreage is in thousands of acres (move decimal three spaces to the right for actual number, e.g., 2.2 is 2,200.)

Pest/Damage	1993	1994	1995	1996	1997	1998	Cumulative
Spruce beetle	730.1	610.2	893.9	1,133.0	562.7	316.8	**2,282.0**
Larch sawfly	2.1	0.3	116.9	606.9	267.6	461.8	**1371.5**
Spruce budworm	34.5	232.1	279.3	235.9	38.4	87.8	**602.1**
Black-headed budworm	233.8	188.1	13.0	1.2	30.8	—	**401.2**
Willow defoliation	47.8	12.5	5.6	50.1	3.5	123.1	**229.6**
Large aspen tortrix	117.5	9.2	32.4	6.4	5.1	21.8	**186.6**
Engravers/spruce beetle	4.8	22.5	5.6	13.9	8.8	13.2	**68.8**
Spruce needle aphid	0.2	1.5	0.1	0.5	24.8	46.4	**48.8**
Hemlock sawfly	4.6	3.0	1.1	8.3	6.6	3.9	**27.0**
Cottonwood defoliation	1.9	3.8	3.5	5.4	3.0	6.6	**23.8**
Birch defoliation[1]	0.1	—	0.9	3.2	5.4	0.1	**9.7**
Total acres[2]	**1,177.4**	**1,083.0**	**1,352.2**	**2,064.9**	**956.7**	**1,081.5**	**5,251.1**

[1] The acreage of birch defoliation was improperly reported in the *Forest Insect and Disease Conditions in Alaska - 1997* and repeated in the 1997 Division of Forestry Annual Report. The number given was 271,900 acres. It should have been 5,400 acres.

[2] Due to a calculation error in the *Forest Insect and Disease Conditions in Alaska - 1997*, the acreage and individual totals reported here may be different from previously reported totals.

Insect and Disease Information

The Division of Forestry home page has information on forest health and forest insect surveys at: www.dnr.state.ak.us:80/forestry/web_bugs.htm. The home page also provides links to other types of forest health information.

The USDA Forest Service, State & Private Forestry home page contains addresses for federal entomologists and plant pathologists, current forest insect and disease conditions (aerial and ground survey data), and sections on forest health research and publications, and a bibliography of Alaska forest health management publications. The address is www.alaska.net/~cnfspf/fhpr10.htm.

Data and map information requests: To request maps or other products from statewide surveys and GIS databases, contact Roger Burnside, Alaska Division of Forestry, 3601 C Street, Suite 1034, Anchorage, AK 99503-5937; (907) 269-8460; fax: (907) 561-6659; rogerb@dnr.state.ak.us.

Cooperative Programs

The Forest Stewardship and Urban & Community Forestry programs are funded by the federal government and administered by the Division of Forestry in Alaska. These programs were initiated nationwide in 1991 because of a noted decline in the number and health of trees on private land in rural areas and in communities.

Through these programs, federal and state government work in partnership with local governments, businesses, volunteers, and landowners to plant and improve the health of trees and forests in urban and rural areas.

Forest Stewardship Program

The Forest Stewardship Program is a federally-funded program administered by the Division of Forestry. The goals are to help non-industrial private forest owners develop 10-year management plans and to support implementation of approved management practices.

1998 Highlights

- Forest Stewardship Plans were prepared and signed by 45 Alaska landowners covering 2,522 acres

- The Kuskokwim Corporation, an Alaska native corporation, completed a Forest Stewardship Plan for its lands

- The stewardship forester assisted the Kenai Peninsula Borough spruce bark beetle task force

- Forest Stewardship staff supervised collection of 470 bushels of spruce cones in bark beetle impacted areas on the Kenai Peninsula and in the Mat-Su Valley and Copper River area

- The division helped the Kenai Peninsula Global ReLeaf chapter to purchase and distribute 22,000 tree seedlings to private landowners

- The Forest Stewardship Program was reviewed by an out-of-state review team

Stewardship landowners participation in the Forest Stewardship Program continued to increase in 1998. Since the program began in 1992, a total of 258 stewardship plans have been developed for individual landowners covering 19,781 acres. Participation is greatest on the Kenai Peninsula, with the Matanuska-Susitna and Tanana valleys also having many participants. The most common management concern continues to be forest health. Many requests for assistance involve options for threatened or dead spruce. Many participating landowners also have strong interests in aesthetics and wildlife.

Cost-share Programs

The Forest Stewardship Program can help to implement approved management practices through the Stewardship Incentive Program (SIP) and Forestry Incentive Program (FIP). With SIP and FIP, the USDA can cost-share up to 75 percent of the cost of the practice.

Requests for cost-share assistance were high in 1998, and Alaska's SIP allocation of $49,000 and FIP allocation of $5,500 were fully used. The most common cost-share practice was site preparation and slash disposal after removing beetle-killed spruce. Forest improvement by thinning and pruning, tree planting, trail clearing, and habitat enhancement were also cost-shared. In all, 37 projects serving 252 acres were completed in 1998. An additional 35 SIP projects covering 194 acres were approved for starting in 1999.

Native Corporation Grants

Native corporations and reservations are the largest private landowners in Alaska, and providing grants for forest planning is an important part of the Forest Stewardship Program. The Kuskokwim Corporation, comprised of 10 village corporations along the lower Kuskokwim River, completed a Forest Stewardship Plan in 1998.

A total of nine ANCSA corporations have now completed Forest Stewardship Plans. Planning projects supported by Stewardship Program grants are underway with seven other native corporations. Assistance to native corporations and reservations will continue in 1999.

Other Landowner Assistance

During 1998, Forest Stewardship Program personnel provided technical assistance to the Kenai Peninsula Borough spruce beetle task force. The final recommendations of the task force included expanding private landowner planning and cost-share assistance. The task force also recommended collection of spruce seed for reforestation of beetle impacted forests.

Following task force recommendations, the USDA Forest Service provided funding for cone collections, and Forest Stewardship personnel supervised collections from the Kenai Peninsula, Mat-Su Valley, and Copper River Basin. The Forest Stewardship Program also assisted the Kenai Peninsula Global ReLeaf with the growing and distribution of seedlings for private landowners in southcentral Alaska.

The Forest Stewardship Program receives guidance from the Alaska Stewardship Coordinating Committee. The committee, comprised of representatives from a broad range of interests, met twice in 1998. One meeting was a joint session with an out-of-state program review team. Forest Stewardship Committee members are listed on page 45.

Urban & Community Forestry

Urban forestry is the comprehensive management of forests and related natural resources in communities. The Urban & Community Forestry Program helps local governments and communities expand and care for these valuable resources. The program:

- provides information and training in retaining, planting, and caring for trees and forests
- helps local governments develop and fund ongoing community forest management programs
- encourages the private sector to support and fund community forestry efforts
- develops local partnerships and supports volunteer efforts
- administers federal grants for pilot programs and demonstration projects

The Alaska Urban & Community Forest Council, a 15-member, nonprofit, citizen advisory group, provides support and advice on development and delivery of the program. Members are from a variety of locations, professions, and fields of interest. A list of members is on page 45.

1997 Highlights

- The City of Homer completed a two-year program development grant and is now the first Alaska city to have a community forestry plan and program.

- The UCF Program, in cooperation with the Pacific Northwest Chapter of the International Society of Arboriculture, sponsored a two-day workshop called Getting to the Root of Tree Care. It was held in Anchorage on May 14 to 15 and attended by 40 people.

- Staff helped initiate the TREEmendous Anchorage Program. The goal of this municipal program is to *protect, improve, plant, and educate the public about trees*. About 70 volunteers have been involved in this successful effort.

- Staff and volunteers transplanted 680 trees from the Plant Materials Center in Palmer to public lands. The trees had been planted by the USDA Forest Service for use by the UCF program. Pines, spruce, birch, firs, and larch were planted at schools, parks, the university, Alaska Botanical Garden, the state fairgrounds, and Elmendorf Air Force Base. In addition, 2,300 spruce seedlings were transplanted. The total value of the trees and seedlings was estimated to be $44,000.

- The Alaska Urban & Community Forest Council received a $10,000 grant from the National Tree Trust to fund two projects. The council involved local government leaders in the establishment of a government grove of trees in Fairbanks and will establish similar groves in four other communities in 1999. Council members also worked with the Fairbanks North Star Borough School District to develop an interactive compact disk on Alaska trees for elementary school students. Copies were sent to all 52 school districts.

Grants

The Urban and Community Forestry Program offered grants to help communities organize Arbor Day events that promote the benefits of trees and forests and the need for proper care.

The division awarded 18 Arbor Day grants in 13 communities. The grants totaled $17,600 and were matched by $53,826 in local funds and services. Grant funds were used to plant and care for trees on public property and to support a variety of Arbor Day events and public education programs.

The division also awarded a grant of $6,600 to the Georgeson Botanical Garden at the University of Alaska Fairbanks for a research project on appropriate mulch materials and techniques for use in various parts of the state.

PLT ALASKA

~ **Creates** awareness, skills, understanding, and commitment to address local and global environmental issues.

~ **Develops** critical thinking skills. It does not seek to teach children *what* to think about the environment, but *how* to think about it.

~ **Increases** appreciation and tolerance of diverse viewpoints by developing attitudes and actions based on scientific analysis.

