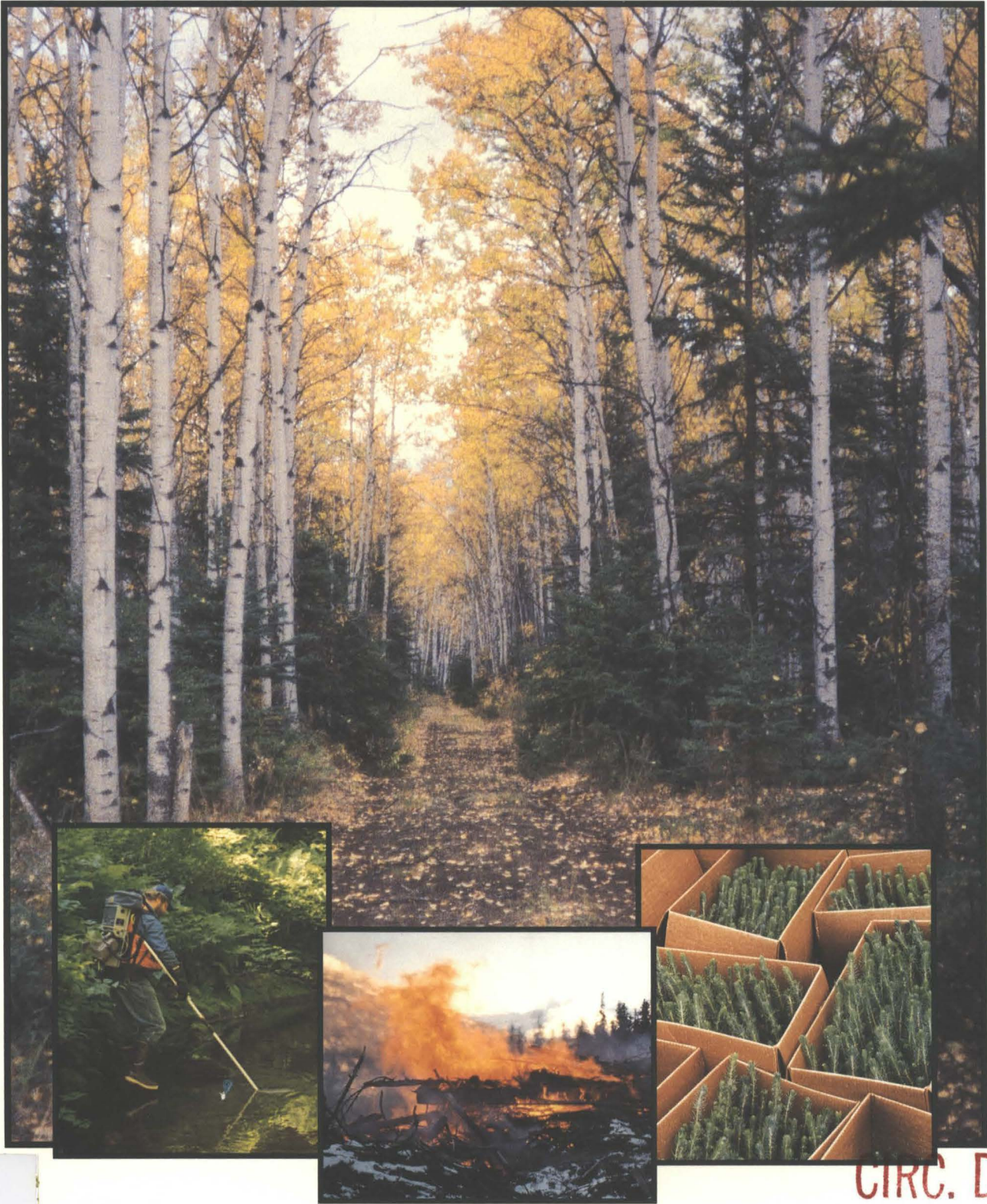


**ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY**



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Alaska Department of Natural Resources

Division of Forestry

1995

Annual Report

**State Forester's Office
400 Willoughby Avenue
Juneau, Alaska 99801
(907) 465-3379**

This publication was released by the Alaska Department of Natural Resources to provide information about operations of the Division of Forestry during 1995. Five hundred forty copies of the report were printed in Anchorage, Alaska at a cost of \$4.28 per copy.

The 1995 Annual Report was produced by Patricia Joyner, Division of Forestry. Cover by Robin Hall, Division of Land, Technical & Data Support Unit.

Cover photographs: Large photo by Al Edgren. Small photo on left by Chris Westwood and small photo on right by Marty Welbourn.

Alaska Division of Forestry

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

The division's mission is to protect the state's forested land and forest resources, and to manage them for multiple use and sustained yield.

The Division of Forestry:

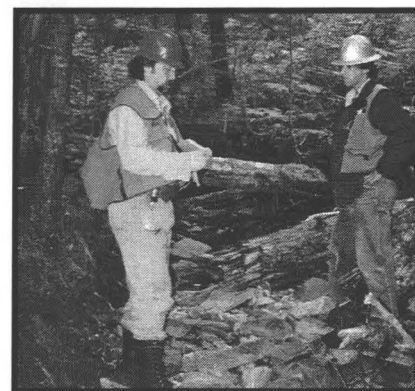
- protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act;
- manages a wildland fire program on public, private, and municipal lands;
- encourages development of the timber industry and 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;

Forestry 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 1995 the division employed 73 people full-time, 155 seasonally, 17 interns, and about 733 as emergency firefighters.



(Scott Christy)



(Chris Westwood)

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(Judy Reese)



(Scott Christy)

State Forester's Comments

The *1995 Annual Report* describes accomplishments and operations during the calendar year. The year brought record stumpage receipts and a continued increase in the amount of active forest management. We were able to increase timber offerings and accomplish a record amount of reforestation because of strong support from the governor and the legislature and a hard-working organization. A very quiet fire season, likely the least costly ever in real dollars, also contributed to increased timber offerings and reforestation.

Due in part to the salvage of dead and dying timber, the division has offered 60 million board feet of timber to the public during the 12 months preceding this writing. Forestry prepared timber sales, on contract, for the Mental Health Trust Lands Unit and the Bureau of Land Management.

During 1995 the division continued to increase the amount of reforestation required of operators on state timber sales. Because the state timber sale program relies upon adequate reforestation, and because funds for reforestation will become even more difficult to obtain, the division will continue giving more responsibility for reforestation to the operator. The accumulated acreage harvested in the distant past that created a reforestation backlog was almost eliminated during 1995.

During 1995 the level of fire protection was reduced on 1.5 million acres. Included in that amount is 850,000 acres of state land that was reduced from the full protection category to the limited option, and 50,000 acres of state land that was reduced from modified protection to limited.

There were 421 wildfires in the state, of which 358 were human-caused. Wildfires burned about 44,000 acres, the least recorded since 1978. Nearly 38,000 acres burned in the 11 fires that were larger than 1,000 acres. Since 1955 there have been only 14 years when wildfires burned less than 100,000 acres, and eight years when more than one million acres burned in Alaska.

Governor Knowles and the Eighteenth Alaska Legislature deserve thanks from the Division of Forestry for their support of forest management. Last June, Governor Knowles signed House Bill 121 into law, allowing salvage sales to go through an expedited public process

and be offered to the public in a timely manner. Capital funds were appropriated and signed into law for preparation of salvageable timber for sale in many parts of the state. All of those sales are on schedule or are substantially ahead of schedule. A thorough description of statewide forest insect and disease conditions appears in the report.

The Board of Forestry advised and assisted the Division of Forestry throughout the year, met four times, and reported to the governor and the legislature. The board is an independent forum for forest practices ideas, a facilitator in the resolution of resource conflicts, and a technically experienced body for providing advice to the division. The Board of Forestry used its ability to build consensus among interest groups to help the Eighteenth Legislature on House Bill 212, a bill which would modify public process requirements for state timber sales, and House Bill 344, Governor Knowles' value-added timber bill. The Board of Forestry looks for sound science, good process and a balanced compromise. The administration sees the Board of Forestry as a consensus-building group since it represents landowners, environmentalists, recreationists, and commercial fishing and timbering interests.

The Forest Resources and Practices Act is a major responsibility of the division. Guidance from the Board of Forestry and the cooperation of other agencies are important in continuing to efficiently perform division responsibilities. The strong and steady support provided by the industry and landowners is essential to the extensive protection found in the act. Questions about some aspects of the act must continue to be answered in the field and there was a record number of field inspections in 1995.

Budget realities have and will continue to bring an examination of programs for cost-effectiveness. The timber sale program will absorb budget reductions, with programs that are least cost-effective being cut first. The Tok Timber Sale Forester position that was held vacant since 1995 is expected to be eliminated along with other positions. While the timber sale program as a whole brings a strong net return to the state, personal use and commercial timber sale programs that are not cost-effective will be reduced as the operating budget is reduced.

continued

The division is able to accomplish more with fewer people. Division of Forestry personnel work hard, safely, and professionally. They put in the extra time and effort required to explain plans and activities on public land and cope with real decreases in money and personnel. Some of the accomplishments noted here required all-night work on maps and documentation. Fire suppression personnel fought fires in the Yukon and fought floods in Southcentral. Forestry personnel contributed their own time to represent the division at a variety of conventions, write journal articles, and explain forestry issues at every forum.

1995 was my second full calendar year at the Department of Natural Resources. I continue to appreciate the opportunities for personal growth and hard work. On days when there are challenges to making any sort of headway I remind myself that the Division of Forestry is responsible to the public and that the public deserves progress and production. Please let me know of your concerns and ideas.

Thank you.

Tom Boutin
Alaska State Forester

The *1995 Annual Report* is dedicated to the public that participate in our processes. The public process is of paramount importance to being able to proceed with many of our programs, particularly the management of state forest land. All interests and all stakeholders need to be involved. The willingness of people to be involved relies on the confidence they have in the Division of Forestry. The public needs to know that their comments and concerns can influence outcomes and that their involvement precedes any decisions. The division will continue to learn to listen to the public, produce better documentation, and improve process.

Tom Boutin
Alaska State Forester

Highlights of 1995

Resource Management

- State timber sales provided a record \$2.1 million to the state treasury in 1995.
- The division issued 643 personal use fuelwood permits; made 18 personal use house log sales and 13 personal use saw log sales.
- The division issued 40 commercial saw log and 12 commercial fuelwood contracts. It registered 74 log brands.
- The number of beach log salvage sales grew from 33 in 1994 to 50 in 1995, the third consecutive year of growth.
- The Division of Forestry planted 552,657 seedlings on 1,234 acres of state land.
- The Urban & Community Forestry Program gave 19 grants to 12 communities for a total of \$19,825 (federal funds). Local communities matched the grants with over \$38,000 in funds and services.
- The division held 21 Project Learning Tree workshops, attended by 273 teachers and resource professionals in 20 communities. Division staff also led five graduate-level courses.
- Forest Stewardship Program foresters helped a record-high number of private forest landowners prepare stewardship plans. Fifty-seven landowners completed plans for 5,335 acres.

Forest Resources & Practices

- The division processed 216 forest practices notifications of timber harvest and 54 renewals of harvest on 71,123 acres, and conducted 242 field inspections.
- Variation requests dropped 44 percent statewide in 1995. The number of trees considered for variations decreased by 60 percent.
- The Board of Forestry held four meetings around the state, talking with the public and interest groups about the Forest Resources and Practices Act, and working with the administration and the legislature on forestry legislation.

Fire Management

- In cooperation with federal agencies, the division provided fire protection for 134 million acres of private, municipal, and state land.
- Nearly 44,000 acres burned in 421 wildfires statewide in 1995, the least recorded since 1978.
- Emergency firefighters collected more than \$1 million in state and federal wages.
- The Division of Forestry administered 23 federal Rural Community Fire Protection Grants totaling \$75,000.
- The division played a major role in South-central Alaska flood relief efforts by providing personnel, equipment, and supplies.

Forest Resources & Practices

The Division of Forestry administers the Forest Resources and Practices Act (FRPA) by reviewing notifications of timber harvest, conducting forest inspections, encouraging compliance, and taking appropriate enforcement action when necessary. An important aspect of the program is educating 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 harvesting plans (notifications) to the Division

of Forestry for review. The division then coordinates review of notifications 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. Operators generally submit notifications well in advance of beginning operations.

Some operations receive more than one field inspection due to the location or relative importance of the site. 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.

1995 Activities

The number of new notifications of operations increased slightly statewide in 1995. The total acreage being harvested in Southeast declined by about 30 percent, while increasing by 35 percent in Southcentral. Harvesting decreased in Prince William Sound but nearly doubled in the Kenai/Kodiak area and increased sixfold in the Copper River basin. Forest practices activities on private land in the Interior remained low and the acreage of active harvesting declined. The state increased inspections in Southcentral Alaska and assigned additional staff to process FRPA documents in the Kenai/Kodiak Area.

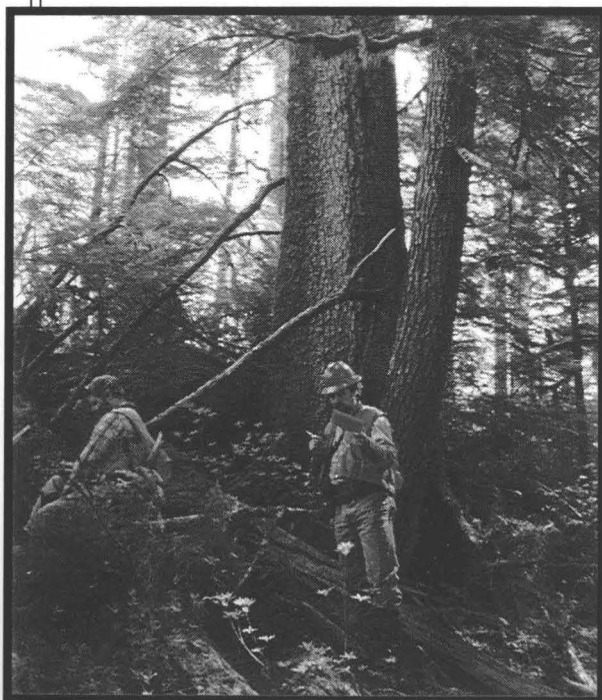
The number of variation applications declined in all areas. Variations dropped 44 percent statewide. The Ketchikan and Juneau/Icy Bay areas were the only areas that received variation requests. The number of trees considered for variations decreased by 60 percent, from 2,642 trees in 1994 to 1054 trees. There were four violations this year, down from nine in 1994. No decisions were elevated to the director or the commissioner level.

The division continued an active training program by offering nine training sessions in Southcentral and Southeast for staff and operators. Forestry also provided training to operators in the Kenai/Kodiak and Mat-Su areas. This training may be contributing to the reduction in the number of violations.

The forest practices research and monitoring program accelerated in 1995. Accomplishments include the following:

- Forestry continued monitoring the best management practices through FRPA inspections.
- DNR and DEC began developing an implementation monitoring strategy.
- DNR, DEC, ADF&G, and affected landowners and managers began work on standards and procedures for routine implementation monitoring for the best management practices in the FRPA regulations. Forestry completed a draft plan for review in early 1996.
- Forestry, Sealaska Corporation, Konkor Forest Products, and the Alaska Forest Association adopted a Cooperative Agreement. The cooperators will develop and implement comprehensive monitoring plans to assess the

John Karoly (Forestry) and Jim Durst (Fish and Game) evaluate a tree on a variation request to harvest trees in a riparian buffer on an island in Klawock Lake. State agencies inspect all requests before determining whether the tree can be cut without harming fish habitat or water quality. (Chris Westwood)



effectiveness of the FRPA and regulations in protecting water quality and fish habitat. DNR and DEC are working together to develop these monitoring programs.

- DNR funded a study of the effect of timber harvest on gravel where salmon spawn and on stream channel stability in the Ninilchik River basin. Extensive harvesting is occurring on Native-owned and state land in the Ninilchik watershed. Data collection began in the summer of 1995.

- DNR also funded a study on the effect of road and bridge construction on Nataga Creek in the Haines area. The study concluded that the bridges do not threaten fish habitat but do alter natural sediment movement in the creek. The study recommended improvements for the bridge site.