~ **Stimulates** creativity, originality, and flexibility.

~ **Encourages** students to become responsible, productive, participating members of society.

Project Learning Tree

Project Learning Tree is an environmental education program designed by and for educators, which uses trees and forests as a context for learning. Elementary and secondary curricula provide appropriate activities for students of all ages. PLT can be applied in many educational contexts, from classrooms and nature centers to museums, scout troops, and child care centers.

The participatory activities incorporate important environmental lessons into all areas of the curriculum to help students develop an appreciation for forests. Activities can be integrated into language arts, science, math, art, or social studies. More advanced activities help students see the complexities of natural resource management and of human impacts on natural environments. The division recognizes the importance of educating students so that as adults they will be able to make decisions regarding natural resource use that are based on a scientific understanding.

PLT is delivered through workshops for facilitators and teachers, who learn about the program and how to use the curriculum materials effectively. Facilitators present workshops for teachers in their local schools and promote continuing use of the curricula. Six hours of workshop training is required in order to receive the curriculum books.

In 1998, nine workshops were conducted around the state for 160 teachers, resource professionals, and other facilitators. The coordinator also cooperated with ADF&G to hold a joint workshop on PLT and the Role of Fire in Alaska; and with the U.S. Fish & Wildlife Service on a Project Wild workshop. One combined 15-hour workshop was offered through UAF in Fairbanks for graduate credit required for teacher recertification.

PLT information or activities were presented to approximately 537 students and adults at a variety of resource meetings and environmental education events. PLT provided a program display at several statewide events and at the conference of the National Association of Interpreters.

The PLT Program is a partnership supported by Natural Resource Conservation Education funds from the USDA Forest Service, operation funds from the Alaska Forest Association, facilitators from Alaska Cooperative Extension, workshop accounting and administration services by the Alaska Natural Resources and Outdoor Education Association and funding and in-kind services from the Division of Forestry.

DOF also continued its partnership with the Campbell Creek Science Center, the environmental and conservation education center located on BLM's Campbell Tract in Anchorage.

The division took on coordination of PLT in 1993, with the employment of Susan Rogers. The program developed in very significant ways during her tenure. She "Alaskanized" activities and assembled background materials to assist teachers and facilitators with current and relevant examples and information. She played an important role in statewide environmental education efforts, explaining the biological, economic, and social bases for forest management.

Susan left the division in October 1998 to teach high school biology. Her replacement will be on board in early 1999 to continue forest conservation education in Alaska.

Project Learning Tree Coordinator Susan Rogers at her going-away party. Susan left her position after five years to teach high school biology. (Chris Christianson)

WILDLAND FIRE PROTECTION

The Division of Forestry, Bureau of Land Management, and USDA Forest Service are responsible for wildland fire suppression in Alaska. Each agency protects specific geographic areas under cooperative agreements. Without these agreements the state would spend an estimated additional 14 million dollars each year to provide comparable protection for state land.

Alaska is the only state with an interagency fire plan. The plan divides the state's land base into fire protection levels based on major natural fire breaks and the objectives of land managers. This allows firefighters to be sent to the highest priority areas, those areas where communities and valuable resources are located. It also gives options for lower cost strategies in remote and unpopulated areas.

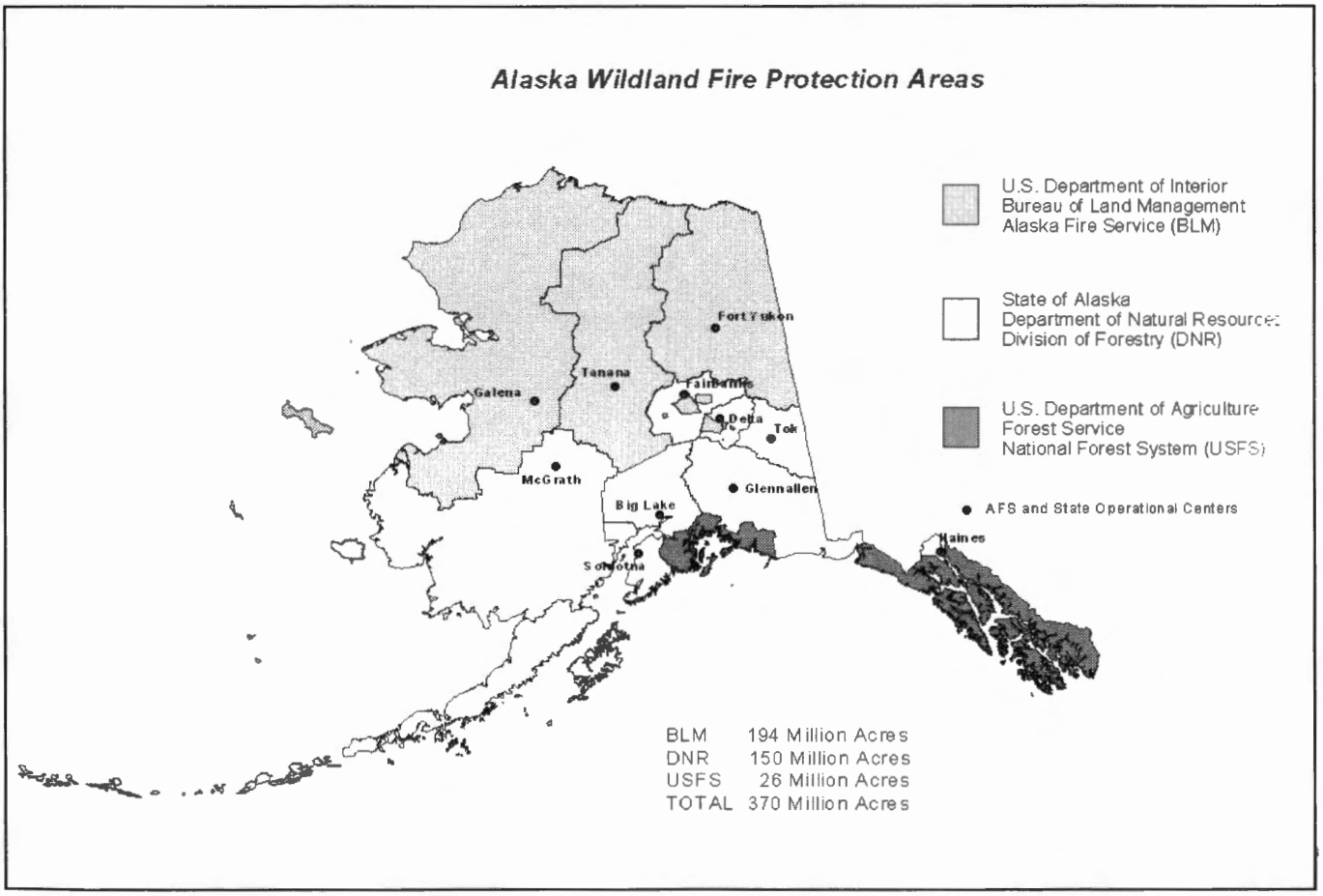
Fire Protection Levels

Critical Protection: Areas where life and property are present receive immediate and aggressive suppression efforts.

Full Protection: Areas with high value resources where fire may adversely impact resource management objectives also receive immediate suppression efforts.

Modified Action: Areas with high value resources where land managers may consider the trade-off of acres burned versus suppression costs. Fires are attacked immediately but land managers guide the suppression effort.

Limited Action: Areas where fire is beneficial or benign, or firefighting costs are greater than fire damage. Fires are monitored but no suppression action is taken except to prevent the fire from burning onto higher value land.



1998 Fire Season

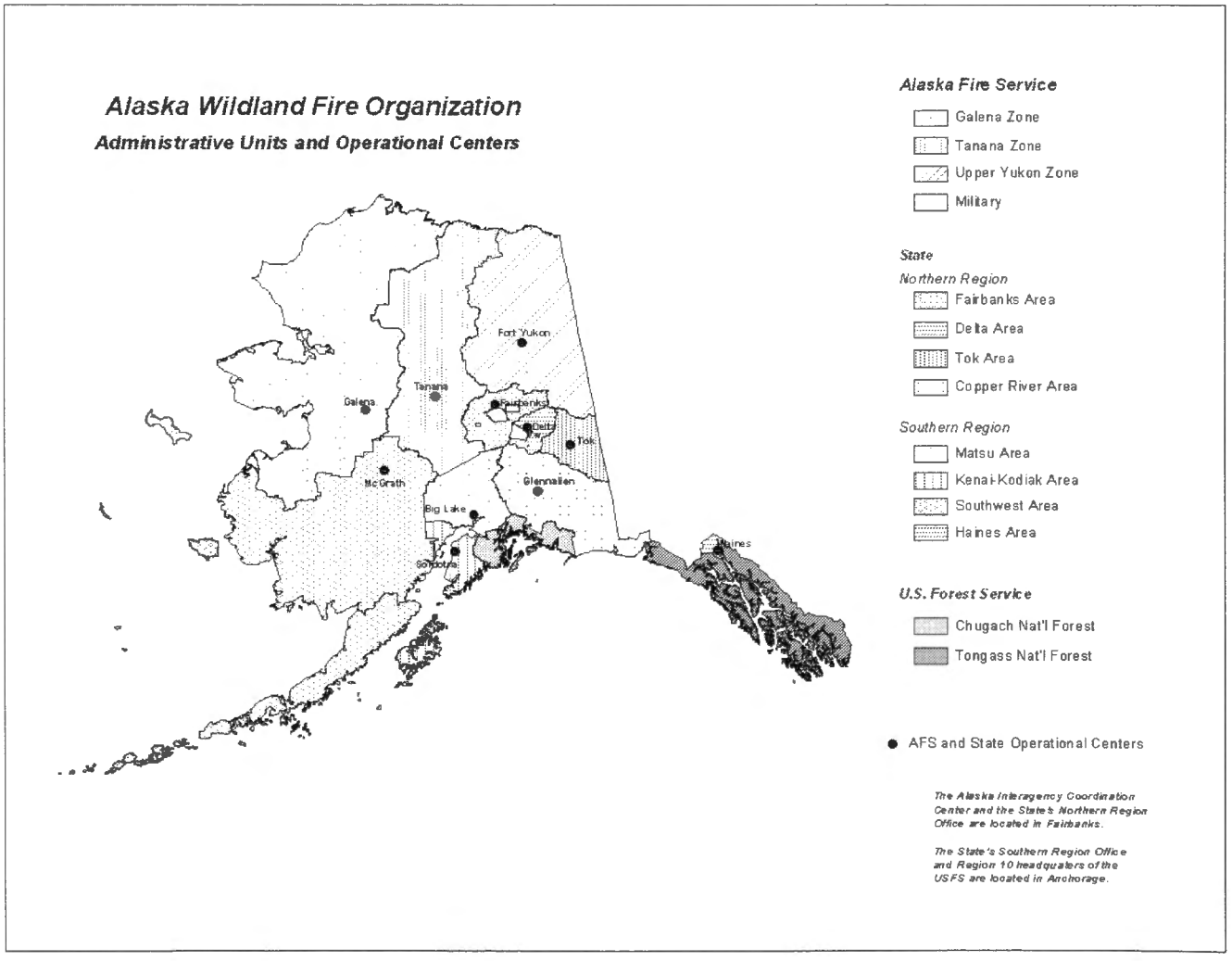
Following two record-setting fire seasons in Alaska, 1998 was a quiet year with less than average activity. In a normal fire season, an average of 655 wild fires burn nearly 1.6 million acres. The 1998 fire season recorded 413 wildland fires and 119,900 acres burned.

Fire season was well under way before the official beginning date for the season of May 1. A total of 100 wildland fires burned more than 500 acres during February, March, and April, with 97 of the 100 fires on land protected by the Division of Forestry. The first wildfire of the year was on February 11 in the city of Wasilla. This grass fire burned 4.3 acres of private land before it was extinguished by DOF and local cooperators.

The USDA Forest Service and the Alaska Fire Service experienced a more normal spring fire season. AFS had three fires in April. The first occurred on April 15 in Galena. A U.S. Fish & Wildlife Service employee responded to the grass fire and controlled it at less than an acre. On April 23, a wildfire began on the Fort Greely military base in a limited suppression area and was allowed to burn without intervention. It eventually burned 357 acres. Another military fire later in April burned 80 acres in a limited suppression area.

By May 1, wildfires were burning under extremely dry conditions. Most initial attack activity was located on the Kenai Peninsula, in the Mat-Su Valley, and in Fairbanks. The fires were small in size but kept firefighters busy. Alaska experienced 116 wildfires in May, burning 54,000 acres.

The most significant wildfire of the summer burned southwest of Delta Junction. Ignited by lightning on May 21, the Carla Lake Fire quickly grew to 800 acres and smoke jumpers were ordered. Over the next several days, additional firefighters were moved to the fire to assist in containment.



On May 27, with sustained winds of 30 to 40 miles per hour, the Carla Lake Fire made several runs in a northerly direction, towards Delta Junction, which was across the river. At that point, the decision was made to staff the growing wildfire with an Interagency Type II Incident Management Team. The fire threatened 45 recreational homes and cabins in addition to an agricultural commune. Home owners relied on access along Clearwater Creek and DOF worked closely with them to maintain escape routes and monitor who was in the area continually. By May 29, the fire had grown to 26,500 acres and the Alaska Type I Interagency Management Team was ordered.

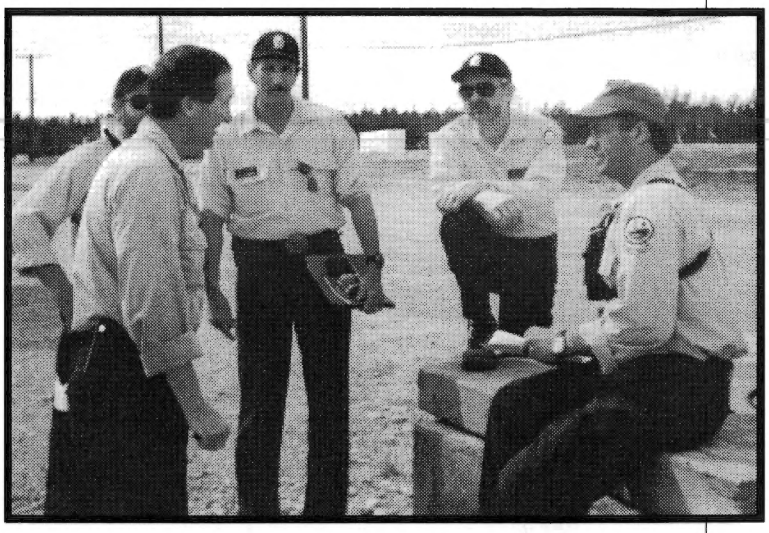
For the next three weeks, nearly every available firefighter, engine, and helicopter in Alaska was mobilized to assist in suppression. Crews from all over Alaska and the Lower 48, participated. A total of 622 overhead personnel, 52 crews, 32 engines, and dozens of boats were used. The Carla Lake Fire was not declared out until September 16 and burned 54,000 acres.

In June, 83 fires burned 32,000 acres. With the May wildfires still burning, firefighting resources were taxed to the limit and Alaska requested additional support from the Lower 48. A total of 178 firefighters and five hotshot crews were brought to Alaska from other states.

In early July, fire activity in the Tanana Valley was at a critical level; Tok and Delta were at critical fire danger levels and new ignitions were difficult to contain. To complicate matters, there were fires in Southeast Alaska as well; stretching firefighters from one end of Alaska to the other.

On July 1, a complex fire was reported burning near Skagway. The Dyea Valley Fire, which began with a structure fire, spread rapidly through heavy fuels on very steep slopes. Fire suppression resources were mobilized from all parts of Alaska, with reinforcements from the Yukon Territory. The fire burned for 43 days before it was declared out in mid-August.

On July 2, the Mill Fire was reported on Prince of Wales Island and was managed by the Forest Service. It was burning on private land and quickly spread through an area that had been logged and subdivided for residential and commercial development. An Interagency Incident Management Team and several fire crews were ordered to help with the complex suppression needs of the growing wildfire. Many structures were threatened. The fire was declared out on August 10 after burning 118 acres.



Alaska Type I Team (left to right) Tom Boatner, Operations Section Chief; Lynn Wilcock, Operations Section Chief; Joe Stutler, Deputy Incident Commander; Joe Stam, Incident Commander; John LeClair, Logistics Section Chief. (Chris Christianson)

July brought little relief to suppression agencies. Another 63 wildfires blackened over 33,000 acres in the state. With August came cooler, moist weather, which helped firefighters contain many fires. Temperatures in the Interior averaged 3.8 degrees below normal and Fairbanks recorded the coolest August since 1965, with 22 days of measurable precipitation. This provided needed rest for firefighters. A total of 32 fires were reported for the month and 74 acres burned, most in the eastern interior of the state.

September was normal in wildland fire occurrence. Only five acres burned as a result of 22 wildfires. Most of Alaska's available resources were dispatched to the Lower 48. The last wildfire of the 1998 fire season occurred on October 17 near Kenai.

Disaster Response

The Division of Forestry assisted the Alaska State Troopers in several search and rescue responses during the year. DOF also assisted the Division of Emergency Services during the Alaska fisheries disaster in August and September. Most of the support consisted of dispatch and aviation management in Bethel. As the project spread east into the interior of Alaska, personnel were based in Fairbanks and Anchorage.