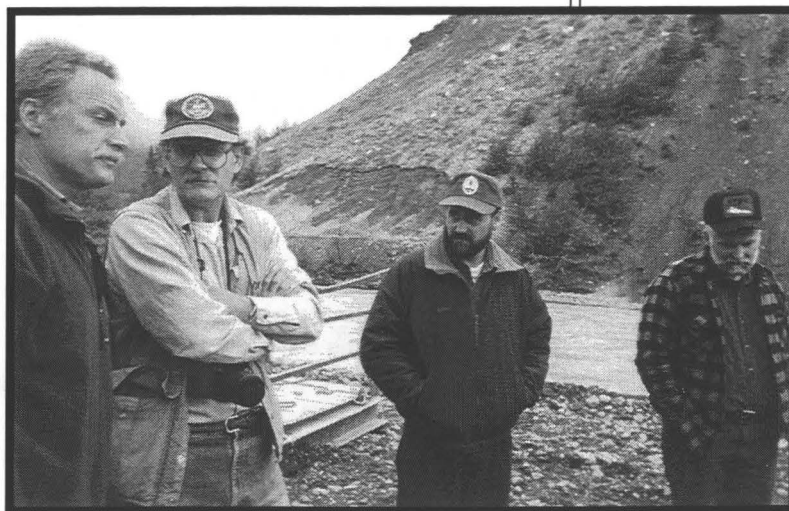
- DNR continues to work with the Alaska Working Group on Cooperative Forestry and Fisheries Research on stream studies. The studies have collected data on 49 stream segments in 14 basins. This was the fourth season of data-gathering. Enough data is now available to begin identifying trends or changes in habitat conditions. DNR is helping to fund analysis of this year's data. A second year of base line data was collected in the Michael Creek Study, and the first year of data was gathered after timber harvesting.

Forest Resources and Practices Workshop

Forestry's Kenai/Kodiak Area sponsored a workshop in April on the provisions of the Alaska Forest Resources and Practices Act and Regulations. Forest products industry representatives and forest landowners from south-central Alaska attended the workshop.

Representatives of the state and local agencies that review timber harvest plans and monitor FRPA compliance spoke. Klukwan Forest Products and Koncor Forest Products staff provided a forum for industry representatives to discuss their viewpoints about the importance of FRPA legislation and requirements.

Speakers described the informational requirements for timber harvest plans, forest road construction standards, use of large spruce material to reduce the risk of spruce bark beetle infestations, and reforestation requirements. The workshop also included a review of the principal compliance standards in the FRPA program.



Forest practices inspection on the Kotsina River. (l to r) Dan Sailors, Copper River Forest Products; Steve Albert, Fish and Game; and foresters Jim Eleazer and Tom Liebscher. (Martin Maricle)

Forestry and Fisheries Research Working Group

The Alaska Working Group on Cooperative Forestry and Fisheries Research coordinates efforts by state and federal agencies and private industry to identify, plan, initiate, and support cooperative research on forest practices and fish habitat issues. The group identifies problems, establishes priorities, and develops cooperative research programs.

Less research was conducted by all parties in 1995. The USDA Forest Sciences Lab and private industry continued research with help from federal Section 319 grants. Participation by some federal agencies was restricted due to reservations over the applicability of the Federal Advisory Committee Act requirements.

The working group approved two publications in 1995. The first, *A Preliminary Assessment of Fish Habitat and Channel Conditions for Streams on Forested Lands of Southeast Alaska*, covered the second year of a study being done by Pentec Environmental, Inc. This ongoing study addresses changes in channel conditions and fish habitat following timber harvest on private lands under the FRPA. The second publication, *Handbook of Criteria for Forest Practices Implementation Monitoring* (Technical Report 95-02), was produced by the working group's subcommittee on monitoring.

Two new technical subcommittees were formed by the working group in 1995. One will update the group's list of research priorities and the second will develop standardized stream survey protocols.

Alaska Board of Forestry

The nine-member Board of Forestry advises the state on forestry issues related to the Forest Resources and Practices Act and regulations. Board members, who are appointed to three-year terms by the governor, represent a wide range of interests and bring a broad perspective to forestry issues.

Last spring Governor Knowles appointed Steve Kallick to the environmental organization seat. During the summer the governor reappointed John Sturgeon to the forest industry association seat, and appointed Bill Thomas to the Native corporation seat, Don Schmiede to the nongovernmental fish or wildlife biologist seat, and Paul Swartzbart to the commercial fishing organization seat. The other seats are held by Andy Miscovich, mining organization representative; Daryl McRoberts, nongovernment forester; and Larry Hartig recreational organization representative. State Forester Tom Boutin is the presiding officer.

The Board of Forestry held three hearings as required by state statute. The hearings took place in Juneau on April 18, in Fairbanks on June 9 and in Anchorage on September 18. Each meeting was teleconferenced to DNR offices and legislative information offices around the state.

A fourth meeting was held on November 16 after the governor's office asked the board to provide a public forum to discuss House Bill 344. Comments from that meeting were provided to DNR and the House Resources Committee (HRC).

At the request of the House Resources Committee, the board reviewed House Bill 212, which proposes to amend the FRPA. The board made recommendations to the HRC in September.

Members of the public raised forest health issues at several board meetings. The board did not directly address forest health but was briefed on the state timber sale program, including salvage timber sales, and the Kenai timber management program. Proposed regulations for which public review began on January 5, 1996, include regulations that define salvage timber. The proposed regulations include an amendment to FRPA regulations on exemptions from reforestation requirements.

The board reviewed research on the division's stream monitoring strategy. Research includes surveys of stream geomorphology, fish habitat, and water quality standards; studies on windthrow in riparian areas; and review of best management practices. The board also learned of the privately-funded research by Pentec and the Alaska Working Group on Cooperative Forestry and Fisheries Research. The Pentec evaluation of timber harvest impacts on streams will go to the Working Group, as will research results from Forestry and others.

The board discussed cuts in the governor's Fiscal Year 1996 operating budget for the Department of Fish and Game's Habitat Division, and potential impacts to ADF&G's responsibilities for the FRPA. The board recognizes that a strong field presence is extremely important.

The board examined follow-up to the Lieutenant Governor's March meeting in Fairbanks on Tanana Basin Forest Planning issues with the Alaska Boreal Forest Council. As a result, the board passed a resolution supporting Boreal Forest Council recommendations to complete and publish the Tanana Valley State Forest inventory report.

The board discussed a variety of issues such as the Kenai Peninsula/Moose Pass Forest Health Initiative; the administrative appeal by Trustees for Alaska; Forestry's operating budget and implications for state timber sale programs; reforestation requirements; a timber inventory of the Tanana Valley State Forest that includes allowable cut and biological capacity figures. Board members reviewed the results of the Seward Sawmill Recovery Study; the U.S. Forest Service's proposed alternative for Moose Pass; Forestry's five research and monitoring projects; and a timber observer program proposal by the United Fishermen of Alaska.

The board extends extra effort to ensure that the public and interest groups are notified about its work. It brings agencies and the public together to discuss issues related to the Forest Resources and Practices Act. By working with landowners, timber operators, agencies, and other members of the public, the board helps ensure that the FRPA is carried out effectively.

Forest Resources & Practices Act

Administrative Activities on Private Land

Harvest Plan Notifications				Harvest Plan Renewals			Active Harvest Acreage			Number of Inspections			Number of Variations		
Coastal Region	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
Ketchikan	118	114	107	54	27	23	23,427	26,466	15,761	84	94	63	24	20	13
Juneau	27	10	24	3	5	5	5,342	6,572	6,984	14	25	30	15	14	10
Haines	8	0	3	0	1	3	824	100	227	8	1	5	0	0	0
Anch/Mat-Su	22	38	25	17	10	16	9,727	20,405	4,009	32	32	48	2	5	0
Kenai/Kodiak	33	33	46	9	13	9	29,588	10,270	18,479	44	53	72	3	2	0
Reg. Total	208	195	205	83	56	56	68,908	63,813	45,460	182	205	218	44	41	23
Interior Region															
Fairbanks	1	1	0	0	0	0	227	23	0	2	1	0	0	0	0
Delta	0	0	2	0	0	0	0	0	213	0	0	1	0	0	0
Tok	3	3	0	1	3	1	4,351	9,637	1,050	1	3	2	0	0	0
Copper River	0	5	9	0	1	2	0	4,077	24,400	0	8	22	0	0	0
McGrath	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reg. Total	4	9	11	1	4	3	4,578	13,737	25,663	3	12	25	0	0	0
State Total	212	204	216	84	60	59	73,486	77,550	71,123	185	217	242	44	41	23

Number of Trees Reviewed				Insects: Acres Reviewed			Regeneration: Acres Reviewed			FPA Violation Admin. Actions		
Coastal Region	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
Ketchikan	926	605	484	0	0	0	0	0	0	7	2	1
Juneau	2,655	1,055	570	0	0	0	0	0	0	0	1	2
Haines	0	0	0	0	0	0	0	0	0	0	0	0
Anch/Mat-Su	9	364	0	0	0	0	640	0	5,609	2	1	0
Kenai/Kodiak	406	618	0	2,800	2,450	15,185	650	900	0	4	3	0
Reg. Total	3,996	2,642	1,054	2,800	2,450	15,185	1,290	900	5,609	13	7	3
Interior Region												
Fairbanks	0	0	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0	1	0
Copper River	0	0	0	0	0	0	0	0	0	0	1	1
McGrath	0	0	0	0	0	0	0	0	0	0	0	0
Reg. Total	0	0	0	0	0	0	0	0	0	0	2	1
State Total	3,996	2,642	1,054	2,800	2,450	15,185	1,290	900	5,609	13	9	4

Resource Management

The Division of Forestry manages state forested land and resources for multiple use and sustained yield. This includes management of two state forests, the Tanana Valley and the Haines, with a combined total of more than two million acres. The division encourages development of the timber industry and forest products markets and conducts personal-use and commercial timber and fuelwood sales.

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, both rural and in communities.

State timber sales provided a record \$2.1 million to the state treasury in 1995.

Timber Development

Timber Salvage Bill Enacted

In 1995 Governor Knowles signed into law a bill exempting salvage sales from five-year schedule requirements. Unlike other sales, salvage sales do not have to appear on the two Five-Year Schedules of Timber Sales preceding the sale offering. Salvage sales include stands *that will lose substantial economic value because of insect or disease epidemics or fire, if not salvaged within two years. Timber on land to be cleared for conversion to nonforest uses also may be offered as a salvage sale* (AS 38.05.117). To provide comprehensive review of state timber sales, the division will continue to include salvage sales on the five-year schedule whenever possible, at least for one year.

The salvage bill also changed AS 38.05.118, the "Schnabel Law." This statute allows DNR to negotiate timber sales in areas with high unemployment, under-utilized timber manufacturing capacity, and available state timber. The changes extend this opportunity to areas that will meet these conditions within two years. It also allows use of salvage timber.

Coastal Region Salvage Sales

The Coastal Region had a very active year preparing and selling salvage timber sales from the Kenai-Kodiak Area to Haines and Ketchikan. A total of 22 sales were sold with a volume of about 32 million board feet of Sitka spruce, hemlock, and white spruce (both sawlogs and utility grade). Almost all the volume sold was from stands infested by the spruce bark beetle.

Receipts from regional timber sales and beach log salvage totaled nearly \$1,390,000 in 1995. Most of this was from sales on the Haines State Forest where Ketchikan Pulp Corporation and Rayonier Inc. harvested nearly 12 million board feet of blowdown and bark beetle infested timber. Much of the volume went to the pulp mill in Ketchikan.

Interior Region Salvage Sales

Interior Region staff began field work as soon as salvage sale funding became available in July. By December, the Fairbanks Area had sales prepared for 2.8 million cubic feet of sawlog and fuel wood on 1,095 acres. The Delta Area laid out 1.8 million cubic feet of volume on 1,419 acres. All 15 Fairbanks sales and six of Delta's 14 sales were scheduled to be sold in January, 1996. Any sales that remain will be offered later in 1996 and 1997.



DNR Commissioner John Shively (left) and Kenai/Kodiak Area Forester Jim Peterson inspect the site of the Falls Creek Timber Sale, a salvage sale on the Kenai Peninsula. (Marty Welbourn)

Beach Log Salvage

Beach log salvage operators recover valuable forest products abandoned in the coastal waters and on the beaches of the state. The division's program to salvage these valuable logs continues to grow. For the third consecutive year, demand for salvage licenses nearly doubled and the high level of interest shows no sign of abatement. The division issued 48 licenses and salvagers recovered 1,383,561 board feet of timber in 1995. Record high pulp prices early in the year stimulated interest.

The number of active licenses is a reflection of log prices since the cost of the one-year license is fixed. Since 1993, at least two people have expressed interest for each open area. Applications for one open area reached an all-time high of seven this year. In addition, the number of inquiries and requests for information packets more than doubled. The Ketchikan Office distributed 170 information packets, created three new salvage areas and took action on two timber theft cases.

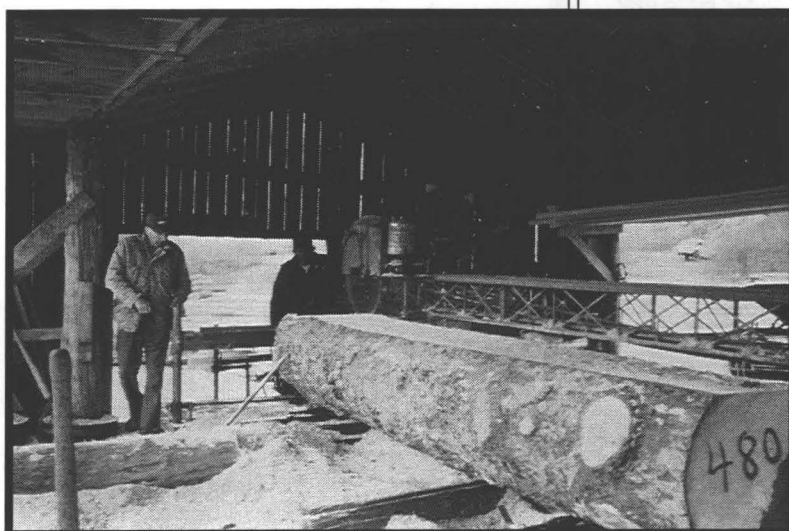
Applicants are required by regulation to have a current registered Alaskan log brand and an Alaska Business License, both of which provide revenue to the state.

Log Brands in 1995

The division issued 74 log brands in 1995. Forty-five brands were renewed and 29 new brands were registered. In 1994, 24 brands were renewed and 48 new brands were registered for a total of 72.



Rafts of salvaged beach logs at a sort yard north of Ketchikan. Nearly 1.4 million board feet of timber was salvaged through the state's beach log salvage program in 1995. (Chris Westwood)



Buster Benson, B & D Lumber in Haines, milling lumber from the Haines State Forest. (Roy Josephson)

Timber Sold and Cut on State Land 1983 ~ 1995

Year	Annual Sales Volume	Annual Cut Volume	Cut Value
1983	72,145 MBF	35,511 MBF	\$402,774
1984	21,087 MBF	28,044 MBF	\$833,793
1985	20,178 MBF	12,864 MBF	\$192,109
1986	10,469 MBF	18,995 MBF	\$233,862
1987	27,588 MBF	25,884 MBF	\$379,540
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	24,105 CCF	63,702 CCF	\$1,090,164*
1993	65,206 CCF	23,240 CCF	\$342,581
1994	66,467 CCF	65,911 CCF	\$783,997
1995	105,148 CCF	65,974 CCF	\$2,140,411

* Includes a back payment of \$413,665

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.

Timber Sold and Cut on State Land by Region Calendar Year 1995

Coastal Region	Sawtimber MBF ¹	Other Products ² MBF	Total MBF
Volume Sold	32,219	568	32,787
Volume Cut	15,505	483	15,988

Interior Region	Sawtimber CCF ³	Other Products ² CCF	Total CCF
Volume Sold	25,901	4,820	30,721
Volume Cut	23,167	5,813	28,980

¹MBF - thousand board feet

²Other products include fuel wood, house logs, etc.

³CCF - hundred cubic feet

Commercial and Personal Use Contracts Issued Calendar Year 1995

Region	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	3	1	1	82	2	3
Kenai/Kodiak	0	3	0	0	5	1
Haines	0	4	0	0	0	0
Juneau	0	0	17	0	0	0
Ketchikan	0	8	32	0	0	1
Totals	3	16	50	82	7	5
Interior Region						
Fairbanks	6	10	0	418	9	4
Delta	0	8	0	82	0	0
Tok	2	3	0	41	0	0
Valdez/Copper River	1	2	0	19	2	0
Southwest (McGrath)	0	1	0	1	0	4
Totals	9	24	0	561	11	8
Grand Totals	12	40	50	643	18	13

Average Sawtimber Stumpage by Species Calendar Year 1995

	Cedar	Birch	Hemlock	Sitka Spruce	White Spruce	Lodgepole Pine
MBF	\$15.00	\$20.84	\$15.49	\$203.86	\$29.08	\$15.00
CCF	—	\$3.64	—	—	\$34.62	

Forest Regeneration

Reforestation Activities

Reforesting harvested areas is an essential component of the state timber sale program. It provides a sustained yield of forest products as required by law. In addition to the required reforestation on harvested land, the division also reforests areas where timber is salvaged after insect, disease, or fire damage.

In 1994 the Legislative Budget and Audit Committee authorized the Division of Forestry to spend \$600,000 of timber sale revenues for reforestation projects. The authorization was based on the division generating \$1,300,000 in timber sale receipts. Reforestation activities include scarification to encourage natural regeneration, collecting cones, growing and planting seedlings, and regeneration surveys of harvested sites. The division requires the timber purchaser to perform some reforestation activities following timber harvests.

In partnership with the Division of Agriculture, Forestry provided funds to renovate the filter system of the state's forest nursery water supply. The division purchased 172,000 seedlings from the state's nursery and another 1,070,000 seedlings from nurseries outside the state to plant throughout Alaska. All the seedlings were produced from seeds collected within Alaska and provided to the nurseries. The Fairbanks Area alone planted 475,000 white spruce seedlings, a record number of white spruce.

These funds allowed Forestry to increase harvest levels to combat the expanding spruce bark beetle infestation and to reforest areas impacted by insects and disease. The division uses the funds to reforest lands burned by wildfire, and harvested sites that are not regenerating naturally at levels that meet the Forest Resources and Practices Act.

The division scarified 792 acres and planted seedlings on 1,234 acres statewide in 1995. A visit in the spring of 1995 to a site on the Kenai Peninsula that was scarified in 1994 revealed an abundance of spruce seedlings. Such scarification projects, especially during years with a large cone crop, encourage natural regeneration and reduce the need to plant nursery-grown seedlings.

With the assistance of the Alaska Vocational and Technical Education Center in Seward, the University of Alaska Fairbanks, and private contractors, Forestry arranged for regeneration surveys on 1,650 acres of harvested state lands in 1995. These surveys help the division assess the success of various regeneration efforts and locate areas where further work is needed.

Reforestation on State Land - 1995

Areas	Seedlings Planted	Acres Planted	Acres Scarified
Kenai/Kodiak	23,000	75	377
Mat-Su	16,407	42	295
Haines	7,200	30	0
Tok	10,000	15	120
Fairbanks	475,000	975	0
Delta	21,050	97	0
Total	552,657	1,234	792

Interior Alaska Reforestation

Two pictures are worth a thousand words when it comes to reforestation. The two photos at right are of forester Bill Johnson, taken at the same location on Rosie Creek in the Tanana Valley State Forest, just west of Fairbanks. The top photo was taken in 1990 and the bottom one in 1995.

The Rosie Creek fire burned 8,600 acres of prime timber in 1983. Salvage efforts after the fire removed over 25 million board feet of white spruce. Once the harvest was completed, Fairbanks Area Forestry planted white spruce seedlings. The trees in the photos were planted in 1985. Comparing the growth at five and 10 years, it is obvious that spruce grow very well in Interior Alaska.

Cone Collection Workshops

The Alaska Reforestation Council and the Division of Forestry sponsored workshops on cone collection in Kenai and Tok during the summer of 1995. The workshops, provided at the request of the forest industry, covered cone development, cone ripeness determination, collection techniques, and seed extraction and cleaning.

The Division of Forestry, Division of Agriculture, University of Alaska Fairbanks, Klukwan Forest Products, Tanana Chiefs Conference, and National Biological Service provided speakers. Classroom talks and demonstrations were followed by field trips. About 30 people involved in forest management attended.

Unfortunately, the 1995 cone crop for white and Lutz spruce was one of the worst in many years. The poor crop extended from the Kenai Peninsula to Fairbanks. Tok and the Copper River Valley had fair crops, but generally not worth collecting. Hopefully, the workshop will help future cone collection efforts.

The Alaska Reforestation Council regularly offers workshops on topics of interest to foresters, ranging from regeneration, to genetic tree improvement, to silvicultural prescriptions for spruce beetle damage.



Forester Bill Johnson in the Tanana Valley State Forest in 1990, five years after the area was planted following the Rosie Creek Fire. (Marc Lee)



Forester Bill Johnson in the Tanana Valley State Forest in 1995, ten years after the area was planted following the Rosie Creek Fire. (Marc Lee)

Coastal Region

Haines State Forest

The Haines State Forest Resource Management Area was designated by the Alaska State Legislature on July 1, 1982. The forest was established for *the use, perpetuation, conservation and protection of the land and water, including, but not limited to, 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. Portions of the Tsirku, Klehini, Kelsall, Takhin, and Kicking Horse Rivers, all major tributaries to the Chilkat River, are in the forest. The Chilkoot and Ferebee rivers also lie within the forest. Most of the rivers begin in a region of glaciers and ice fields located on the Alaska-Canada boundary approximately 40 miles northwest of Haines. The rivers flow through broad floodplains composed of deep deposits of sand, silt and gravel alluvium.

The topography is rugged, being part of the Pacific mountain system. Mountains ranging from sea level to over 7,000 feet contribute to the spectacular scenery in the forest.

The vegetation of the forest is very diverse because it is located in a transition zone between the moderate, but wet, coastal climate and the dry, cold interior. 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.



Natural regeneration in the Haines State Forest. This area was harvested in 1966-1968 and thinned in 1993. (Marty Welbourn)

Timber has been harvested in the forest since the 1960s when two large sawmills operated in the valley. In the late 1970s one of the sawmills closed and the remaining mill operated occasionally until 1992 when it closed. 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 total state forest (49,231 acres) is dedicated to timber harvest with an allowable harvest of 6.96 million board feet per year.

Although natural regeneration occurs readily, all large commercial sales have been replanted since the 1970s. Timber purchasers have planted 500,000 seedlings since then.

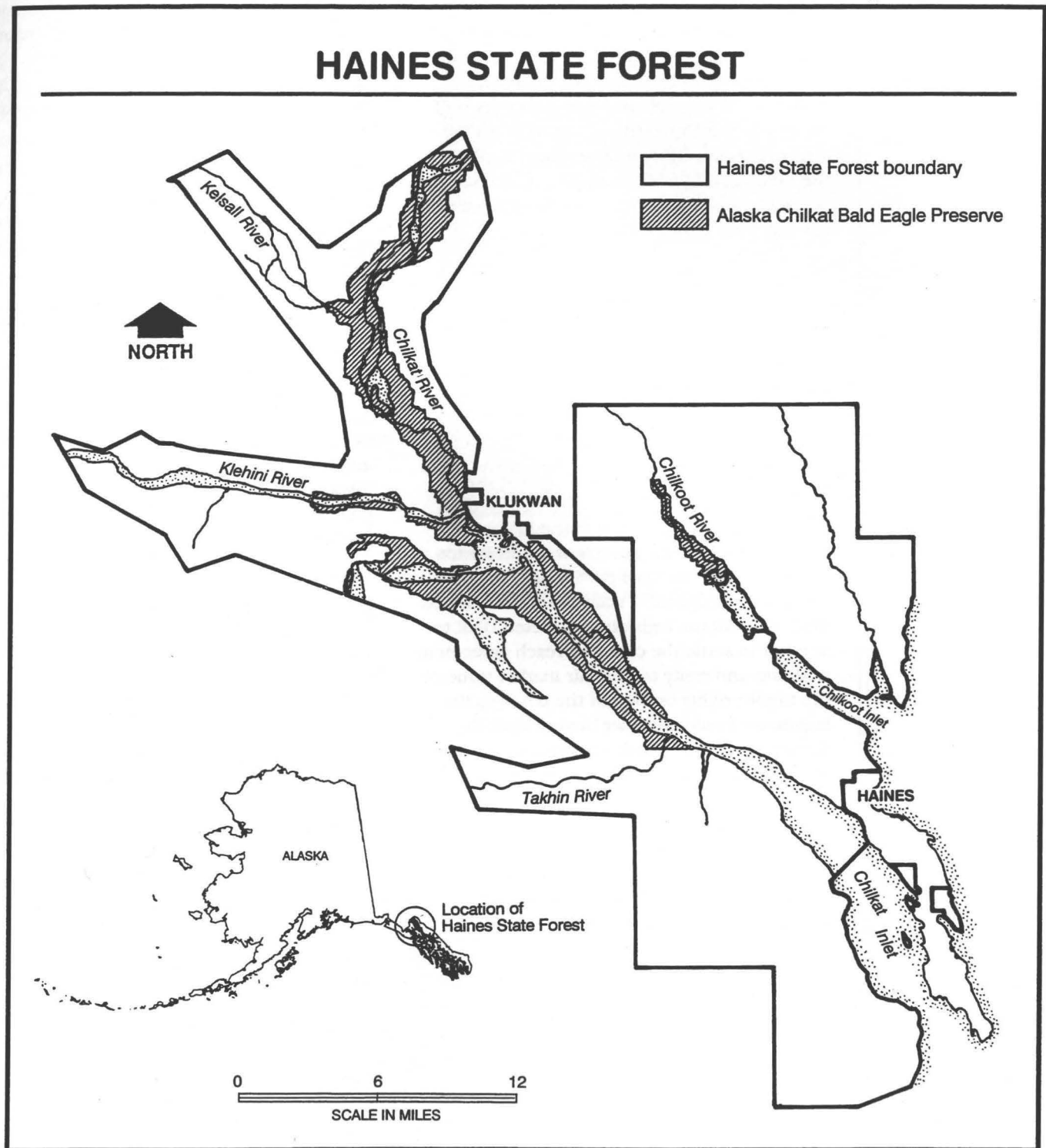
Backcountry logging roads, rivers and hiking trails provide access to remote areas and abundant recreational opportunities. Hunting, fishing, berry picking, sight-seeing, camping, hiking, photography, snowmobiling, and skiing are popular activities. Several commercial operators provide tours through the forest.

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

The state forest is rich in minerals. Prospecting and mining have occurred since the turn of the century and continue today.

The Division of Forestry has had an office in Haines and managed the state forest since 1961. The division has brought in stumpage receipts of \$2,071,981 in the past ten years and has provided for many jobs through management of the forest over the past 35 years.

HAINES STATE FOREST



University to Harvest Cape Yakataga Timber

In 1960 the Alaska Legislature authorized DNR to manage land granted by the United States Congress to the University of Alaska as trust lands. In 1978 the legislature redesignated trust lands as general grant lands, and provided for trustor remuneration in the form of state revenues. The legislature also allowed municipalities to select vacant trust land under the Municipal Land Grant provision of AS 29.65. The University of Alaska Board of Regents rejected the redesignation. In 1979 the Municipality of Anchorage selected seven parcels of university trust land and the university sued the state for breach of trust.

In 1983 the state settled all university claims against the state except for the conveyance of the seven parcels to the Municipality of Anchorage. All university land was returned to the university or replaced with other state land or cash remuneration. In 1987, in order to settle the lawsuit, DNR conveyed to the university 71 parcels of land and limited timber rights on three parcels of state land in the Yakataga area.

In 1988 the transfer of the limited timber rights on those three parcels was administratively appealed by third parties and, upon denial of that appeal, a third party lawsuit was filed. In 1990 the legislature directed DNR to attempt to settle the case and reach agreement with the university on the fair market value of the timber rights on two of the tracts so the legislature could consider buying back the timber rights. In 1990 the court found in favor of DNR and the university but remanded the case to DNR to complete two tasks: (1) a determination of annual timber harvest amounts which would satisfy requirements for sustained yield as stated in the Alaska Constitution and applicable state statutes; and (2) classification of the Yakataga tract.

DNR and the university failed to reach agreement on the fair market value of the timber rights. On remand, DNR completed substantial research and documentation in order to make the sustained yield determination and decided to classify the Yakataga tract through development of the Yakataga Area Plan. Negotiations to settle the lawsuit concluded with execution of a Memorandum of Agreement in December, 1994.

The Final Finding and Decision for one of the two tracts (Substitute Tract) was issued in February, 1995. The Yakataga Area Plan was adopted in April, 1995. The Final Finding and Decision for the second of the two tracts (Tract 20) was issued in June, 1995. The University of Alaska and DNR completed a Memorandum of Understanding in October, 1995 that will implement the 1994 Memorandum of Agreement. The Gulf Coast Timber Sale #1 for 74 million board feet was awarded by the university in December, 1995. Nine units, totaling 401 acres, and associated roads, totaling 8.7 miles, were the subject of forest practices inspections by DNR, ADF&G, and DEC during October, 1995.

The Division of Governmental Coordination issued an Alaska Coastal Management Program (ACMP) Final Consistency Determination for the Gulf Coast Timber Sale #1 Annual Operating Plan in January, 1996. Following ACMP Final Consistency Determination, DNR released the roads and units notified in the 1996 Gulf Coast Timber Sale #1 Annual Operating Plan. Road building and timber harvesting operations are expected to begin sometime in the spring of 1996.

Mental Health Trust Lands Timber Sale

The Mental Health Trust Lands Administrative Unit contacted Forestry's Coastal Region in 1995 to discuss the possibility of offering timber sales on trust lands. The Coastal Region had included sales on Mental Health Trust Lands in the two preceding Five-Year Schedules of Timber Sales in anticipation of such a request. Forestry agreed to prepare a timber sale at Icy Bay and signed an RSA with the Mental Health Lands Trust Unit to fund the division's work on the sale.

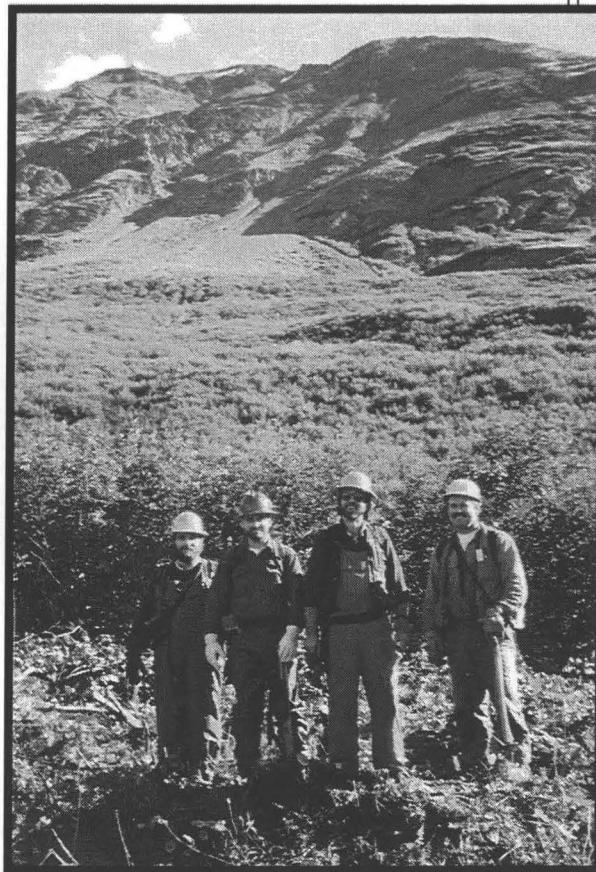
Coastal Region staff prepared the Johnston Creek Timber Sale, which contains an estimated 4.6 million board feet of Sitka spruce and western hemlock. Harvesting will occur in two units covering approximately 172 acres. Bids are expected to be opened in April, 1996 after the ACMP consistency determination and AS 38.05.035(e) decision process are completed.

The Mental Health Trust anticipates more than one million dollars in stumpage receipts for the timber in the Johnston Creek sale, based on the stumpage rates set by competitive bidding in the University of Alaska's recent timber sale at Cape Yakataga.

Kenai Timber Sale Litigation

Trustees for Alaska and eight other environmental and fishing groups appealed the Fiscal Year 1995-1999 Five-Year Schedule of Timber Sales and ten salvage timber sales on the Kenai Peninsula in Anchorage Superior Court beginning in 1994 (*Alaska Sportfishing v. Alaska*). Opening briefs and Trustees' response brief were filed in 1995. Oral arguments are expected in 1996.

During the year, Trustees asked the Anchorage Superior Court for emergency stays of the Kalgin Island and Falls Creek timber sale auctions. The court denied the stays and the sales were sold. The Court also ruled in DNR's favor on a motion to recover expenses. The judge ordered the appellants to pay state costs for preparing the record filed to date. The judge also directed DNR to notify the appellants of the costs to prepare the Falls Creek portion of the record. Finally, the judge denied motions by Trustees to add the Fiscal Year 1996-2000 Five-Year Schedule of Timber Sales to the case, to submit an over-length brief, and to add 470 pages of new material to the record.



Foresters John Winters, Jim Eleazer, Chris Foley, and Roy Josephson laying out the Thunder Creek helicopter timber sale in the upper Kelsall Valley of the Haines State Forest. (Greg Palmieri)



The 1.81-million-acre Tanana Valley State Forest is composed of white and black spruce, paper birch, quaking aspen, balsam poplar, and tamarack. (Marc Lee)

Interior Region

Tanana Valley State Forest

The Alaska Legislature established the Tanana Valley State Forest in 1983 to perpetuate *personal, commercial, and other beneficial uses of resources through multiple-use management*. The forest is managed on the sustained yield principle to guarantee that it will provide timber and other renewable resources to meet current needs as well as those of future generations.