1998 Fire Statistics

Year	Fires statewide	Acres Burned
1998	413	119,899.8
1997	716	2,026,899.3
1996	724	599,197.1
1995	421	43,945.8

Fire Activity by Landowner

Landowner	Number	Acres
State	65	86,763.6
City/Borough	36	92.1
Private/Non-ANCSA	232	129.0
Bureau of Land Mgmt.	14	1,416.6
National Park Service	3	22.0
Fish & Wildlife Service	8	55.3
Bureau of Indian Affairs	2	0.2
Native Claims Act Lands	26	7,649.6
Military	10	23,769.2
USDA Forest Service	17	2.2
Total	**413**	**119,899.8**

Causes of Fires on State-Protected Land

Cause	Number	Acres
Lightning	16	62,923.5
Other causes	39	513.6
Arson-related	25	5.6
Trash/dump burning	33	12.5
Camp/cooking fires	49	43.3
Smoking	9	1.8
Land clearing/field burns	40	51.3
Slash burning	33	23.6
Burning structures	13	91.8
Power lines	36	14.9
Children	31	8.9
Fireworks	5	16.6
Equipment/vehicles	9	1.0
Total	**338**	**63,708.4**

Emergency Firefighter Wages

Year	State	Federal	Total
1989	1,805,955	2,276,175	4,082,130
1990	7,398,211	5,765,547	13,163,758
1991	5,344,384	3,741,521	9,085,905
1992	786,747	612,048	1,398,795
1993	3,699,629	580,866	4,280,495
1994	5,952,942	3,654,245	9,607,187
1995	904,492	207,958	1,112,450
1996	6,778,022	4,273,774	11,051,796
1997	3,869,912	1,485,846	5,355,758
1998	2,734,442	1,897,356	4,631,798
Total	$39,274,736	$24,495,336	$63,770,072

Emergency Out-of-State Crew Use

Number of 20-person crews sent outside of Alaska to fight fires. Wages are paid by other states or suppression agencies.

Year	Crews
1989	61
1990	7
1991	0
1992	5
1993	0
1994	83
1995	1
1996	59
1997	0
1998	2

1998 Fires by Area and Protection Level

State-Protected Areas

Area	Critical		Full		Modified		Limited		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Anch/Mat-Su	67	43.8	10	9.1	0	0	0	0	77	52.9
Copper River	0	0	20	6.4	1	0.1	0	0	21	6.5
Delta	24	12.3	1	0.1	0	0	1	175.0	26	187.4
Fairbanks	131	82.2	9	24.7	4	32.3	1	2.0	145	141.2
Haines	6	1.7	3	0.3	1	85.0	0	0	10	87.0
Kenai/Kodiak	30	16.1	2	3.1	1	0.1	0	0	33	19.3
Southwest	1	0.1	2	0.6	1	21,800.0	2	285.0	6	22,085.7
Tok	8	16.7	9	610.7	0	0	3	40,501.0	20	41,128.4
Totals	**267**	**172.9**	**56**	**655.0**	**8**	**257,476.7**	**7**	**40,963.0**	**338**	**63,708.4**

USDA Forest Service-Protected Areas

Area	Critical		Full		Modified		Limited		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chugach N.F.	5	0.5	5	1.5	0	0	0	0	10	2.0
Tongass N.F.	5	119.2	8	1.3	7	0.9	5	1.4	25	122.8
Totals	**10**	**119.7**	**13**	**2.8**	**7**	**0.9**	**5**	**1.4**	**35**	**124.8**

BLM's Alaska Fire Service-Protected Areas

Zone	Critical		Full		Modified		Limited		Unplanned		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Galena	1	0.3	3	117.0	3	62.0	0	0	0	0	7	179.3
Military	1	0.1	0	130.0	1	44,795.0	8	9,306.1	0	0	10	54,231.2
Tanana	0	0	4	680.0	3	28.0	7	21.0	0	0	14	729.0
Upper Yukon	0	0	1	0.1	1	2.0	7	925.0	0	0	9	927.1
Totals	**2**	**0.4**	**8**	**927.1**	**8**	**10,252.1**	**22**	**10,252.1**	**0**	**0**	**40**	**56,066.6**

Statewide Totals by Protection Level

Critical		Full		Modified		Limited		Unplanned		Total	
No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
279	293.0	77	1,584.9	23	66,805.4	34	51,216.5	0	0	413	119,899.8

Alaska Assists Lower 48

As fire activity in Alaska began to wind down in mid-July and August, fire activity in the Lower 48 began to heat up. Lightning storms in Florida and Texas caused several disastrous wildfires. As Division of Forestry resources became available for dispatch, the Lower 48 ordered them. A total of 85 employees from DOF responded, many to states never before supported by the division. DOF helped fight wildfires in Georgia, Florida, Texas, North Carolina, Oklahoma, and Wisconsin. Logistics support staff was provided to Pennsylvania for Hurricane Bonnie and to Georgia for Hurricane Georges.

The division also assisted with fire operations in California, New Mexico, Nevada, Arizona, Utah, Idaho, Montana, Oregon, Colorado, Washington, and Wyoming. A state air attack airplane and crew went to Nevada during July and August.

Canadian Support

The Division of Forestry was asked to assist Yukon Territory and British Columbia several times during the summer. The Yukon Territory experienced a very long fire season, with many fires burning out of control for weeks. On May 31, when the Yukon requested an air tanker for a fire near Haines Junction, tanker 33, a DC-7 contracted by DOF, was mobilized. The same tanker was requested for wildfires near the community of Mayo, Yukon on July 4 and again on July 15.

As wildfire activity continued, the Yukon Forest Service placed requests for DOF firefighters to assist in combating the Whitehorse #42 Fire, and the Carmacks #3 Fire. The division provided six firefighters.

In August, as fire activity continued in the Yukon Territory, problem fires also began in British Columbia. On August 4, fire officials in British Columbia requested the Tazlina Hotshot Crew and 18 firefighters from DOF. These resources were used on forest fires near the Kamloops area. The Yukon Territory ordered a Type II Emergency Fire Fighting Crew and requested additional firefighters from the division. A crew from the Tok Area Office was moved to Whitehorse, later to be deployed on several fires for a three-week period. Alaska also sent portable fire pumps, fire hose, and portable water tanks to British Columbia.

Fire Program Implementation

Grants To Rural Communities

The Division of Forestry administers Rural Community Fire Protection (RCFP) grants from the USDA Forest Service. Volunteer fire departments serving communities with populations under 10,000 may apply for grants of up to $5,000 on a 50/50 cost share basis to organize, train, and equip fire protection units.

In 1998, 46 applications were received requesting a total of $181,787. The division approved 20 grants, totalling $77,071 to fund training and to purchase pumps, radios, protective clothing, fire extinguishers, smoke detectors, fire tools, and other supplies. Five of the grantees had never received a RCFP grant before.

In addition to grants, the division issued fire stores and equipment valued at over $169,700 to volunteer fire departments.

Volunteer Fire Department	Grant
Iliamna VFD	4,932
Arctic Village VFD	3,000
Ekwok VFD	800
Ruby VFD	3,017
Coffman Cove VFD	5,000
Galena VFD	5,000
Nikiski VFD	4,721
Sand Point VFD	4,814
Chitina VFD	5,000
Palmer Emergency Services	5,000
Bristol Bay Borough	5,000
Egegik VFD	2,628
Seward VFD	5,000
Skagway VFD	813
Woman's Bay VFD	3,546
Ester VFD	5,000
Valdez VFD	1,800
Nenana VFD	2,000
Copper Center VFD	5,000
Big Lake VFD	5,000
TOTAL	**$77,071**

Aviation Program

To prepare for an expected increase in the number of fires on the Kenai Peninsula due to the spruce bark beetle infestation, DOF contracted for a medium helicopter from April 15 to May 14. The division also established a fire-retardant base at the Homer Airport to provide a facility for storing and mixing fire retardant. This retardant base provided for faster air tanker retardant response in the event of fire in the East End Road area.

DOF provided an air tanker to fire officials in the Yukon Territory on three occasions. Canadian air tankers reciprocated by assisting the division on the Dyea Fire, near Haines. These cooperative agreements allow the cost-effective use of aircraft closest to a fire, regardless of ownership.

DOF contracted for a turbine commander (AC-690) in Fairbanks to help manage aircraft responding to wildland fires. This aircraft and crew provide air traffic control to smokejumper aircraft, air tankers, and helicopters. It relays important information on the status of a fire to firefighters on the ground to prevent entrapments.

During 1998, Beaver 9262Z, which was acquired from the USDA Forest Service through the Federal Excess Personal Property Program in 1976, underwent maintenance and upgrades. This included standardization of the instrument panel, a larger door to accommodate cargo, and improved navigation and communication radios. These improvements allow the aircraft to provide safe and reliable service to firefighters in the field.

Aviation initiated an "All Eyes" safety program and enlisted the aid of federal cooperators. The premise is that safety is everyone's job and requires everyone's help in watching for safety concerns and bringing them forward for resolution. The division's aviation section has a good safety record and intends to maintain safety as the top priority.

Statewide Prevention

Prevention and enforcement are important components of the Division of Forestry's fire management program. The goal is to heighten public awareness of the need to follow safe burning practices.

Burn permits are required from May 1 through September 30. The division issued 5,050 new burn permits in 1998 and 15,820 were active. Many permits are good for a three-year period. Issuing burn permits allows DOF to educate the public on a one-on-one basis about safe burning practices. To improve service to the public, many burn permits are issued by local fire departments. In the Fairbanks area, for example, local fire departments handle 55 percent of the average 2,000 permits issued each year.

Prevention also involves education through workshops and school programs during a three-week period in May. This is quite a challenge as this is a very active time during the fire season. This year, 92 school programs were offered to 6,300 students and teachers.

Information and workshops on defensible space are also becoming increasingly popular. In 1998, approximately 30 workshops were held. Over 1,000 contacts were made through these efforts and individual contacts.

Enforcement action is taken whenever a violation of Title 41 occurs. In 1998, the division issued 13 citations and 86 written warnings. Citations resulted in $1,030 in fines and $5,910 in restitution.

Groundbreaking for Southcentral Consolidated Fire Facility in Palmer. (left to right) Tom Smith, Palmer City Manager; Steve Grand, Grand Engineering; Mayor Guinotte, City of Palmer; John Shively, DNR Commissioner; Bob Limbean, DOF Mat-Su Area Office Maintenance Worker I; Dean Broun, DOF Deputy Director; Chris Christianson, DOF Admin. Mgt. III; Mark Ford, DOF Procurement Specialist III. (Curt Sandvik)

Eagle River Warehouse crew loading an FEPP Ford diesel tractor with sweeper and blade attachment for shipment to Tanacross Airfield. The tractor with brush hog (not shown) and the sweeper attachment are used to maintain the Tanacross Air Field and Fire Retardant Base. From left: Harry "Buck" La Grew, Steve Gasparini, and Eddie Sheldon (M. Scott Christy)

FEPP before and after. A 1,200-gallon water tender now refurbished and being used for wildland fire suppression. The cab and chassis is from a five-ton military dump truck and the tank is from a "deuce - and-a-half" military fueler. (M. Scott Christy)

Federal Excess Personal Property Program

The Federal Excess Personal Property (FEPP) Program provides equipment for wildland fire fighting in Alaska. The Division of Forestry has acquired more than $5 million in federal excess equipment since it began participating in the program in 1971. The division also assigns equipment to cooperating volunteer and structural fire departments. This program has been very effective in assisting the division and its cooperators during periods of declining budgets and rising costs.

In 1998, DOF acquired 143 items worth approximately $695,305. Significant among these items are the following:

- one four-wheel-drive one-ton diesel pickup
- two four-wheel-drive Chevrolet Blazers
- four trucks and three cars
- one forklift
- one 5,000-gallon tanker trailer
- one shop air compressor and generator
- two Ford diesel tractors with sweepers
- two brush hogs and one blade attachment for the tractors

State Fire Warehouse

The state fire warehouse system supplied over 120 fires statewide in 1998, including one type II incident and assisting the Bureau of Land Management in supporting one type I incident. During this fire season, the warehouse system moved over 759,000 pounds of fire support items with a value of $1.6 million.

The state warehouse catalog of fire supplies and equipment lists 982 individual items. The value of this inventory is more than $5.9 million.

In addition to the main warehouse located in Fairbanks, there is a supply facility in Eagle River and area caches in Delta Junction, Tok, Tazlina, Big Lake, Soldotna, McGrath, and Haines.

DOF Workers' Compensation

7/1/97 to 6/30/98

Emergency Fire Fighters

Total claims	16	$3,647

Other DOF Employees

Total claims	45	$110,636

Fire Program Training

Training Program Highlights

The division provides staff training to maintain a qualified work force that meets national standards. All interagency courses were open to the state's cooperating structure fire departments and Canadian cooperators.

National level training helped DOF meet the need for qualified, advanced incident management personnel who will serve on Alaska's Type I and Type II Incident Management Teams. Personnel attended the Command and General Staff Exercise and Fire Area Growth Simulator training. Staff also attended the following national level training courses: Supervisory Dispatcher, Communications Unit Leader Update, National Aerial Firefighter Academy, Advanced Fire Behavior, Air Support Group Supervisor, and a comptrollers workshop.

DOF held several Basic Firefighter and Wildland Interface Firefighter courses for structure fire departments and emergency firefighter crews. This training certifies students as basic firefighters. The division continues to work with the Tazlina crew to help members gain the training and experience needed to maintain national standards for type I crews.

The newly developed Leadership and Organizational Development course was presented for the first time this year in Alaska. This course provided participants with supervision skills necessary to perform as unit leaders on wildland fires. The Alaska Dispatch course and Support Dispatcher course helped train more dispatchers needed to support fires with overhead, crews, aircraft, and supplies. The Situation Unit Leader course, Interagency Helicopter Training, Fire Behavior Calculations, and Fire Business Management courses were also presented. The division provided recurrent training in fireline safety, aerial ignition, Canadian Forest Fire Danger Rating System, Helicopter Manager, Aviation Transport of Hazardous Materials, and Hazardous Materials for Warehouse Personnel.

DOF continues to assist the Division of Emergency Services in conducting Incident Command System training. The division provided basic ICS training to local governments in Petersburg, Bethel, and Kodiak. The division also provided an instructor to Canada to help teach the Wildland Fire Behavior Specialist Course.

Training in 1998*

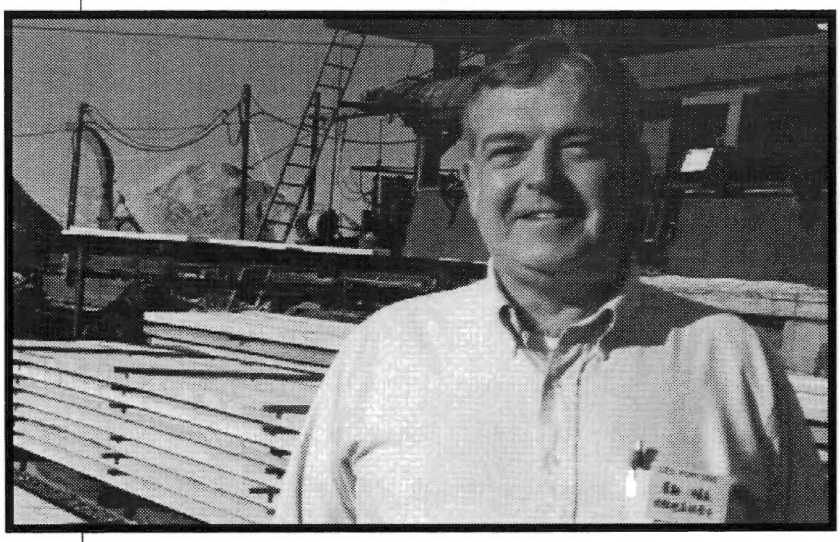
Type	Courses	Particip.	Instructors	Hours
Emergency Firefighter	5	198	14	70
Wildland Interface Firefighter	9	270	25	182
Incident Command System	5	52	8	72
Incident Command System related to wildland fire	4	12	1	108
Fire Management	5	5	1	224
Dispatch Courses	3	17	3	152
Suppression Skill	26	340	49	631
First Aid, CPR, ETT, BBP, Defensive driving	9	114	0	59
Fire Line Safety	22	1,168	63	111
Hazardous Materials (aviation, warehouse, first responder)	10	288	0	74
Totals	**98**	**1,473**	**164**	**1,703**

**Chart includes training sponsored by the division and other training attended by division personnel. It includes emergency firefighter crews and participants from other agencies and cooperator fire departments.*

Structure Fire Department Training

Structure fire departments across the state, through cooperative agreements, assist the Division of Forestry in fire suppression in populated areas. These cooperators are a valuable source of trained, experienced firefighters. DOF offers courses in the evenings and on weekends to make the training convenient for volunteer firefighters. The response from firefighters was outstanding and numerous fire personnel received needed training in Intermediate Fire Behavior, Basic Air Operations, Task Force/Strike Team Leader, Leadership and Organizational Development, Fire Operations in the Urban Interface, Initial Attack Incident Commander and Engine Boss in several locations throughout the state.

STAFF RECOGNITION



Lester Fortune (Dean Brown)

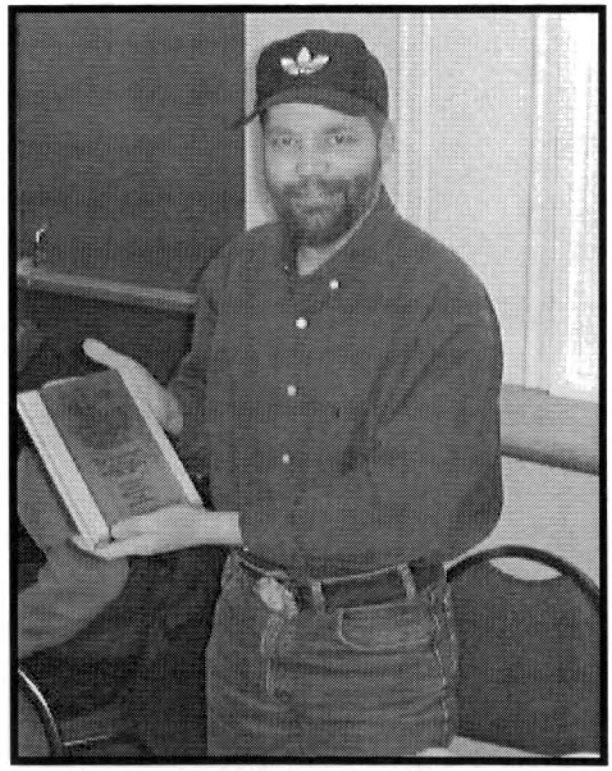
Les Fortune Elected SAF Fellow

Lester H. Fortune Jr., Northern Region Forester, was elected a Fellow of the Society of American Foresters. A Fellow is the highest form of recognition by the society of one's peers for outstanding service to SAF and the forestry profession.

Les has been very active in SAF, serving as the Alaska Chair in 1993-94, helping host state meetings in 1978, 1983, 1986, 1990, 1991, and was chair-elect in 1998. He was also Yukon River Chapter chair in 1998, secretary-treasurer for three terms, and chair for two terms during the mid-'70s and early '80s. He attended national conventions in 1993, '94, and '95, serving in the House of Society Delegates in 1993 and 1994. He became an SAF Certified Forester in 1997.