The Tanana Valley State 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.

Almost 90 percent (1.59 million acres) of the state forest is forested, chiefly with hardwood and hardwood-white spruce vegetation types. The principle tree species are paper birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack.

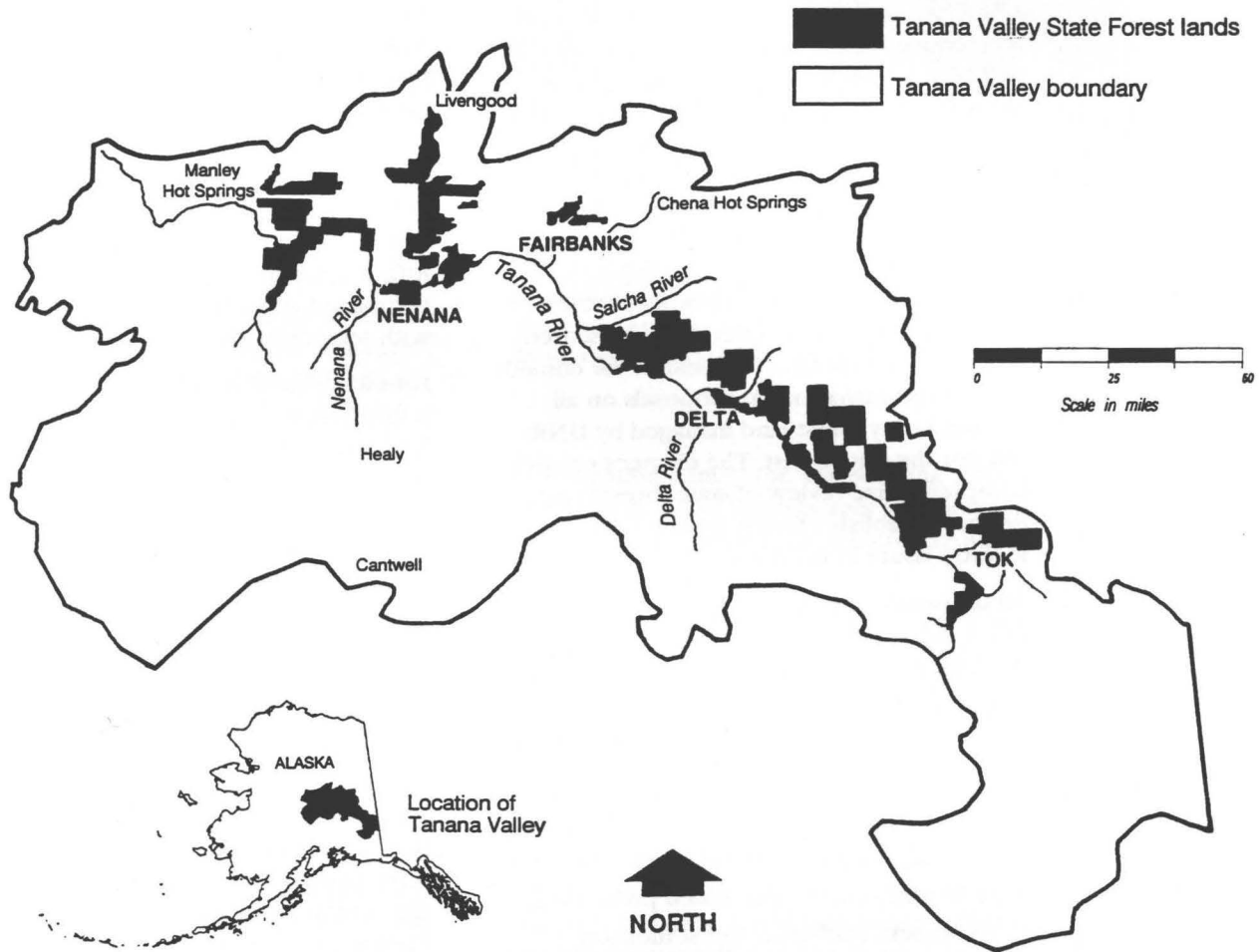
The state forest is relatively productive and accessible compared to other state holdings in the Tanana Valley. About 85 percent of the forest is located within 20 miles of a state highway. Eighteen communities adjacent to the forest total 70,000 residents, with most in the Fairbanks North Star Borough. Approximately half (1.1 million acres) of the Tanana Basin's productive forest land is located in the state forest. Over 200 miles of the Tanana River flow through the forest.

The state forest contains the Bonanza Creek Experimental Forest, a 12,400-acre area dedicated to forestry research. 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 forest offers many recreational opportunities including hunting, fishing, trapping, dog mushing, camping, snowmobiling, gold panning, wildlife viewing, photography, boating, hiking, berry-picking, and cross-country skiing.

A 12-member Citizen's Advisory Committee, representing the variety of state forest users, reviews and comments on proposed plans for development in the state forest.

TANANA VALLEY STATE FOREST



The Tanana Valley State Forest consists of 1.81 million acres and lies almost entirely within the Tanana River Basin. Almost 90 percent (1.59 million acres) of the area is forested, chiefly with hardwood and hardwood-white spruce vegetation types.

Tanana Valley Forestry Issues

Forestry activities in the Tanana Valley continued to spark lively public debate. In March, the Lieutenant Governor's Office and the Department of Natural Resources sponsored a workshop in Fairbanks on Tanana Valley forestry issues. Lieutenant Governor Fran Ulmer and DNR Deputy Commissioner Marty Rutherford co-chaired the meeting. Thirty-seven people participated as representatives of a wide variety of interests and communities. Another 50 people observed the workshop and many submitted comments.

After considering the discussion and the written comments, DNR took several actions that will lay a foundation for constructive resolution of forestry issues. Most importantly, after thorough public and agency review, the DNR commissioner amended the Tanana Valley State Forest Plan to reorganize the Tanana Valley Citizens' Advisory Committee. The amendment increased the committee to 12 seats, and retitled several existing seats to ensure that all key interests are represented. The new committee is responsible for considering forest management proposals on all Tanana Valley forest land managed by DNR, not just the state forest. The changes provide comprehensive review of state forestry activities and establish a forum for resolving forestry issues in the Tanana Basin.

An unusually large and highly-qualified group of candidates from communities throughout the Tanana Valley applied for the committee. The division received 41 applications for the twelve seats. The new committee has more diverse regional representation than previous groups. The new committee members, who were appointed in January, 1996 and the interest they represent, are as follows:

Mike Musick, Ester, value-added processing
Chris Maisch, Fairbanks, forest industry
Roger Siglin, Fairbanks, environmental interests

Ron Ricketts, Fairbanks, private forest-users
Tricia Wurtz, Fairbanks, Forest science
Paul Mayo, Fairbanks, Native community
Sandra Perry, Tok, recreation
Doug Bowers, Nenana, tourism
Anne Ruggles, Fairbanks, fish and wildlife interests

Charlie Boddy, Fairbanks, mining
Tyler Conkle, Delta Junction, Upper Tanana Valley
Edna Hancock, Nenana, Lower Tanana Valley

New Access to the Tanana Valley State Forest

Forestry sold a spruce sawlog sale in the Standard Creek area, totaling 704 thousand cubic feet, to Northland Wood Products, a local sawmill and lumber retailer, at the spring timber sale. One requirement of the sale was the construction of four miles of all-season road and the purchase and installation of two bridges. Because of frozen soils in the drainages where the bridges were to be placed, Northland Wood was required to install a system of rock-filled gabions for abutments and retaining walls.

Northland Wood purchased two steel bridges from Hamilton Construction Company of Springfield, Oregon. Besides meeting all engineering specifications required in the timber sale contract, the bridges were easy to transport and install. They were made with treated timber decking and back walls, with dimensions of 14 feet by 45 feet. Beginning in late August, one and one-half miles of road were completed and both streams were spanned with temporary bridges.

Following installation of the abutments, Northland Wood placed the permanent bridges in late September. Both bridges were installed in one day, including delivery of the superstructures to the stream sites, setting the bridges on the abutments, and installing the hardware. Next summer, Northland Wood will complete the bridge approaches and construct the remaining two and one-half miles of road.

Tanana Basin Inventory

In 1995 the Division of Forestry used its inventory funds to improve the extent and accuracy of the Tanana Basin forest inventory. New aerial photography covering two million acres of state forest lands was completed under contract with Aeromap U.S., Inc. The photography allows for a more accurate delineation of state forest land and improved forest vegetation mapping. Forestry collected additional field data in the fall of 1995 by measuring 47 field plots.

Foresters are now analyzing the information to update the statistics for volume, growth, mortality, and yield for forest land in the basin. The division will complete computer data entry during the first six months of 1996. The information will result in improved mapping of each forest type, accurate land base acreage for management under the Tanana State Forest Management Plan and a Tanana Basin Inventory Report.

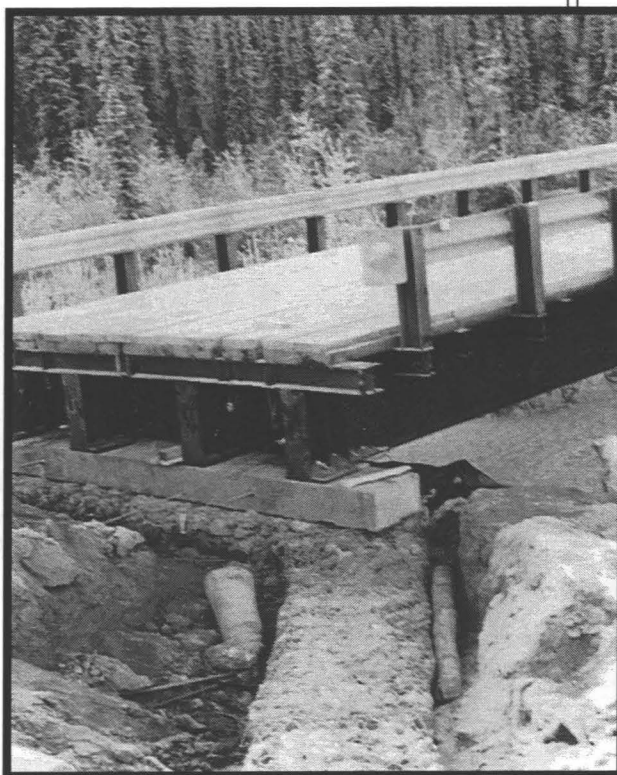
New Technology Tracks Timber Management

Forestry's Fairbanks Area Office is using a Geographic Information System (GIS) and Global Position System (GPS) to track the many details involved in timber management activities. During a typical year, the Fairbanks Area administers 40 to 60 active timber sale contracts. Twelve to 20 new timber sales come on line every year and an equal number close out. These contracts account for 650 to 1,000 acres of timber harvested annually (valued at over \$1 million in stumpage payments in fiscal year 1995), and contain \$450,000 in road and bridge construction. As part of the contract, timber sale purchasers are required to build an annual average of 10 miles of all-season road, 20 miles of winter road, and bridges.

As part of its responsibility for reforesting harvested areas, the division contracts for the growing and planting of 350,000 seedlings annually. During the summer of 1995, the division planted 475,000 seedlings in the Fairbanks area. Since most of the 650 acres harvested and planted annually are divided into 10-acre harvest units, it is quite a challenge to ensure that stumpage payments are received, roads and bridges are constructed to contract requirements, and harvest areas are planted.

To help track this information, the Fairbanks Area Office has developed computer programs to automate data entry and tracking. A Sparc 20 Sun workstation, located at Forestry's Interior Region Office, serves as the platform for the GIS software package, ArcInfo, which tracks all timber sale activity from sale layout to tree seedling planting.

When timber sales are sold at auction, a clerk enters pertinent timber sale contract data into GIS with the easy-to-use forest management tracking program. As contractors make stumpage payments and harvest timber, the clerk enters the payments and harvest locations. When stumpage payments are overdue, the tracking program automatically notifies the clerk. When harvested areas are ready for tree planting or regeneration surveys (required three years after planting), the program produces a list and map of these areas. The program tracks the date and type of harvest and the date and density of seedlings planted. It also records the species, stock type, seed source, nursery that produced the seedlings,



The Standard Creek Bridge improves access to the Tanana Valley State Forest. (Dave Maxell)

tree planting contractor, and seedling survival and growth. All of these factors are important to successful reforestation, which is required by law.

Another timesaving device that has been integrated into GIS is the Global Positioning System. In the past, when timber sales were flagged by foresters on the ground, the location was traversed by a three-person crew. Now the sale boundary is walked by just one person carrying a GPS backpack.

The division next plans to reduce the field and office time needed to record, enter, and plot regeneration data. A GPS data logger will store the regeneration data and location. A bar code will be used to quickly enter plot data in the GPS data logger at each plot location. The plot data and location will be downloaded directly from the data logger to GIS without key punching, which reduces personnel costs by two thirds. Additionally, the computer will automatically calculate stocking levels, as required by the Forest Resources and Practices Act, and identify areas requiring replanting. This will result in a large savings over the current practice of calculating by hand.



Decked timber from a state sale in the Valdez/Copper River Area. An operator in this area uses a single grip harvester, which can fall, limb, and buck a tree. Most operators use feller bunchers to cut trees, skidders to bring them to the landing, and then a processor to limb and buck trees at the landing. (Martin Maricle)



Nearly 50 truck loads of logs are shipped from the Copper River area to Valdez each day. From Valdez, the logs are shipped to mills in Canada and Oregon. (Martin Maricle)

BLM Plans Salvage Sale in Copper River Basin

The Division of Forestry entered into an agreement with the Bureau of Land Management to identify white spruce killed by beetles in the Copper River Basin and to begin a salvage program. Forestry's Valdez/Copper River Area Office identified, inventoried, and mapped candidate stands of beetle-killed spruce for commercial harvest. The division also cruised timber and marked sale boundaries in a 4,000-acre tract that the BLM will sell this winter. The sale area includes more than six million cubic feet of timber, which will be sold as pulp. The BLM has no foresters in Alaska and is relying on the division for technical assistance.

Forest Products Class

In September, Fairbanks Area Forester Pete Buenau presented a class on forest products as part of a University of Alaska Fairbanks course. The class dealt with timber sale planning and contracting, and what affect these processes might have on the end product. As an example, state timber sale contracts cannot require primary manufacturing, which affects utilization of the forest product. The class also discussed the Forest Practices Act and Regulations. This was one of a number of class presentations that forestry employees make at the university each year.

Fairbanks Area Briefs Mayor

Increased demand for wood fiber in the world market caused increased harvesting of timber in the Fairbanks vicinity. Development interest groups, as well as those concerned with the environmental impacts of timber harvest were actively seeking support from the public and all political levels.

Fairbanks North Star Borough Mayor Sampson's staff asked the Division of Forestry to provide a briefing on the current level of management, the Tanana Valley State Forest Management Plan update, harvest methods, potential jobs and markets, and reforestation. This late February briefing provided the mayor with facts about past, current, and planned activities for state-owned forest lands.

Ruffed Grouse Habitat Improvement Project

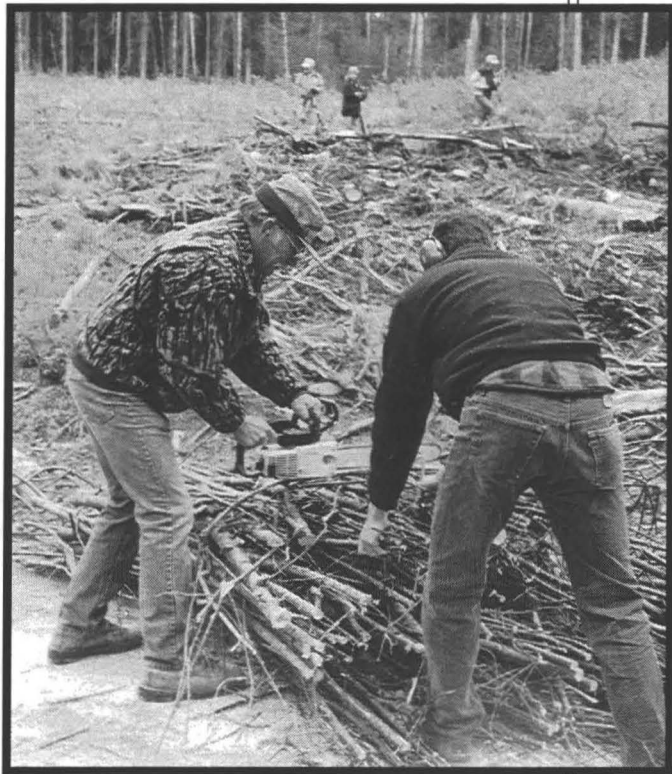
The Division of Forestry and the Ruffed Grouse Society selected an area to enhance for ruffed grouse in 1994. The 6,000-acre Nenana Ridge Ruffed Grouse Project Area is located in the Tanana Valley State Forest, south of the Parks Highway, between Fairbanks and Nenana. Also in 1994 the Alaska Legislature appropriated funds to the Department of Fish and Game to enhance wildlife habitat and hunter access in the same general area. This presented 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 almost no young, vigorously growing aspen and birch stands, which are important sources of food and cover for wildlife. This project uses timber harvests to create habitat for ruffed grouse.

The Department of Fish and Game allocated \$14,000 to the Division of Forestry to harvest aspen and develop access. A \$5,000 contract was awarded to Dry Creek Company to build two miles of road for hunters and firewood cutters. Construction was completed by the end of October. The division selected twelve harvest units, totaling 85 acres of mature aspen, marked trees for cutting, and awarded a contract for \$8,100 in October to Four Star Lumber to cut and bunch the aspen. Four Star offered its equipment at cost, \$85 per hour, and was the only bidder for the contract. Approximately 40 acres were felled in 1995.

Additional contracts will be awarded during the early spring of 1996. The goal is to clear 100 acres by May to stimulate the sucker sprouting and sapling development needed for grouse breeding and brood cover. Every decade until the year 2025 an additional 200 acres will be cleared to create habitat conditions most favorable to ruffed grouse.

During the next 40 years, Forestry expects to create and maintain habitat for 100 breeding pairs. As many as 20,800 ruffed grouse could be produced on the 800 acres to be managed. In addition to ruffed grouse, this kind of management also benefits snowshoe hares, lynx, moose, goshawks, great horned owls, and several species of migratory songbirds that use early to mid-successional habitats.



On a Saturday in May, 14 volunteers from Forestry, Fish and Game, and the Ruffed Grouse Society planted willow cuttings in the Cache Creek Area to improve ruffed grouse habitat. They cut live willow stems into three-foot sections and stuck them in the ground. The cuttings quickly sprouted and developed root systems. The planting was done in an area harvested four years ago. (Marc Lee)

Boreal Owl Study

Forestry and the Department of Fish and Game are cooperating on a study of boreal owls in the Southwest Area. The study, *Selection of Nesting Habitat by Boreal Owls in West-Central Alaska*, is being supervised by Jackson Whitman, Area Biologist in McGrath for Fish and Game's Division of Wildlife Conservation. Assistant Southwest Area Forester Andy Alexandrou is the principal Forestry participant.

The study is expected to help land managers understand habitat requirements of the owls and the impacts that harvesting and other human activities in the immediate vicinity of nests may have on owl habitat, nest selection, and nesting success.

Jackson Whitman conducted preliminary investigations near McGrath from 1990 to 1995. He placed 19 artificial nest boxes within eight kilometers of McGrath to monitor use by boreal owls. A total of 50 "box-years" have resulted in seven nesting attempts, a 14 percent occupancy rate. Forty-eight additional boxes were placed downstream from McGrath along the Kuskokwim River during the fall of 1995 by the divisions of Wildlife Conservation and Forestry. Twenty-four boxes were placed in or near recent clear cuts and 24 were placed in areas not identified for harvest for the next 10 to 15 years. An additional 57 boxes will be placed near McGrath during the spring and summer of 1996, bringing the total number to 128. The boxes will be monitored for occupancy and nesting success for the next several years. Some occupied boxes will be monitored for chick growth rate and food selection. The intent is to achieve a sample size of at least 300 "box-years" by 1998.

The study has already yielded some interesting information about the diet of the birds. Animal remains taken from a nest box indicated that early in the chick brooding stages meadow voles were apparently the preferred prey. Although red-backed voles are much more common near the nest box, they were not found to be part of the diet until May 21. This suggests that the male owl hunted in the more open, grassy areas where meadow voles were more common during the early spring. When the grass grew to a certain height, it appears that he switched from the open, grassy areas to forested areas where the red-backed voles were more abundant.

Since owls are often used as indicators of healthy ecosystems, Forestry and Fish and Game are interested in the impact of current forest management activities on these birds. In addition, increased management activity in both Native- and state-owned forests is expected to increase over the next few years. Assessing the impact of logging on owl habitat and nesting success prior to the expansion of activities will allow managers to answer questions about this important indicator species and the overall health of the ecosystem and allow the division to make better forest management decisions.



Boreal owl looks out of a nest box, one of 19 nest boxes placed in McGrath to study effects of human activity and timber harvesting on owl habitat and nesting. (Jackson Whitman)



Mother owl and nest. (Jackson Whitman)



Young boreal owls in a nest box. Owls are used as indicators of healthy ecosystems. (Jackson Whitman)

Forest Insect & Disease Conditions

Insects

More than 1,945,000 forested acres were impacted by insects and disease in 1995. This is a small increase over the 1.7 million acres impacted in 1994. Rather significant increases in some insect populations were offset by equally dramatic declines in others.

Spruce beetles, the most important disturbance agent of Alaska boreal forests, increased by 40 percent this year; more than 890,000 acres of ongoing and newly-infested areas were detected in aerial surveys. Activity is increasing on the Kenai Peninsula and along the west side of Cook Inlet.

Tree mortality caused by engraver beetles decreased by 70 percent this year in interior Alaska, with only 5,600 acres of new spruce mortality noted, mostly along the Porcupine and Christian rivers.

Hardwood defoliation, mostly caused by the Large Aspen Tortrix, rose significantly. More than 30,000 acres of intense defoliation was noted near the Anchorage Bowl and along the Glenn Highway north of Palmer. Spruce budworm populations also remained high with heavy defoliation on more than 279,000 acres of white spruce along the Yukon and Tanana rivers. Larch sawfly populations exploded this year and were responsible for more than 116,000 acres of heavy defoliation of larch west of Fairbanks and near Delta.

In southeast Alaska there were some dramatic changes in insect populations in 1995. The level of defoliator insects showed the most significant decline with a crash of the black-headed budworm outbreak, which had been going on since 1990. Budworm defoliation was recorded on nearly 13,000 acres, down significantly from the 194,000 acres observed in 1994. Budworm activity was concentrated in large mainland river drainages near spruce beetle outbreaks. Damage from *Ips* engravers was scattered throughout southeast but was most evident near Haines and Wrangell.

Hemlock sawfly populations dropped to 1,100 acres, about one-third the level in 1994. This was the second straight year of dramatic declines. Sawfly activity is concentrated in southern southeast Alaska, while most budworm activity is north of Frederick Sound. Top-kill was evident among western hemlock in several areas heavily defoliated in 1994. Spruce needle aphid was apparent on and near populated, private lands on Chichagof Island.

While defoliator activity seems to have subsided, the total spruce beetle activity rebounded to 16,800 acres, after a sharp decline in 1994. The spruce beetle infestation in Haines continues, with approximately 8,400 acres of new and ongoing activity. The 1994 spruce beetle outbreak on the north side of the Taku River expanded to 4,000 acres and now includes both sides of the river, to become the second largest bark beetle outbreak in southeast Alaska during 1995. The Taku River stands also experienced heavy black-headed budworm defoliation. The beetle outbreak in lower Glacier Bay has shifted to a ridge east of Gustavus impacting 2,200 acres. There was no new activity evident in areas of historic infestations. New spruce beetle activity was noted in scattered locations throughout southeast Alaska, including the outer coast of Glacier Bay National Park, areas near Sitka, and the Stikine River delta. The largest of these new infestations, in the Stikine River area, covered more than 2,000 acres.

Interpreting Aerial Survey Data

The Division of Forestry uses aerial surveys to assess the extent of insect activity and other damage on the state's forested lands each year. The number of acres reported in the table on page 28 are estimates of current damage based on surveys of about 20 percent of Alaska's forested land during 1995.

These figures do not give the total picture of accumulated pest damage over several years because only visible, new pest activity is reported each year. Also, damage from some species is not immediately apparent from the air. Spruce bark beetle damage is visible from the air for at least one year after the trees are attacked, when 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 from aerial surveys is available from entomologists at the Division of Forestry (907-269-8460) or the U.S. Forest Service (907-271-2575).

Diseases

Yellow cedar decline, wood decay of live trees, and hemlock dwarf mistletoe were the most important diseases of Alaskan forests in 1995. All three altered forest structure, composition, and succession. In addition, each caused commercial losses. Heart rot and butt rot fungi cause significant cull in all tree species in Alaska, particularly in coastal forests where approximately one-third of the gross volume of the forest is defective. Decay in living hardwoods throughout the state is considerable. Wildlife habitat is produced directly by heart rot and dwarf mistletoe through the formation of tree cavities and witches brooms, respectively. Hemlock dwarf mistletoe continued to cause loss of growth, top-kill and mortality in old-growth forests of southeast Alaska. Its impact in managed stands depends on the presence of large infected trees left after harvesting the stand.

More than 595,000 acres of yellow cedar decline have been mapped throughout an extensive area of southeast Alaska. Snags of yellow cedar accumulate on sites of decline and forest composition changes as the trees die, giving way to other tree species.

Foliar diseases of conifers are usually of little ecological significance and were generally at moderate levels throughout Alaska in 1995. Spruce needle rust infection was visible from the air on over 2,800 acres of Sitka spruce near Yakutat. The fungus *Rhizosphaera pini*, which occurred at high levels in southeast Alaska during the previous two years, dropped back to endemic levels in 1995. Hemlock canker subsided in 1995 after causing hemlock mortality along roads of several islands in southeast Alaska during the early 1990s. Canker and foliar fungi caused a large, but unmeasured damage to hardwood species in interior Alaska.

Porcupines continued to damage Sitka spruce and western hemlock in valuable young-growth stands. Brown bears wounded the lower boles of a large number of yellow cedar in southeast Alaska.

The table on page 28 summarizes insect and disease activity by land ownership in 1995.

Interagency Forest Ecology Study Team

An interagency forest ecology study team (INFEST) has been established in southcentral Alaska to address research into changes to the forest caused primarily by spruce beetles. The team is focusing on the effects of these changes on wildlife.

The team consists of specialists in wildlife biology, forestry, forest entomology, forest health, and forest ecology. Agencies involved include the U.S. Forest Service, U.S. Fish and Wildlife Service, and the Alaska departments of Fish and Game and Natural Resources. INFEST members held four meetings and took one field trip to the Cooper Landing/Moose Pass area in 1995.

The team will compile information, identify information gaps and fill them, and provide a forum to share this information. In addition, it is coordinating efforts to provide integrated management of the southcentral Alaska forest ecosystem, and to conduct forest ecosystem studies across jurisdictional boundaries. Other issues the team may examine are the potential impacts of artificial disturbances such as logging and prescribed fire on forest ecosystems, the relationships of forest composition to wildlife and fish habitat requirements, and the consequences of various management actions on the ecosystem.

The study team supported a project funded by the Exxon Valdez Oil Spill Trustee Council to synthesize scientific literature on spruce beetle infestation impacts on fish and wildlife species, especially those species injured as a result of the 1989 oil spill in Prince William Sound. This project involves an intensive literature search of automated databases and contacts with governmental agencies at the state, federal, and provincial levels in the U.S. and Canada. The report will summarize information on the direct and indirect impacts of the spruce beetles on eight injured species and their habitats. A draft of this report was completed in late 1995.

1995 Forest Insect Activity, Disease & Damage by Land Ownership and Acreage

These figures are from "Forest Insect and Disease Conditions in Alaska - 1995," prepared by the U.S. 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 1995.

These figures do not give the total picture of accumulated pest damage over several years because only visible, new pest activity is reported each year. Also, damage from some species is not immediately apparent from the air. Spruce bark beetle damage is visible from the air for a least one year after the trees are attacked, when 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 U.S. Forest Service (271-2575).

Pest/Damage	State/Private	Nat'l Forest	Other Federal	Native	Total Acres
Spruce beetle	400,882	33,927	248,207	209,815	892,831 ¹
Engravers	2,276	336	1,551	1,428	5,621
Spruce budworm	77,800	—	102,632	98,736	279,168
Spruce bud moth	—	1,243	—	—	1,243
Spruce needle aphid	—	68	—	—	68
Spruce needle rust	—	2,855	—	—	2,855
Black-headed budworm affects hemlock, Sitka spruce	387	10,737	1,871	—	12,995
Hemlock sawfly	5	529	517	52	1,103
Larch sawfly	48,974	—	67,908	—	116,882
Large aspen tortrix	25,824	476	5,822	225	32,347
Conifer defoliation	865	495	7	4,100	5,467
Cottonwood defoliation/leaf beetle	1,951	101	1,453	—	3,505
Aspen defoliation	—	—	437	—	437
Birch defoliation	239	—	657	—	896
Willow defoliation	3,913	—	1,447	213	5,573
Alaska yellow cedar decline ²	10,430	550,380	—	17,670	578,480
Blowdown/windthrow	—	49	—	—	49
Flood/high water	992	1,664	2,053	66	4,775
Landslide	135	239	39	52	465
Porcupine damage	26	349	—	—	375
Total acres by ownership	574,699	603,478	434,601	332,357	1,945,135

¹Combined total of spruce beetle activity over all ownerships, including state-owned and small, 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. However, a computerized tracking system for comparisons on state, federal, and private lands is still being developed. It is estimated that 1995 spruce beetle activity mapped on state-owned forests is about 40 to 45 percent of this total (over 360,000 acres).

²Totals for yellow cedar decline are not restricted to acreages with a high concentration of dying trees for this year, but also include stands that have long-dead, recently-dead, and some healthy trees.

Forest Health Assessments for State Land in the Mat-Su

Central Office Forestry staff and the Mat-Su Area Office began field assessments of conditions on several sites in the Mat-Su Valley managed by the state. Based on these assessments, the divisions of Forestry, Land, and Parks & Recreation will work together to develop silvicultural prescriptions and plans for sites along the Glenn Highway north of Palmer and selected portions of the Deception Creek Management Area near Hatcher Pass. The U.S. Forest Service, State & Private Forestry is funding development of these plans.

Tour Companies Learn About Spruce Beetle Infestation

At the suggestion of DNR Commissioner Shively, Forestry's entomologist contacted tour companies that operate on the Kenai Peninsula to provide information about the spruce beetle infestation. Entomologist Roger Burnside met with Princess Tours and Westours/Gray Line bus drivers and discussed the ongoing spruce beetle infestation along the Seward Highway near Moose Pass and along the Seward Highway. He also discussed cooperative efforts between the state and the U.S. Forest Service; short- and long-term impacts expected from the epidemic; and the role of fire, harvesting and disease in the spruce ecosystem. Drivers will use the information on the tours and to answer questions from tourists.



Division of Forestry employees evaluating spruce bark beetle damage at the King's Mountain State Recreation Site. (l to r) George Coyle, Tom Smayda, Patricia Winn, Tom Liebscher, and Gary McGeorge. (Roger Burnside)

Healthy, well-managed trees and forests provide environmental, social, and economic benefits. They:

- filter dust;
- improve air quality;
- reduce soil erosion, which helps maintain the purity of streams and lakes;
- provide wildlife habitat and plant diversity;
- provide wood products and jobs, which strengthens local economies;
- act as buffers between different land uses;
- conserve energy by providing summer shade and wind protection;
- create recreation and scenic areas that contribute to good physical and psychological health;
- improve quality of life in neighborhoods and business districts;
- increase community pride and property values.

Cooperative Programs

National Tree Program

The National Tree Program was initiated in 1991 because of a notable decline in the number and health of trees in communities and on private land in rural areas. The program encourages federal and state governments to work in partnership with local governments, businesses, volunteers, and landowners to plant and care for trees and forests in communities and rural areas nationwide.

The Division of Forestry administers two of these federal programs, the Forest Stewardship Program and the Urban & Community Forestry Program.

Forest Stewardship Program

The Forest Stewardship Program is funded by the federal government and administered by the Division of Forestry. The goals are to help non-industrial private forest owners develop 10-year management plans and implement approved management practices.

Following are highlights of the Forest Stewardship Program for 1995:

- More landowners were served in 1995 than any year since the program began;
- Workshops for forest landowners were held in Tok, Talkeetna, and Homer;
- Southeast Alaskans participated in the Stewardship Program for the first time;
- A video was professionally produced to inform Alaska native corporations about the program;
- Presentations on forest stewardship were given to 20 Alaska native corporations.
- Forest stewardship presentations were given at Resource Conservation and Development District forestry symposia in Palmer and Kenai.

Participation in the Forest Stewardship Program continued to increase in 1995. Stewardship foresters helped 57 landowners develop plans covering a total of 5,335 acres. This was a substantial increase over 1994 when 31 plans were prepared for 2,189 acres.