Les is a founding member of the Fairbanks Arbor Day Committee Interior Chapter, a member of the Ruffed Grouse Society Natural Resource Committee and the Fairbanks Chamber of Commerce. He frequently makes forest management presentations to civic groups, classes, university students, and international groups.

Coral "Bud" Graham retired as Chief of aviation after 10 years with the Division of Forestry. Many of Bud's friends and co-workers joined him for a cookout held in the Aviation hangar at Lake Hood. (Chris Christianson)



Lon Greenough, retired Mat-Su Area Fire Suppression Foreman, was recognized for his commitment to Forestry with a birch and walnut plaque signed by his co-workers. (John See)

20 Years of State Service

Wade Wahrenbrock

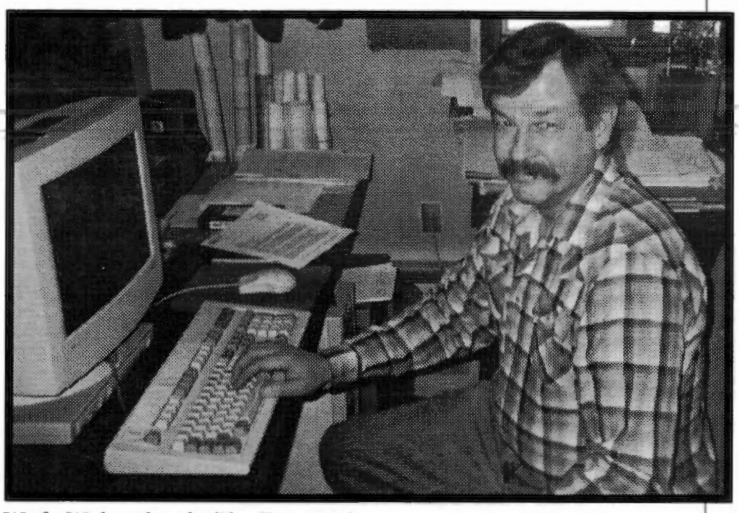
After receiving his forestry degree in 1976, Wade came to Alaska to visit a U.S. Navy shipmate. He returned to California for a season on a Forest Service Hotshot crew, but returned to the Kenai Peninsula the following spring. Wade became a Department of Natural Resources employee in 1977 and has worked for the Division of Forestry's Kenai-Kodiak Area Office throughout his career with the state.

Early in the 1977 fire season, Wade was promoted from crewman to area foreman. In 1979 his position was made full-time. As area foreman, summer seasons were geared toward the wildland fire program and managing the fire crew. During winter, he focused on the resource management program. Wade managed the personal-use firewood and house log program as well as assisting with field preparation of commercial timber sales.

In March of 1983, Wade attended the Advanced Fire Behavior Officer Course in Marana, Arizona. He was promoted to Forester I in 1984 and given responsibility for administering the Kenai-Kodiak Area forest management resource program. In 1988, Wade was promoted to Forester II. For six years Wade continued with resource program operations during most of the year. In the summer months, he completed took on assignments with class I and class II fire incident management teams as a fire behavior specialist.

In 1990, Wade was transferred to the forest practices program, which remains his current job function. He has consistently achieved high marks on employee evaluations as well as earning two outstanding achievement awards.

In his spare time, Wade experiments with the adaptability of trees species in Alaska. He has planted over 50 different types of trees on his property. Many of the fir and pine species have proven quite successful. Wade also enjoys woodworking and has built numerous cabinets using local Alaskan wood.



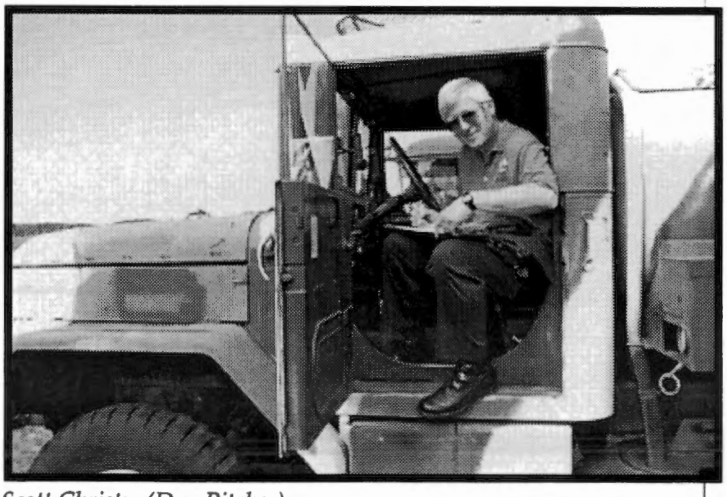
Wade Wahrenbrock (Jim Peterson)

15 Years of State Service

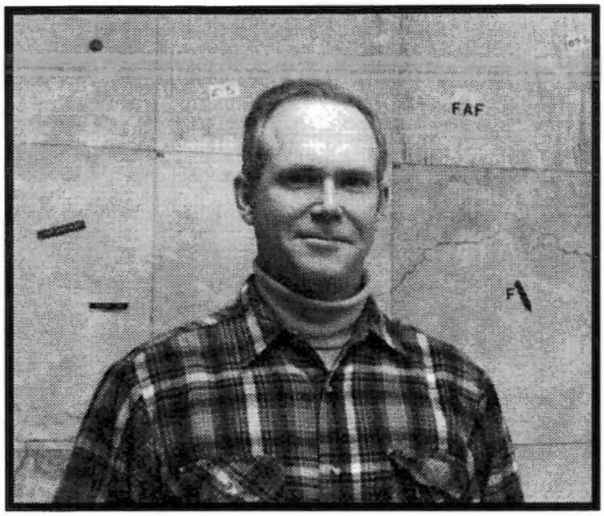
Scott Christy

Scott began work with the Department of Natural Resources in the Division of Geological & Geophysical Surveys in 1982. He was project manger for the resource mapping project. From 1988 to 1990 Scott worked with the State Interest Determination Unit of the Division of Lands. In 1990 he moved to the Division of Forestry and worked on the revision of the Forest Resources and Practices Regulations. Since 1992 Scott has led the division's efforts to remove underground fuel storage tanks and to clean up contaminated sites. Since 1996 he has been working with the fire program and its Federal Excess Personal Property program.

When he is not working, Scott is an avid flyer. He operates a Maule M-6 on floats and wheel skis. He is building a cabin in the wilderness east of Seward. In addition, he enjoys overseas travel, photography, and woodworking.



Scott Christy (Don Pitcher)



Steve Joslin (Joanne Singer)

Steve Joslin

Steve Joslin began his career with the state in 1981, working out of the Haines Area office. In 1985, Steve was transferred to the Delta Area Office. Fellow employees remember him asking as he walked through some possible sale areas, *where are the trees*? He soon got over the shock of interior timber and has been responsible for growth in the timber industry since his arrival.

Some of his notable accomplishments include: expanding the sale offering from 300,000 board feet to 1.5 million board feet annually, maintaining a reforestation program with little or no backlogged acres, constructing more than 100 miles of all-season and winter road, administering an average of 28 sales per year, and experimenting with a cone picker, tree planter, and various harvesting methods.

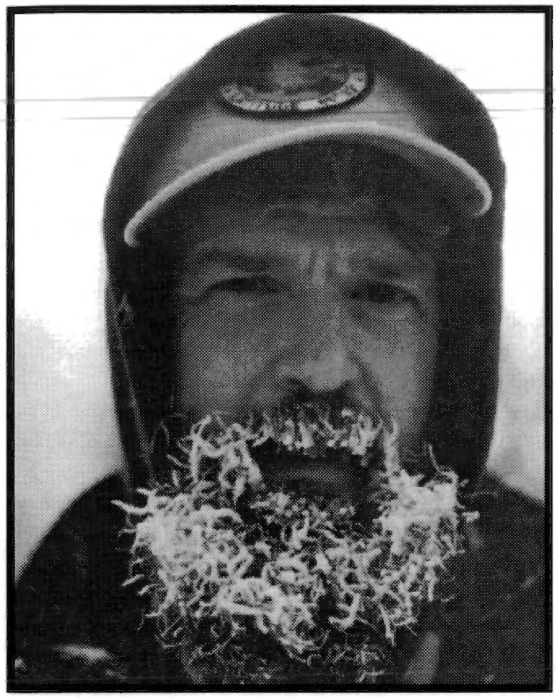
Steve must rely on seasonal staff to accomplish the goals of the resource program and he has made good use of their talents.

Bob Limbean

Bob Limbean has completed 15 years of service to the state. He began his career with the state in 1982, working first in the Eagle River warehouse and later as a mechanic and maintenance worker with the Eagle River shop. In 1990, Bob accepted a transfer to the Mat-Su Area where he continues to serve as the warehouseman/maintenance worker.

Throughout his tenure, Bob has earned and maintained a reputation as the epitome of *Jack of All Trades.* During these 15 years you could find him doing anything from changing spark plugs on a fire pump to driving a dozer in a woodlot. He is just as competent with a wrench or framing hammer as he is with a fire shovel. Bob has driven trucks, issued supplies, graded roads, built bridges, fought fires, swept floors, made signs, fueled helicopters, and fixed just about everything from boilers to snow-machines. He has been a *go to* guy of the first order for his entire career and the Division of Forestry has benefited in many and varied ways from his years of service.