Since the program began in 1992, a total of 126 landowners have prepared stewardship plans for 10,887 acres. Participation is greatest in the Matanuska-Susitna Valley but there are also many participants on the Kenai Peninsula and in the Tanana Valley. In 1995 four landowners in the Haines area completed stewardship plans. These were the first stewardship plans completed in southeast Alaska.

The most common concern continues to be spruce bark beetles and there are many requests for information on harvesting options for beetle-killed spruce. Other landowners are primarily interested in aesthetics and wildlife.

The Forest Stewardship Program helps implement approved management practices through the Stewardship Incentive Program (SIP). Through SIP, the U.S. Department of Agriculture can cost-share up to 75 percent of the cost of the practice. Requests for SIP assistance increased in 1995, and Alaska's SIP allocation of \$67,000 was fully used. The most common SIP practices were thinning and pruning to improve the forest, but tree planting, trail clearing, and habitat enhancement were also cost-shared. In all, 26 SIP projects on 346 acres were completed.

Native corporations are the largest private landowners in Alaska, and providing grants for forest planning on their land is an important part of the Forest Stewardship Program. In 1995 the Seldovia Native Association and Ninilchik Native Association completed Forest Stewardship Plans. This brings the number of ANCSA corporations with completed Forest Stewardship plans to five. Five other native corporations, with the support of Stewardship Program grants, are working on plans.

The Forest Stewardship Program benefits in many ways from the guidance it receives from the Alaska Forest Stewardship Coordinating Committee. The committee, composed of representatives from a broad range of interests, met three times in 1995. The committee members are listed on page 50.

Urban & Community Forestry

Urban forestry is the establishment and care of trees in communities. The Urban & Community Forestry Program helps local governments and community members expand and care for this valuable resource. The program:

- provides information and training in proper techniques for retaining, planting, and caring for community trees;
- supports volunteer efforts to plant and maintain trees;
- helps local governments develop and fund effective, ongoing community forest management programs;
- encourages the private sector to support and fund community forestry efforts; and
- administers federal grants for pilot programs, demonstration projects, and tree planting.

The Alaska Urban & Community Forest Council, a 15-member 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 in the state. A list of members is on page 50.

1995 Highlights

- Produced *Plant a Tree: Alaska's Guide to Tree Selection, Planting & Care*. This 22-page booklet is the first such guide available to Alaskans. Also produced a condensed version of the booklet in the form of a brochure. Distributed both widely statewide.
- Sponsored *Building With Trees*, a workshop by the National Arbor Day Foundation, on how to save trees during construction and land development. Thirty people from seven communities attended the all-day workshop in Anchorage.
- Held a one-day workshop in Fairbanks, called *Trees and Shrubs for Fairbanks*, attended by 35 people.
- Led two-hour workshops on tree care in Glennallen and in Delta Junction.
- Co-sponsored, with the Cooperative Extension, three classes on spruce bark beetles, attended by more than 100 people.

Inspecting trees at Eielson Air Force Base following recertification as a Tree City USA. (l to r) Urban & Community Forest Council member Mark Malin, Deputy State Forester Dean Brown, Natural Resource Officer Gerald Von Rueden, Lt. Colonel S. C. Boyce and Northern Region Forester Les Fortune. (Pete Simpson)

- Organized *A Walk in the Woods: Discover Anchorage's Urban Forest*, a four-evening class, attended by an average of 25 people.
- Eielson Air Force Base, Alaska's only Tree City USA, was certified for a second year by the State Forester and the National Arbor Day Foundation.
- In cooperation with the Alaska Cooperative Extension, began development and organization of the Alaska Community Tree Steward Program. A pilot course will be offered in the spring of 1996 in Anchorage. The course will provide 30 hours of training on all aspects of community tree establishment and care. Those who participate in the course will, in exchange, volunteer 30 hours to a community forestry project.

Arbor Day Grants

In 1995, the Urban and Community Forestry program offered Arbor Day grants to communities to help them organize Arbor Day celebrations as a means of promoting the benefits of trees in communities and the need to provide proper care for them.

The division received 32 grant proposals requesting a total of \$42,449, much more than was available. Nineteen grants were given to organizations in 12 communities. The grants totaled \$19,825, and were matched by \$38,391 in local funds and services. The 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.





GOALS:

CREATE awareness, appreciation, understanding, skills and commitment to address local and global environmental issues.

PROVIDE a framework for students to apply scientific processes and higher order thinking skills to resolve environmental problems.

INCREASE appreciation and tolerance of diverse viewpoints on environmental issues by developing attitudes and actions based on analysis and evaluation of available information.

STIMULATE creativity, originality and flexibility to resolve environmental problems and issues.

ENCOURAGE students to become responsible, productive and participating members of society.

Educational Programs

Project Learning Tree

Since its introduction in the early 1970s, Project Learning Tree has been one of the most widely used environmental education programs in the United States. Hands-on, interdisciplinary activities let students investigate environmental issues and encourage them to make informed, responsible decisions based on knowledge about our complex environment.

PLT focuses on developing critical and creative thinking skills. The program does not try to teach children **what** to think about the environment; rather, it offers tools to help them learn **how** to think about the environment. Issues included are both local and global in focus. Activities deal with land, air, and water, as well as trees and forests. The curriculum seeks to instill in students the confidence and commitment to take responsible action on behalf of the environment.

Presently, PLT is used in all 50 states and U.S. territories, as well as Canada, Japan, Mexico, Sweden, Finland, and Brazil. Each year about 60,000 educators in the U.S. alone attend workshops to learn how to use the program with young people. In some states there are correlations between PLT activities and the state science or environmental education standards. There are also correlations between PLT activities and some science texts, and with scouting activities.

During 1995, facilitators introduced 273 teachers, youth group leaders, and resource professionals to the revised pre-kindergarten through grade eight activity guide. Four leaders participated in on-the-job training by facilitating workshops. Participants from 20 Alaskan communities took part in 21 workshops statewide. Five graduate credit courses were offered—one each in Girdwood, Eielson and Glennallen, and two in Palmer.

Foresters from the U.S. Forest Service and the Alaska Cooperative Extension presented a number of workshops, in addition to those led by division staff. The other sponsors of the program in Alaska are the Alaska Forest Association, the Alaska Natural Resource and Outdoor Education Association, and the Alaska Department of Education.

McGrath Outdoor Classroom

The Southwest Area helped the McGrath School secure a multi-year permit from the Division of Land to use a five-acre tract of state land just outside McGrath. The land will be used as an outdoor classroom for students. The school district constructed a cabin to be used for science and native education programs, and improved a trail that leads to the cabin. Biology classes have already begun surveys of vegetation in the area and are developing a nature trail, using existing trails.

Southwest Area Forester Bill Beebe has agreed to teach forest management classes as part of this project. Classes will include dendrology, forest survey, mensuration, forest management plan development, and forest entomology and pathology. The program will include developing a detailed forest management plan for the area which will cover forest health, recreation and a firewood cutting area.



Sasha Forsyth, a fifth-grader student at Denali Elementary School in Anchorage, won the statewide Arbor Day Poster Contest in 1995. This year's theme was Trees are Terrific and Forests are Too. Sasha's parents, Gaylord and Cynthia Kaze, attended the award ceremony held in her honor. (Dean Brown)

Arbor Day Celebrations

Alaska celebrates Arbor Day on the third Monday in May. This year, ceremonies and tree planting celebrations took place across the state, including the following:

- Urban & Community Forestry grants supported 20 Arbor Day events in 12 communities, from Coffman Cove to Holy Cross.
- The Urban & Community Forestry Coordinator spoke at the Municipality of Anchorage's celebration. The mayor read the Arbor Day Proclamation and Parks and Recreation planted a tree.
- Deputy Director Dean Brown participated in a celebration at Denali Elementary School in Anchorage, which honored the winner of the Alaska Arbor Day Poster Contest.
- Division staff, students and volunteers from many organizations and businesses planted trees in four Anchorage parks and at several schools.
- In Fairbanks, Forestry participated in activities at 10 schools, UAF, and three other locations. The mayors of Fairbanks, North Pole, and the North Star Borough participated in Arbor Day events. Fairbanks also held ceremonies in honor of the second and third place winners of the statewide Arbor Day poster contest.
- The Ketchikan Area Forester gave an Arbor Day presentation to third grade classes at an elementary school in conjunction with the school's Sea Week Celebration.



Volunteers planting trees in Conifer Park in Anchorage on Arbor Day. (Scott Christy)



Members of the Urban & Community Forest Council demonstrate tree transplanting at a public workshop in Fairbanks. (Patricia Joyner)

Wildland Fire Protection

The Division of Forestry, Bureau of Land Management's Alaska Fire Service, and U.S. 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 fourteen million dollars each year to provide comparable protection for state land.

Alaska is the only state with an interagency fire plan. The plan classifies 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 where communities and valuable resources are located. It also gives options for lower cost strategies in remote and unsettled areas.

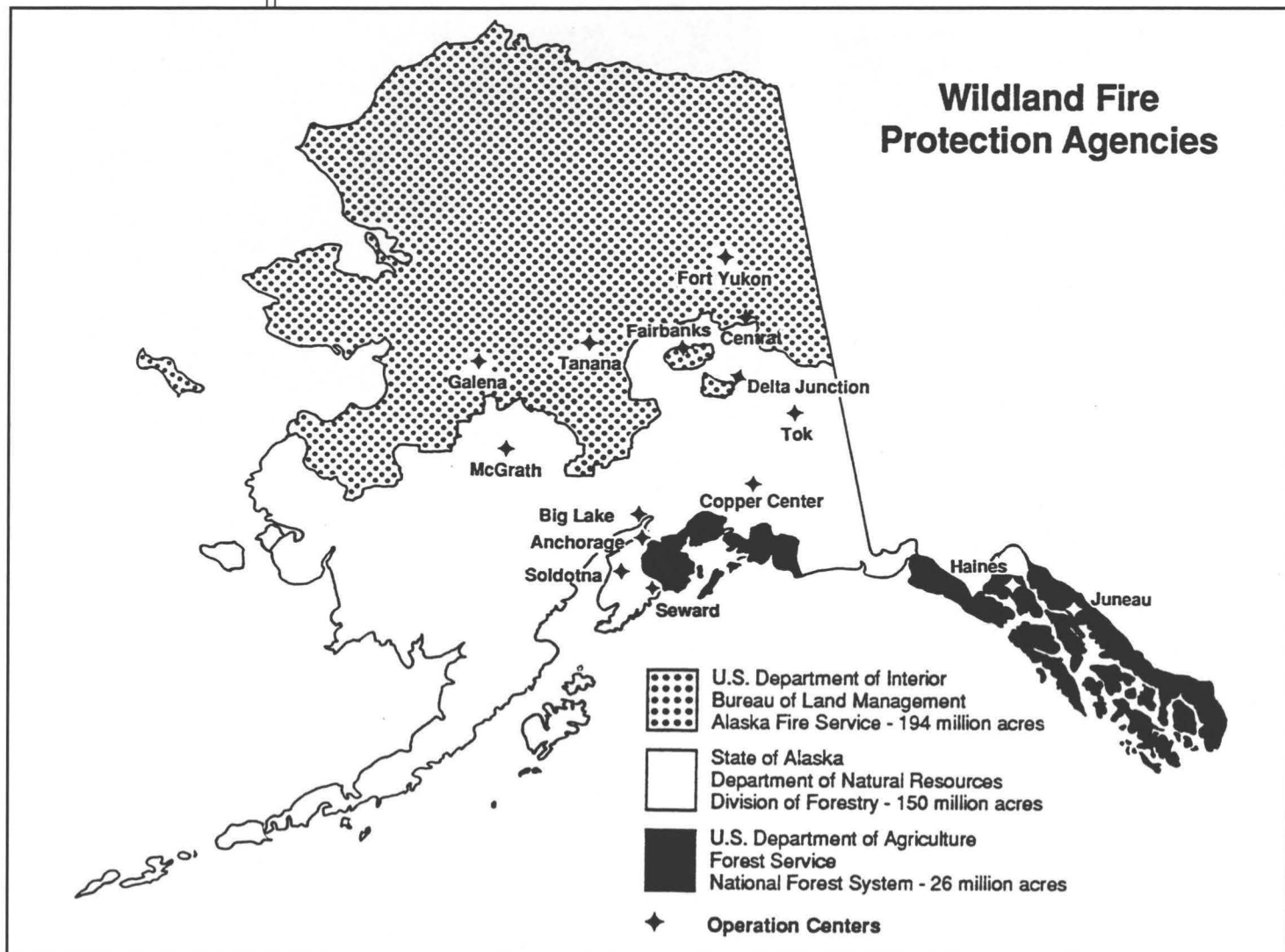
Fire Protection Levels

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 fire fighting 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.



1995 Fire Season

Alaska saw a substantial decrease in fire activity in 1995. The Division of Forestry and the Alaska Fire Service experienced a near record low number of fires and acres burned. However, the U.S. Forest Service had a higher than average number of wildland fires in national forests. Statewide, a total of 421 fires burned 43,945.8 acres, well below the annual average of 747 fires burning 1,604,000 acres.

Much of Alaska had record high temperatures early in the fire season. During the first half of May, Interior temperatures reached into the 80s. However, the last two weeks of May were much cooler than average with snow falling in the eastern interior. Mild weather patterns established themselves across Alaska with no extended periods of dry weather for the remainder of the season. Summer ended in the southern portion of the state with rain during much of August and extremely wet weather in September. Lack of snow throughout the state in the fall resulted in fires occurring through December.

The usual weather pattern of upper level high pressure systems that move into Alaska from Canada, remained east of Alaska, where western Canada experienced a high to severe fire season. The absence of these upper level highs resulted in few lightning strikes or lightning-caused fires. Most lightning storms that occurred were moist. No large "project" fires resulted from lightning strikes.

Spring Began with a Bang

The spring fire season began on March 7 with a fire in southeast Alaska on Admiralty Island. The U.S. Forest Service responded to the fire, which was caused by logging activities. The Kenai/Kodiak Area Office recorded the first fire on state protected land on March 13. It was started by someone burning trash and burned two acres before being suppressed by local fire district cooperators under agreement with the state.

The Fairbanks area had the most fires during the spring with 75 wildland fires burning 45 acres. The Mat-Su area was second with 49 fires, followed by the Kenai/Kodiak area with 35 fires. Overall, the spring work load for suppression agencies in Alaska was normal except for Delta, which had the only large fire.

A landowner clearing agricultural land ignited the Clearwater #1 fire in the Delta area on May 3. It quickly grew to 3,000 acres. Engine crews from Delta and a helitack crew from

Fairbanks attacked the fire, followed by 24 smoke jumpers from Fairbanks and the Palmer air tanker. Crews controlled the fire on May 7 and declared it out on June 9.

Forestry allowed a large fire in the Tok Area to burn due to the low value of resources in the area. By the end of May, 219 fires had burned 10,300 acres statewide—more than a quarter of the total acreage that would burn during the entire year.

Summer Slowed to a Crawl

Fire activity fell off dramatically in June, when 109 fires burned 5,700 acres. The division responded to the second large Delta area fire on June 14. Forestry began an aggressive initial attack with air tankers, fire engines and smoke jumpers. High winds and warm temperatures quickly fanned the flames through the spruce forest. This fire, the Clearwater #2, also resulted from agricultural burning and required many people and resources to suppress it. A 700-acre forested watershed, designated by the Department of Fish and Game as salmon spawning habitat, burned in this fire. Fish and Game was concerned about possible impacts to salmon habitat. The fire consumed 1,200 acres before it was brought under control.

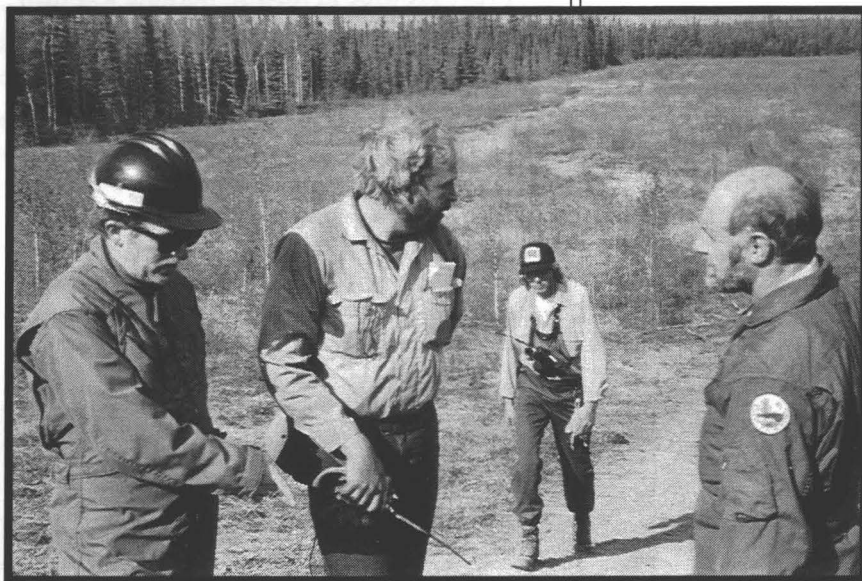
1995 Statistics

Fires by protection area:

Division of Forestry	77.5%
Alaska Fire Service	13%
USDA Forest Service	9.5%

Acres burned by protection area:

Division of Forestry	37.5%
Alaska Fire Service	62.5%
USDA Forest Service	.1%



Martin Maricle (Valdez/Copper River Area Forester) on an acting assignment as Delta Area Forester, Mark Groenwald (Delta Area) as situations unit leader, Mark Bertels (Mat-Su Area) as division supervisor, and Larry Dorhorst (Delta Area) as safety officer on an agricultural tract staging area for the Clearwater fire. (Dean Brown)

The Pinnacle Mountain fire started on June 10 at the Pinnacle Mountain Lodge, mile post 75 of the Glenn Highway, when a fire burning debris escaped. Initially fire engines and helitack crews from the Mat-Su Area's Palmer Base attacked the fire. Air tanker support was quickly ordered. When crews arrived, the five-acre fire was spreading quickly through the aspen and cottonwood forest understory.