Bob Limbean, far right (Dean Brown)



Gary Reabold (Dave Maxell)

Gary Reabold

Gary Reabold began work for the Division of Forest, Land and Water Management in 1979 as a firefighter in Fairbanks. In 1981, Gary became crew foreman for the Fairbanks area. He fought fires throughout the interior and the Lower 48. Gary cut his teeth on the Delta Barley Project fires and other notable fires such as Munson Creek, Quiring Ridge, Blair Lakes, and Dunes Lakes. When he began working for the division, firefighters were issued a piece of visqueen, a file, and a bug net for their three-week assignment.

Gary transferred to the Fairbanks Area resource program in 1989 as a road engineer and firewood forester. He instituted a computer-aided road design program that automated cut and fill calculations and plotted contract plan and profile sheets, saving a tremendous amount of time over the hand design method.

Gary was responsible for winning a national grant competition for wood bridges sponsored by the USDA Forest Service. The $50,000 grant allowed the Fairbanks Area to construct a 64-foot span wooden bridge using new technology and incorporating local wood products. The University of Alaska Fairbanks, cooperators with the division on the project, designed the bridge and tested a new wood preservative treatment for the white spruce boards that were used in the bridge. Gary has been responsible for many road construction projects, including the construction of five bridges in the Fairbanks Area. Gary remained active in the fire program after his transfer to the resources program. He has served as the operations chief on several class II teams across the state. He has also served as the incident commander on a number of fires in the Fairbanks Area.

Sandra Gabbard

Sandra Gabbard began working for the State of Alaska in 1978 with the Department of Public Safety. She transferred to Health & Social Services and for the next four years worked in several positions as administrative clerk, fiscal accounting, and in the personnel section. Sandy left state employment in 1984, moved to Tok, and built her home. In April 1988, Sandy was hired by the Division of Forestry at the Tok Area Office.

Sandy is the administration clerk for the area and has been involved in several CIP work projects. The latest was the Tok River 180 sale in which she developed the GIS ArcView maps and database. For the last several months she has developed databases, maps, and shape-files to be used in the area's fire pre-attack planning. She also fills in as dispatcher, area forester, and other positions as needed.

During her spare time she enjoys gardening, sewing, cross-stitching, tatting, crocheting, knitting and other handcrafts. This past year she finished a cookbook of her Grandmother's recipes for the family. Sandy is an emergency medical technician III and volunteers several hours a week for the Tok Area Emergency Medical System.

Sandra Gabbard, far left (Chris Christianson)

William Simonsma

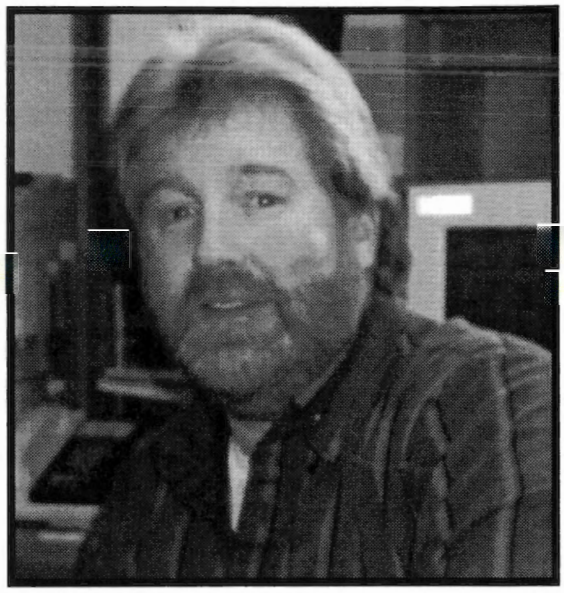
Bill Simonsma came to Cordova, Alaska in 1957 with his family. Bill still remembers the fire engines racing up and down the streets with sirens blaring when Alaska became the 49th state. In 1960 his family moved to Fairbanks where Bill attended local schools and the University of Alaska for four years majoring in fisheries.

In 1973, Bill began his career with the State of Alaska, working for the Department of Fish & Game as a Tech IV out of Seward. The following summer he worked out of Cordova at a remote location on the Copper River. Going straight from high school to college, Bill felt he had not seen enough of the world so he decided to work construction out of the Laborers Hall for a few years.

After six years of construction work, Bill decided to look for something more secure and began working with the Division of Forestry in 1979 as an emergency firefighter. In 1980, he was hired to work in the Fairbanks warehouse as a storekeeper from Local 71. At that time he was the division's only warehouseman in Fairbanks. As the state has taken over protection of more state land, the warehouse has grown to five employees and up to 50 emergency firefighters during the fire season. Bill has seen the warehouse go from tracking everything manually on index cards, to becoming fully automated with computers. He helped develop the warehouse computer program being used and oversees development and printing of the division's Catalog of Fire Supplies and Equipment every year. In 1984, Bill received the outstanding Achievement Award for the Division of Forestry for development of the division's warehouse catalog.

Bill works closely with the Alaska Fire Service on standardizing kits and policies involving warehouse matters. He helped write the Standard Operating Procedures and Policy & Procedures Manual for the division's warehousing. Bill has helped evolve the warehousing system within DOF into a statewide operation that is recognized nationally as a major fire cache. In his current position as lead warehouseman cache manager for DOF, he oversees statewide operations. Bill also serves as the property custodian for the Northern Region.

Bill is active in the community, serving on the Chena Riverfront Commission and the Helen Snedden Memorial Park Advisory Committee.



Bill Simonsma (Karen Gordon)

CITIZEN ADVISORY GROUPS

12/98

Alaska Board of Forestry

Richard Carle, Jr., Native corporation, Craig

Debra Clausen, non-governmental fish or wildlife biologist, Seward

Lawrence Hartig, recreational organization, Anchorage

Jeff Jahnke, State Forester, Juneau

William Jeffress, mining organization, Fairbanks

Chris Maisch, non-governmental forestry, Fairbanks

Richard Smeriglio, environmental organization, Seward

John Sturgeon, forest industry trade association, Anchorage

Paul Swartzbart, commercial fishermen's organization, Cordova

Tanana Valley State Forest Citizens' Advisory Committee

Frank Burris, Upper Tanana Valley representative, Delta Junction

Robert Charlie, Native community, Fairbanks

Brad Cox, value-added processing, Delta Junction

Tom DeLong, tourism industry, Fairbanks

Gilbert Ketzler, Sr., Lower Tanana Valley representative, Nenana

Audrey Magoun, fish/wildlife interests, Fairbanks

Chris Maisch, forest industry, Fairbanks

Ron Ricketts, private forest-user, Fairbanks

Roger Siglin, environmental interests, Fairbanks

Shelly Stephenson, mining industry, Fairbanks

Bill Studebaker, recreation, Fairbanks

Trish Wurtz, forest science, Fairbanks

Forest Stewardship Coordinating Committee

Ted Berry, landowner, Willow

Steve Bush, USDA Forest Service, Anchorage

Jeff Graham, Division of Forestry, Soldotna

Max Huhndorf, Gana-A' Yoo, Ltd., Galena

Glen Anderson, USDI Bureau of Indian Affairs, Anchorage

Karen Olsen, USDA Farm Service Agency, Palmer

George Matz, The Audubon Society, Anchorage

Cal Miller, USDA Natural Resources Conservation Service, Anchorage

John Mohorcich, Kenai Peninsula Borough, Soldotna

Paul Slenkamp, Ketchikan Pulp Company, Ketchikan

Ted Smith, Consulting Forester, Willow

Dr. Bob Wheeler, Alaska Cooperative Extension, Fairbanks

Evie Witten, The Great Land Trust, Anchorage

Dick Zobel, Natural Resource Conservation & Development Board, Wasilla

Alaska Urban & Community Forest Council

Dave Casey, member-at-large, Anchorage

Edward Baker, horticulture, Wasilla

Lisa Crum, member-at-large, Anchorage

Michael Fastabend, Alaska Cooperative Extension, Anchorage

Bill Jardel, arborist, Palmer

Jonnie Lazarus, community forestry and beautification, Girdwood

Christopher Mertl, landscape architect, Juneau

Oscar Frank construction/right-of-way, Fairbanks

Michael Rath, forester, Naknek

Beverly Richardson, member-at-large, Petersburg

Arlene Rosenkrans, small community service, Copper Center

Michelle Weston York, member-at-large, Girdwood

Diane Wood, business/industry, King Salmon

vacant, municipal planner

Fiscal Year 1998 Actuals[1]

Funding Sources	Forest Mgmt. & Develop.[2]	Fire Suppression	Total
General Funds	$7,199.2	$23,686.1	$30,885.3
Federal Funds	1,029.7	8,379.4	9,409.1
Capital Improvement Receipts	492.7	—	492.7
Interagency Receipts	843.2	—	843.2
General Fund/ Program Receipts	14.6	14.6	28.8
Totals	**$9,579.0**	**$32,080.1**	**$41,659.1**
Positions			
Permanent Full-Time	62	6	68
Permanent Part-Time	117	34	151
Non-Permanent	17	733	750
Total Positions	**196**	**773**	**969**
Staff Months	**1,454**	**1,734**	**3,188**

Forest Management & Development Component

Renewable Resource Development & Sales	Coastal Region	Interior Region	Northern Zone	Southern Zone	Statewide	Total
Board of Forestry	—	—	—	—	15.0	15.0
Forest Practices	378.1	—	—	—	48.9	427.0
Forest Stewardship	230.4	483.0	—	—	161.8	875.2
Reforestation	58.7	189.2	—	—	—	247.9
State Timber Sales	350.0	498.7	—	—	104.2	952.9
Capital Improvement Receipts	201.8	290.9	—	—	—	492.7
General Fund/Program Receipts	—	—	—	—	14.2	14.2
Senate Bill 83 / Mat-Su Access	43.0	—	—	—	—	43.0
Unbudgeted RSAs	—	—	—	—	843.2	843.2
Subtotals	**$1,262.0**	**$1,461.8**	**—**	**—**	**$1,172.3**	**$3,896.1**
Wildland Fire Protection Services						
Anchorage School District Interns	34.5	—	—	—	—	33.4
Pre-suppression	1,629.4	1,031.0	528.9	632.6	377.9	4,199.8
Rural Community Fire Protection (Fed.)	—	—	—	—	77.5	77.5
Rural Fire Prevention & Control (Fed.)	—	—	16.3	59.8	112.9	189.0
Subtotals	**$1,663.9**	$1,031.0	**$545.2**	**$692.4**	**$568.3**	**$4,500.8**
Forest Administration						
Federal Cooperative Forestry Assistance	—	—	—	—	763.2	763.2
Director's Office	—	—	—	—	418.9	418.9
Subtotals	—	—	—	—	**$1,182.1**	**$1,182.1**
TOTALS	**$2,925.9**	**$1,461.8**	**$545.2**	**$692.4**	**$2,922.7**	**$9,579.0**

[1] All dollar figures are in thousands. For actual number, move decimal three spaces to the right, e.g., 686.5 is 686,500.

[2] Includes the cost of fire pre-suppression (cost of being prepared to fight fires)

Fiscal Year 1999 Budget [1]

Funding Sources	Forest Mgmt. & Develop.[2]	Fire Suppression	EFF Non-Emergency	Total
General Funds	7,136.9	3,175.1	—	10,312.0
Federal Funds	1,416.6	5,319.6	—	6,736.2
Capital Improvement Receipts	242.7	—	250.0	492.7
Interagency Receipts	49.9	—	—	49.9
General Fund/Program Receipts	14.2	—	—	14.8
Totals	**$8,885.9**	**$8,494.7**	**$250.0**	**$17,630.6**
Positions				
Permanent Full-Time	62	6	—	68
Permanent Part-Time	117	35	—	152
Non-Permanent	17	733	—	750
Total Positions	**196**	**774**	—	**970**
Staff Months	**1,488**	**1,734**	—	**3,225**

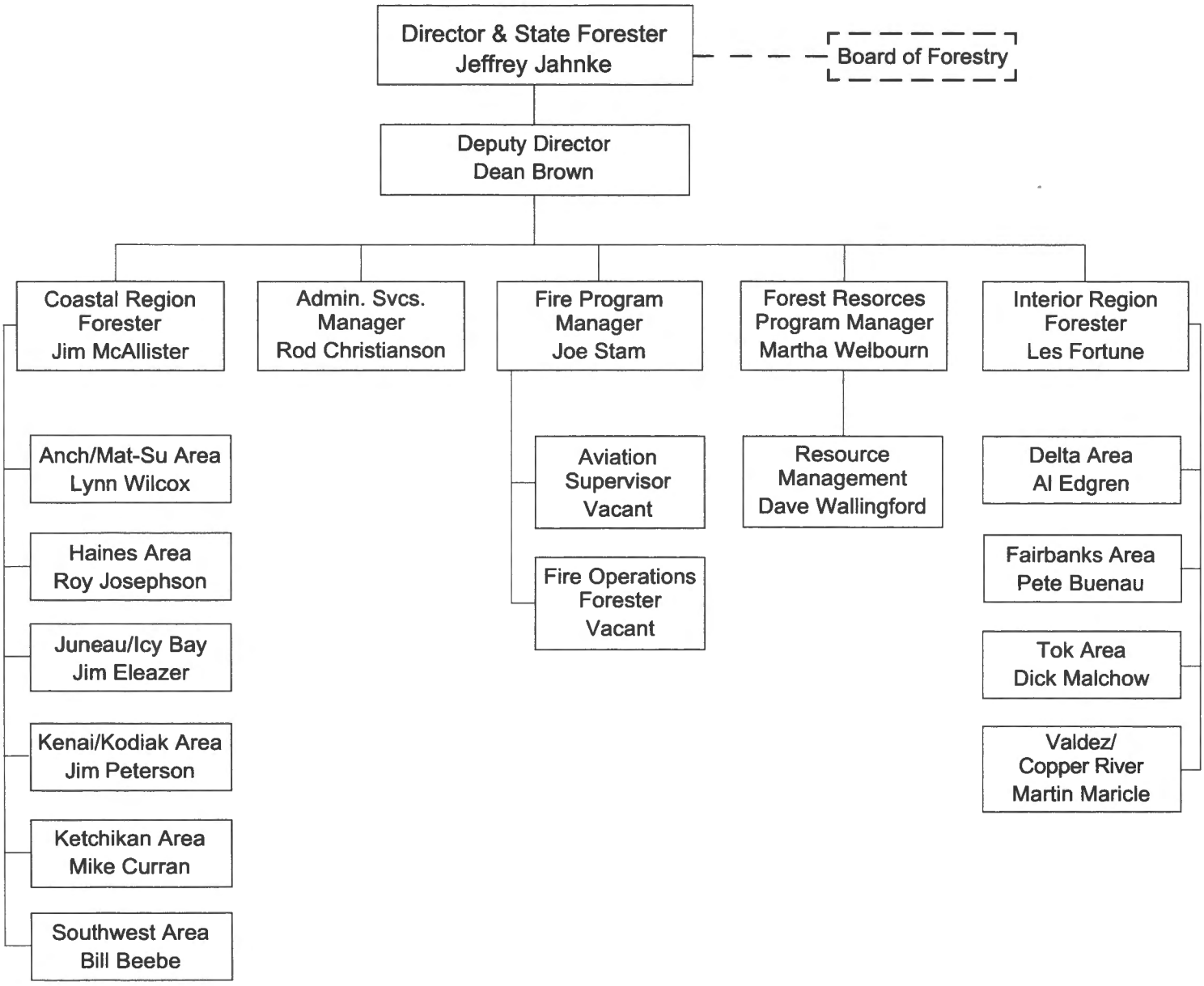
Forest Management & Development Component

Renewable Resource Development & Sales	Coastal Region	Northern Region	Statewide	Total
Board of Forestry	—	—	9.1	9.1
Forest Practices	355.1	—	50.8	405.9
Forest Stewardship	262.2	480.4	128.3	870.9
Reforestation	65.0	180.0	—	245.0
StateTimber Sales	333.1	478.5	117.9	929.5
School Land Trust	—	—	25.0	25.0
Capitol Improvement Receipts	—	—	225.7	225.7
General Fund/Program Receipts	—	—	14.8	14.8
Subtotals	**$1,015.4**	**$1,138.9**	**$571.6**	**$2,725.9**
Wildland Fire Protection Services				
Anchorage School District Interns	38.9	—	—	38.9
Pre-suppression	2,101.4	1,777.6	409.9	4,288.9
Rural Community Fire Protection (Fed.)	—	—	75.0	75.0
Subtotals	**$2,140.3**	**$1,777.6**	**$484.9**	**$4,402.8**
Forest Administration				
Federal Cooperative Forestry Assistance	—	—	1,341.6	1,341.6
Director's Office	—	—	415.6	415.6
Subtotals	—	—	**$1,757.2**	**$1,757.2**
TOTALS	**$3,155.7**	**$2,916.5**	**$2,813.7**	**$8,885.9**

[1] All dollar figures are in thousands. For actual number, move decimal three spaces to the right, e.g., 686.5 is 686,500.

[2] Includes the cost of fire pre-suppression (cost of being prepared to fight fires)

DIVISION OF FORESTRY ORGANIZATION CHART



DIVISION OF FORESTRY DIRECTORY

3/99

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Jeff Jahnke

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Martha Welbourn, 269-8473

Resource Management
Dave Wallingford, 269-8450

Urban & Community Forestry Program
Dan Ketchum, 269-8466

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(Insects and Disease)
Roger Burnside, 269-8460

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Joe Stam, 451-2673

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Jim Lewandoski, Fire Mgmt. Officer

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451-2666

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Vacant, Area Forester

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Martin Maricle, Area Forester

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Al Edgren, Area Forester

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Dick Malchow, Area Forester

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Mike Curran, Area Forester

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McGrath, Alaska 99627
524-3010 fax: 524-3932
Bill Beebe, Area Forester

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 present

This publication was released by the Alaska Department of Natural Resources to provide information about operations of the Division of Forestry during 1998. Seven hundred copies of the report were printed in Anchorage, Alaska at a cost of $3.82 per copy.

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Alaska Department of
NATURAL
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