Strong winds, steep terrain and lack of access hampered initial suppression efforts. Forestry asked the Mat-Su Borough's structural fire department for support because several homes and other structures were threatened. At the height of mobilization, 10 state firefighters, the BLM, Alaska Fire Service, four type II crews, the Chena Hot Shots, Tazlina type I fire fighter crew, and local fire departments worked under a type III incident command organization. Firefighters dropped 15,000 gallons of retardant on the fire. The fire was contained at 90 acres after three days, with no loss of property.

The number of fires in July dropped to 52. However, the number of acres burned increased due to fires in the Fairbanks and Alaska Fire Service areas that were allowed to burn under observation. There were only 16 fires statewide in August, burning less than five acres.

Fall Fire Season Never Ended

The number of fires in the Interior and Southeast increased to 26 in September. Fifteen fires in the Fairbanks area burned 15 acres and four fires in the Tongass National Forest burned four acres. There were three fires in October and no fires in November. However, due to the lack of snow in December, three fires required suppression by state firefighters.



Delta Area Forester Al Edgren briefing Armund Dube (r) type II IC, and Ray Brazier (l), Delta Area liaison on the Clearwater Fire. (Dean Brown)

1995 Summary

The Division of Forestry had a total of 327 wildfires on land under its protection, burning 16,585.3 acres. The major causes of wildfires on state-protected land were land clearing, controlled burning, children, campfires, and lightning. A high number of fires were also caused by power lines and burning structures.

The Alaska Fire Service had 54 wildfires with 27,347 acres burned. Lightning was the major cause of wildfires on land protected by the Alaska Fire Service.

The U.S. Forest Service had 40 wildfires on land under its protection, burning 13.5 acres. Campfires and debris burning caused most of these fires.

State Assists Yukon Territory

The 1995 fire season was one of the worst on record for parts of the Yukon Territory. Several fires escaped initial attack and became large "project" fires. The Yukon Forest Service requested help from the Division of Forestry in mid-June through a Memorandum of Understanding between the Government of Canada and the State of Alaska. Initially, Forestry provided two medium helicopters staffed with initial-attack firefighters.

The Yukon Forest Service requested that a 20-person crew of initial-attack firefighters from Alaska be sent to Carmacks, Yukon Territory on June 30. These firefighters augmented Yukon initial-attack personnel and provided expertise in protecting structures in historic Fort Selkirk along the Yukon River. The helicopters and personnel spent more than a month in the Carmacks area.

On July 20 the Yukon Forest Service requested a type II overhead team from Forestry to help manage several large fires in the Carmacks Fire District. The 20-person Tazlina type I emergency firefighter crew (EFF) was also ordered. With the addition of this crew, Alaska sent a total of 75 firefighters to the Yukon and provided equipment and supplies from the State Fire Warehouse.

Alaska's slow fire season allowed the division to assist the Yukon Territory, returning the outstanding support Yukon provided to Alaska during the disastrous 1990 fire season. The Canada and Yukon Forest Service spoke very highly of the assistance the Alaskan firefighters provided. The Prime Minister wrote to Governor Knowles commending Alaska's firefighters and recognizing Forestry employees Frenchie Malotte and Joe Stam.



Senator Ted Stevens thanks Fire Operations Forester Joe Stam for his assistance with Southcentral flood relief.

Flood Assistance

Koyukuk Flood

In September, 1994 Forestry was asked to organize logistics and field operations in support of the Koyukuk flood relief efforts. The division responded with more than 200 incident management personnel; over \$1 million in equipment and supplies; and expertise in field operations, logistics, warehousing, procurement, finance, aviation, and overall management and supervision.

The project ended in December, 1995 when Alatna was rebuilt and repairs in Hughes and Allakaket were completed. The division participated in the final critique of the flood response with the Federal Emergency Management Agency and the Alaska Division of Emergency Services.

Southcentral Flood

The Division of Forestry played a key role in the southcentral flood relief efforts in the fall of 1995. During mobilization, Southern Zone Fire Management Officer John See served as DNR's representative at the State Emergency Coordination Center. He acted as liaison between DNR divisions to provide damage assessment specialists and to coordinate with the Southern Zone Logistics Office. The logistics office filled requests for personnel and flood relief supplies, including one aircraft.

Forty-one Forestry employees and 17 emergency firefighters staffed local Emergency Operation Centers in Skwentna, Wasilla, Seward, Soldotna, and Kenai.

A local type III incident management team organized to help the Kenai Peninsula Borough emergency center coordinate its relief

efforts. A type II incident management team, composed mostly of Forestry personnel led by Incident Commander Lynn Wilcock, was organized on September 28.

The Alaska type I incident management team was put in place to assist the State Emergency Coordination Center. The Southern Zone Logistics Office organized the team. Fire Operations Forester Joe Stam served as an On-Scene Coordinator for the Alaska Division of Emergency Services Director.

The Matanuska-Susitna Borough requested assistance from the division to form a relief crew for the Skwentna area. The Mat-Su #1 EFF crew assisted Skwentna residents.

The borough also asked the Big Lake Area Office to set up and operate the incident command system for the Yentna and Knik River flood. A team of local Forestry staff organized an Incident Action Plan that involved many local agencies and volunteers.

The team's initial objective was search and rescue, however, it later turned to damage assessment and then to damage mitigation when the local Mat-Su EFF crew was sent into areas where residents needed immediate help to restore basic living conditions.

Valdez/Copper River Area personnel also helped residents in that area who incurred damage from the flood.

Many Forestry employees played key roles in helping to coordinate the State Emergency Coordination Center's response to the first disaster since the facility was constructed. It was a tremendous learning experience and good exercise in interagency coordination. The state will benefit from experiences gained during these incidents when Alaska experiences its next major disaster.



Pinnacle Mountain Fire. (Patrick Purcell)

1995 Fire Statistics

Fires statewide: 421

Acres burned: 43,945.8

1995 Fire Activity by Landowner

Landowner	Number	Acres
State	67	14,943.6
Borough/City	22	4.3
Private/Non-ANCSA	246	1,118.1
Bureau of Land Mgmt.	20	19,272.0
National Park Service	4	264.8
Fish & Wildlife Service	17	6,663.8
Bureau of Indian Affairs	2	106.1
Native Claims Act Lands	19	1,444.2
Military	3	142.0
U.S. Forest Service	21	6.9
Total	421	43,945.8

1995 Fires on State-Protected Land by Cause

Cause	Number	Acres
Lightning	29	11,331.8
Land clearing	71	4,664.3
Campfires	42	368.3
Trash/debris	34	138.8
Powerlines	24	37.4
Children	37	11.3
Equipment/vehicles	13	10.4
Smoking	15	7.5
Structures	16	4.6
Incendiary/arson	12	2.8
Fireworks	5	0.5
Other	30	7.6
Total	327	16,585.3

Emergency Firefighter Wages

Year	State	Federal	Total
1980-85	\$4,689,081	\$9,861,933	\$14,551,041
1986	2,515,750	2,832,208	5,347,958
1986 ¹	561,770	—	561,770
1987	646,674	5,352,799	5,999,473
1987 ²	643,932	—	643,932
1988	4,474,107	5,146,861	9,620,968
1988 ³	907,865	—	907,865
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
Total	\$40,331,539	\$40,032,161	\$80,363,700

¹Special appropriation due to Fair Labor Standards Act.

²U.S. Dept. of Labor ruling required payment at time-and-one-half when week exceeded 40 hours. Amount shown was paid in 1990.

³U.S. Dept. of Labor ruling required payment at time-and-one-half when week exceeded 40 hours. Amount shown was paid in 1991.

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
1985	39
1986	22
1987	59
1988	54
1989	61
1990	7
1991	0
1992	5
1993	0
1994	83
1995	1

1995 Fires by Area & Protection Level

State-Protected Areas

Area	Critical		Full		Modified		Limited		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Tok	4	0.8	5	64.3	2	2.0	1	1,880.0	12	1,947.1
Delta	12	53.2	7	4,576.1	2	1.6	0	0	21	4,630.9
Fairbanks	91	27.4	10	9.5	8	7,536.4	1	600.0	110	8,173.3
Val/Copper River	4	0.8	11	4.1	1	0.8	3	1,145.0	19	1,150.7
Anch/Mat-Su	79	37.1	11	126.0	0	0	0	0	90	163.1
Kenai/Kodiak	45	48.1	3	40.7	1	3.0	1	320.0	50	411.8
Southwest	0	0	6	9.8	2	90.5	0	0	8	100.3
Haines	6	7.0	4	0.4	3	0.3	4	0.4	17	8.1
Totals	241	174.4	57	4,830.9	19	7,634.6	10	3,945.4	327	16,585.3

U.S. Forest Service-Protected Areas

Area	Critical		Full		Modified		Limited		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Totals	3	1.2	11	4.1	19	7.3	7	0.9	40	13.5

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	0	0	5	143.2	4	3,035.0	6	3,873.2	0	0	15	7,056.4
Tanana	1	3.0	5	1,506.6	3	105.0	8	8,535.3	2	140.5	19	10,290.4
Up. Yukon	0	0	7	91.9	3	8,850.0	8	1,053.0	2	4.3	20	10,000.2
Totals	1	3.0	17	1,741.7	10	11,990.0	22	13,461.5	4	144.8	54	27,347.0

Statewide Totals by Protection Level

Critical		Full		Modified		Limited		Unplanned		Total	
No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
245	178.6	85	6,582.7	48	19,631.9	39	17,407.8	4	144.8	421	43,945.8

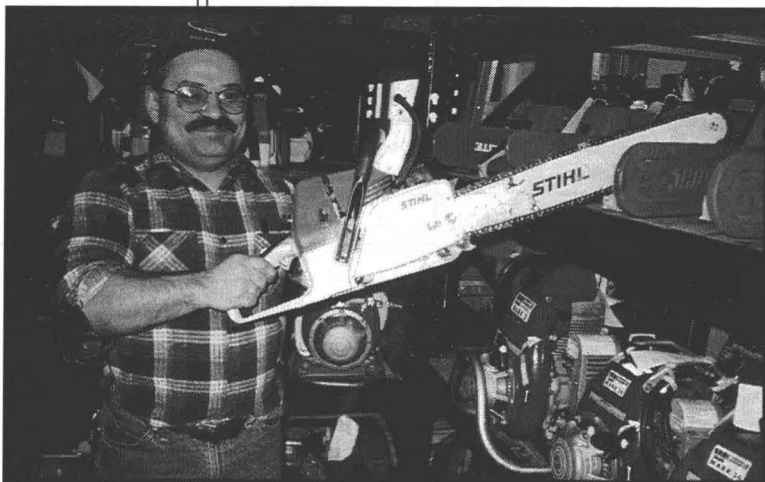
Fire Program Implementation

Decreased Protection Levels on Interior Acreage

Land managers decided to reduce the level of fire protection on more than 1.5 million acres in Interior Alaska near Ruby and Galena. State land managers and fire managers worked with the U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Doyon Ltd. Regional Corporation, Gana-A' Yoo Ltd. Village Corporation, and over 80 Native allottees to coordinate the changes. The state owned the most acreage involved, with 850,000 acres changing from a designation of Full to Limited Option, and 50,000 acres changing from Modified to Limited. This change is expected to provide significant savings in fire suppression costs and allow fire to play its natural role in the northern environment without jeopardizing other values.

Chugach Fire Protection

The Division of Forestry made a proposal to the U.S. Forest Service to take over fire suppression for the Chugach National Forest. Analysis of fire occurrences show that the forest averages 12 fires per year (over half of those on state or private land), all are human-caused and most occur near a road. Due to changes in ownership patterns, state land selections and the state's fire work load, it is more efficient, in terms of funds and personnel, for the Kenai/Kodiak Area Office to provide initial attack on these few fires. The state has acquired housing and a site for a seasonal base in Cooper Landing for initial attack and timber sale management staff. The division also acquired a FEPP fire engine. A joint analysis of the fire work load was completed but the U.S. Forest Service has not responded and formal discussions continue.



Grants To Rural Communities

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

The 46 applications for grants were a slight increase from the 44 received in 1994. The total amount requested was \$158,339. The division approved 23 grants to fund training and to purchase pumps, radios, protective clothing, fire extinguishers, smoke detectors, fire tools, and other supplies. There was one new RCFP grantee this year.

In addition to grants, the division issued fire stores and equipment valued at over \$150,000 to volunteer fire departments.

Fire Department	Grant Amount
Kongiganak	\$1,442
St. George	5,000
Chignik Bay	3,591
Gustavus	1,375
Whittier	2,000
Takotna	400
Glennallen	5,000
Haines	2,600
McKinley	650
Nenana	2,500
Thorne Bay	1,500
Valdez	1,817
Wrangell	2,548
Homer	5,000
Anderson	5,000
Chena-Goldstream	5,000
Kenny Lake	3,687
Houston	5,000
Meadow Lakes	5,000
North Pole	4,250
Chugiak	3,058
Copper Center	3,600
Bear Creek	4,982
TOTAL	\$75,000

Ken Cruickshanks, mechanic at Forestry's Eagle River shop, with a refurbished chainsaw, ready for the next fire. (Dean Brown)

Burn Permits

The Division of Forestry issued 3,362 burn permits in areas of the state that require such permits. Some areas issue three-year permits and others issue permits valid for only one year. The Anchorage/Mat-Su and Valdez/Copper River areas issue permits over the telephone. All others require a visit to the area office or local volunteer fire department.

Area Office	# Issued	Comments
Anchorage/Mat-Su	1,128	3-year permits
Delta	260	1-year permits
Fairbanks	803	3-year permits
Haines	3	1-year permits
Kenai/Kodiak	800	3-year permits
Tok	57	1-year permits
Valdez/Copper River	311	1-year permits

Consolidated Fire Facility

The Division of Forestry and the City of Palmer have developed a proposal to build one facility to centralize Southern Zone fire facilities. The intent is to consolidate the Anchorage fire program, logistics, and dispatch; the Eagle River warehouse and shop, the Palmer dispatch center, air tanker base, and initial-attack post; and the Mat-Su Area Office in one location at the Palmer airport. The consolidated facility would be more accessible to the public and provide management and cost efficiencies for the division.

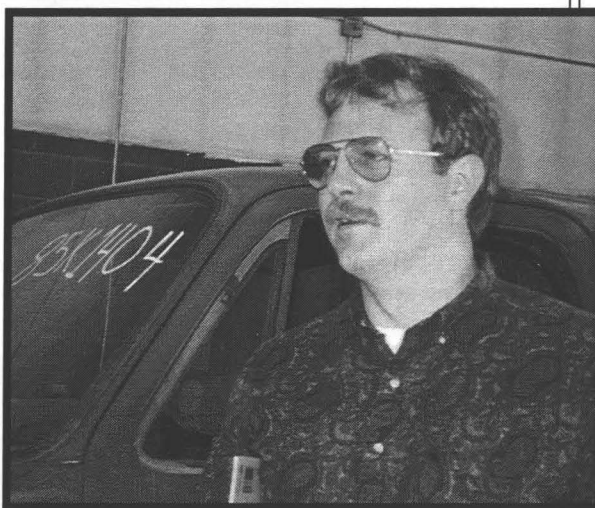
A conceptual design was developed for an 80,000-square-foot facility that includes a hangar, shop, warehouse and engine bays, and space for administration, training, dispatch and logistics.

Legislative approval is necessary to enter into a lease/finance agreement and the City of Palmer would issue Certificates of Participation. A bill was introduced at the end of the legislative session by Representative Ogan to authorize a lease-finance plan for \$6 million for the facility.

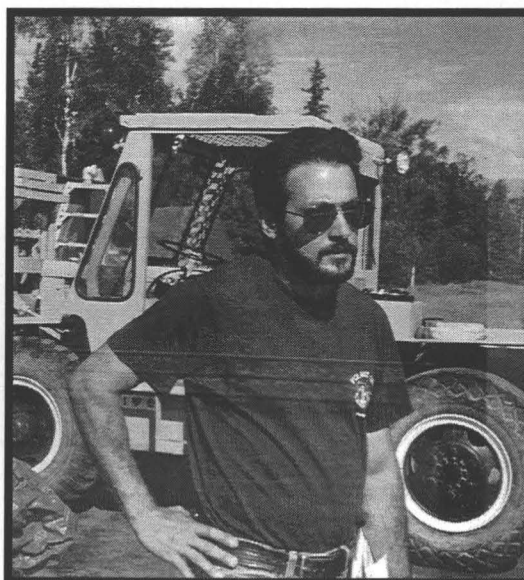
Enforcement and Violations

An important aspect of Forestry's prevention program is enforcement. Nineteen citations were issued to individuals in 1995. Of these, 16 pled guilty or no contest; one elected a jury trial, and in two cases the state declined to prosecute.

These legal actions resulted in heightened public awareness, \$2,317 in fines, \$10,589 in restitution, 10 days suspended jail time, and 100 hours of community service. In addition, one person was required to join his local volunteer fire department.



John See, Southern Zone Fire Management Officer, inspecting a truck the state acquired from surplus federal property. (Dean Brown)



Benny Caruso, assistant base manager at the Palmer Air Base. (Dean Brown)

Fire Reporting System

Forestry activated a new Fire Reporting System that uses a sophisticated computer network statewide. In 1993 the Division of Forestry contracted with DNR's Land Records Information Section to develop a computer program and distribution network. It is used to report fire information, keep fire statistics and share fire information such as night and daily situation reports, crew status, weather, and interagency reports. The network allows fire dispatch offices to transfer data to a central data base. The network uses the state mainframe computer network, Alascom lines, microwave lines, satellite, and local telephone company lines.

The Fire Reporting System has also provided the foundation for the Wide Area Network (WAN), which has been expanded to support all of DNR. The WAN expansion allows for an electronic mail system that will reach all DNR employees and connect to other agency electronic mail systems. It provides for mainframe terminal access, fire transfers, and network file sharing.

The Fire Reporting System became fully operational in the spring of 1995 and the response from users has been extremely positive. The new reporting system and distribution network is a cost-effective, user-friendly system designed to meet present and future needs for transferring data and graphics.

McGrath Airport Cleanup

Forestry installed a soil remediation system to clean up soils contaminated by aviation fuel at the McGrath Airport fire retardant ramp and refueling facility in June. The consulting firm that won the competitive bid designed and installed a system for the most economical treatment of the contaminated soils, which are located above a shallow water table.

Three independent horizontal trenches were dug and spaced to provide the maximum amount of air exchange. Perforated and wrapped pipes were placed in the trenches and connected to vertical wind-driven turbine fans and air intake risers. An electrical blower enhances the passive air flow system during the summer by alternating between extracting fuel vapors and injecting fresh air.

Fertilizer was added to the soil that filled the trenches to enhance the natural biological degradation of the fuel. The soil will be sampled at the end of next summer. Once the contamination has dropped below required levels the blower will no longer be used but the passive system will operate for a year or two longer to ensure complete rehabilitation of the site.



Medium helicopter with a bucket leaving the helibase in Delta. (Scott Christy)

Fire Training

Support Dispatcher

The Division of Forestry and the U.S. Forest Service sponsored the first support dispatcher course held in Alaska. This new course by the National Wildfire Coordinating Group (NWCG) helped interagency fire suppression agencies fill much needed support dispatcher positions. Two logistics coordinators from Colorado and California served as lead instructors and trained the student dispatchers in national and local logistics procedures.

Firefighter Safety

The division places major emphasis on firefighter safety and provided training to fire suppression agencies, emergency firefighters and cooperator fire departments. Participants were trained to use fire shelters. They discussed firefighter deaths, major injury or near miss situations, the 10 Firefighter Orders and the 18 Watch Out Situations. The division also continued to provide current training on hazardous materials, first aid, and blood-borne pathogens.

Incident Command System

The division participated in a cooperative funding agreement with the U.S. Department of Interior, the Alaska Department of Environmental Conservation and the Alaska Division of Emergency Services to sponsor the new NWCG incident management courses. About 100 students from these agencies attended the training.

Alaska Crew Boss Training

The division, in cooperation with the Alaska Fire Service and Bureau of Indian Affairs, sponsored an Alaska emergency firefighter crew boss training session. This intensive two-week school is essential for providing qualified crew bosses for the 73 emergency fire fighter crews located throughout Alaska. This year 25 crew bosses were trained.

Canadian Forest Fire Danger Rating System

The division continues to educate staff on the CFFDRS. Division instructors offered a one-day interagency training session and workshops at each Forestry area office. The CFFDRS helps fire managers predict fire danger and fire behavior potential. Using information from the CFFDRS, fire fighting resources are moved to areas of the state with the highest fire potential, thereby providing aggressive initial attack to keep fires small.



Tazlina type I crew leaving Alaska to fight fires in the Yukon Territory. (Frenchie Malotte)

Tazlina Crew Training

The division and interagency cooperators provided training to the Tazlina type I emergency firefighter crew. The courses offered were Basic Fire Fighting, Helispot Management, Crew Boss Training, Fire Suppression Tactics, Intermediate Fire Behavior, Fire Behavior Calculations, Strike Team Leader and Crew Representative Training.

The Valdez/Copper River Area Office procured exams, tracked training and experience records, provided additional self-study training materials and issued red cards for the crew.

Fire Behavior Analyst

The division took steps to fill Fire Behavior Analyst vacancies this year. The division sent one participant to the Advanced Fire Behavior Calculation Course and he is preparing to complete the required Fire Behavior Analyst training in 1996. The FBA position is essential to the interagency type I and type II incident management teams. Fire Behavior Analysts make fire behavior predictions that provide for firefighter safety during intense burning conditions.

Training in 1995*

Type	Courses	Participants	Instructors
Emergency firefighter	11	250	30
Cooperator fire departments	11	264	22
Initial attack	17	163	23
Extended attack	2	17	3
Fire management	39	227	36
Safety	26	392	21
Human resource development	9	56	4
Totals	115	1,369	139

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



Jim Carlson, maintenance worker at the Eagle River Shop. (Dave DeHart)

Firefighter Training for Coast Guard

The Kenai/Kodiak Area provided a Wildland Interface Firefighter Course to 20 members of the U.S. Coast Guard in Kodiak in March. The Coast Guard suppresses wildland fires that occur on the base and in surrounding areas under mutual aid agreements with local fire service areas. The Coast Guard paid the expenses incurred by the division to provide the training.

Prevention Analysis Workshop

The division and national prevention experts hosted a Prevention Analysis Methods Workshop in Anchorage and Fairbanks. This course was essential in helping the division complete work on the Interagency Fire Prevention Analysis Plan.

Aerial Firing

The Alaska Fire Service and Forestry sponsored an aerial firing specialist course to train firefighters to operate the helitorch and plastic sphere dispenser. This highly specialized equipment helps fire managers suppress wildland fires through burnout operations, and with prescribed fires for wildlife habitat improvements.



Larry Dorhorst, Delta Area, safety officer on the Clearwater Fire. (Dean Brown)



Danny Newby, Delta Area emergency firefighter, using a hand-held GPS to map the perimeter of the Clearwater Fire. (Dean Brown)



Gary Mullen, Copper River Area type II team air operations, on the Clearwater Fire. (Dean Brown)

Staff Recognition

Foresters Rescue Five

Three generations in one family were grateful for the quick response of Mat-Su Area Forest Technicians Tom Dean and Gary McGeorge. Tom and Gary were on road patrol in the Willow area when they heard a 911 report of an overturned boat at the mouth of Willow Creek.

The five family members in the boat were swept downstream, out of Willow Creek and down the Susitna River. Gary and Tom, realizing that the nearest dive rescue unit was 20 miles away, initiated their own rescue attempt. They recruited a local resident with a boat and quickly went down river from Willow Creek into the Susitna. They found and rescued two victims clinging to the overturned boat, two washed up onto a sandbar and one clinging to a log in the river.

Tom and Gary's quick thinking and action allowed them to locate the victims and get them to a waiting ambulance. The victims were suffering from hypothermia and, according to the EMS personnel, could have perished had rescue not been immediate.

Western Forester Publishes Article by Division Foresters

The Society of American Foresters published an article written by foresters Roger Burnside, John See and Steve Phillips in the March issue of its newsletter, *Western Forester*. The article, entitled Forest Health on the Kenai Peninsula, described forest health concerns and provided an update on the spruce beetle epidemic. It also discussed Forestry's development of the Western Kenai Peninsula and Kalgin Island Forest Health Management Plan.

National Instructors

The division provided two instructors to national level training for fire prevention and fire fighting personnel. John LeClair, Kenai/Kodiak Area Fire Management Officer, spoke at the National Logistics Workshop held in Nevada. Bud Rotroff, Fairbanks Area Fire Prevention Technician, spoke at the National Fire Prevention Workshop in Colorado. Forestry is fortunate to have such highly qualified staff members.

Alaska Society of American Foresters

For the second year in a row a division forester served as chair of the Alaska Society of American Foresters, the professional forestry organization. Dan Ketchum, Urban and Community Forestry Coordinator, followed Interior Regional Forester Les Fortune as chair. Twenty-one division employees are members, associate members, or affiliate members of Alaska SAF chapters. Pete Simpson, Interior Region's stewardship forester, served as chair of the Yukon River Chapter this year.

SAF activities in which Forestry employees participated in this year included:

- a breakfast for state legislators in January to acquaint them with the organization and to present a professional forestry perspective on the issue of forest health;
- a three-day annual meeting in Petersburg in April, hosted by the Stikine Chapter;
- the annual Arbor Day tree seedling sale by the Cook Inlet Chapter members, who distributed the division's fact sheet on seedling planting and care to each purchaser.
- participation at the Tanana Valley State Fair by the Yukon River Chapter, which offered tree seedlings and discussed local forestry issues with interested members of the public.

As chair, Dan was the representative to the House of Society Delegates (HSD) which preceded the national SAF convention in Portland, Maine in October. He was also honored to be one of four candidates for chair of the HSD, a prestigious position in the society for which the competition is always stiff. The chair of the New York SAF won the election.

Dan reported that the HSD experience was interesting and enriching, and especially valuable after many years in the profession. He said it expanded his awareness and appreciation for the professional aspects of forestry and helped him see the opportunities available through participation in SAF.

Foresters Contribute to Seventh American Forest Congress

Alaska participated in preparations for the Seventh American Forest Congress, which convenes in Washington, D.C. in February, 1996. Titled "Many Voices...A Common Vision," its objective is to develop shared visions, principles and recommendations for the protection and sustainable management of America's forests into the 21st century. More than 85 organizations are sponsoring the Congress and over 2,000 individuals are expected to attend.

The division is an official collaborating organization with two individuals making significant contributions to the Congress. Dan Ketchum, as chair of the Alaska Society of American Foresters, led the local citizen involvement. He attended a training session for round table organizers in late July, organized a local committee and held a round table in Anchorage in November. Input from that effort was sent to the Congress.

Deputy Director Dean Brown was named to the six-person Pacific Northwest Regional Research Committee for the Congress. The committee initiated an effort involving numerous organizations and peer review, which identified research needs in the Pacific Northwest. The effort resulted in a Report to the Congress that will help participants envision the direction that forestry research should take to meet challenges into the next century.

Fiscal Year 1995 Actuals¹

Funding Sources	Forest Mgmt. & Develop. ²	Fire Suppression	Total
General Funds	\$7,784.1	\$5,572.7	\$13,356.8
Federal Funds	1,215.9	8,334.1	9,550.0
Capital Improvement Receipts	207.0	—	207.0
Interagency Receipts	792.8	8,292.9 ³	9,085.7
General Fund/ Program Receipts	617.2	—	617.2
Totals	\$10,617.0	\$22,199.7	\$32,816.7

Positions	Forest Mgmt. & Develop.	Fire Suppression	Totals
Permanent Full Time	67	6	73
Permanent Part Time	121	34	155
Non-Permanent	17	733	750
Total Positions	205	773	978
Staff Months	1,558	1,734	3,292

Forest Management & Development

Renewable Resource Development & Sales	Coastal Region	Interior Region	Northern Zone	Southern Zone	Statewide	Total
Board of Forestry	—	—	—	—	9.3	9.3
Forest Practices	572.6	1.3	—	—	175.7	749.6
Forest Practices Act Research (one-time\$)	69.4	—	—	—	—	69.4
Forest Stewardship	210.2	538.5	—	—	188.9	937.6
Haines State Forest	85.9	—	—	—	—	85.9
Reforestation	77.3	267.2	—	—	—	344.5
Reforestation RPL ⁴ Program Receipts	185.4	264.2	—	—	150.4	600.0
Small Timber Sales	189.5	472.3	—	—	125.7	787.5
Capitol Improvement Receipts	130.9	44.0	—	—	32.1	207.0
Cash Bond RPL ⁴ Program Receipts	—	10.4	—	—	—	10.4
Subtotals	\$1,521.2	\$1,597.9	—	—	\$682.1	\$3,801.2

Wildland Fire Protection Services

Anchorage School District Interns	47.3	—	—	—	—	47.3
Pre-suppression	879.5	1,848.0	479.8	709.7	451.8	4,368.8
Rural Community Fire Protection (Fed.)	—	—	—	—	77.0	77.0
Rural Fire Prevention & Control (Fed.)	—	—	51.4	21.2	129.8	202.4
Subtotals	\$926.8	\$1,848.0	\$531.2	\$730.9	\$658.6	\$4,695.5

Forest Administration

Federal Coop. Forestry Assistance	—	—	—	—	936.5	936.5
Project Learning Tree RPL ⁴ Program Receipts	—	—	—	—	6.8	6.8
Director's Office	—	—	—	—	407.6	407.6
Unbudgeted Reimbursable Svc. Agreements	—	—	—	—	769.4	769.4
Subtotals	—	—	—	—	\$2,120.3	\$2,120.3
TOTALS	\$2,448.0	\$3,445.9	\$531.2	\$730.9	\$3,461.0	\$10,617.0

¹ All dollar figures are in thousands

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

³ Koyukuk Flood Support - \$4,674.5

⁴ RPL- Revised Program Legislative (budget amendment)

Fiscal Year 1996 Budget ¹

Funding Sources	Forest Mgmt. & Develop. ²	Fire Suppression	Totals
General Funds	\$7,627.6	3,510.0	\$11,137.6
Federal Funds	1,415.1	5,328.8	6,743.9
Capital Improvement Receipts	241.0	—	241.0
Interagency Receipts	49.8	—	49.8
General Fund/Program Receipts	15.0	—	15.0
Totals	\$9,348.5	\$8,838.8	\$18,187.3

Positions	Forest Mgmt. & Develop.	Fire Suppression	Totals
Permanent Full Time	67	6	73
Permanent Part Time	121	34	155
Non-Permanent	17	733	750
Total Positions	205	773	978
Staff Months	1,558	1,734	3,292

Forest Management & Development

Renewable Resource Development & Sales	Coastal Region	Interior Region	Northern Zone	Southern Zone	Statewide	Total
Board of Forestry	—	—	—	—	9.2	9.2
Forest Practices	597.6	2.0	—	—	142.3	741.9
Forest Stewardship	219.1	514.8	—	—	242.6	976.5
Haines State Forest	76.5	—	—	—	—	76.5
Reforestation	65.4	240.7	—	—	—	306.1
Small Timber Sales	122.6	460.5	—	—	116.7	699.8
Capitol Improvement Receipts	—	—	—	—	224.0	224.0
General Fund/Program Receipts	—	—	—	—	15.0	15.0
Subtotals	\$1,081.2	\$1,218.0	—	—	\$749.8	\$3,049.0

Wildland Fire Protection Services

Anchorage School District Interns	39.1	—	—	—	—	39.1
Pre-suppression	927.9	1,882.3	471.0	681.8	483.6	4,446.6
Rural Community Fire Protection (Fed.)	—	—	—	—	77.0	77.0
Subtotals	\$967.0	\$1,882.3	\$471.0	\$681.8	\$560.6	\$4,562.7

Forest Administration

Federal Coop. Forestry Assistance	—	—	—	—	\$1,338.1	\$1,338.1
Director's Office	—	—	—	—	398.7	398.7
Subtotals	—	—	—	—	1,736.8	1,736.8
TOTALS	\$2,048.2	\$3,100.3	\$471.0	\$681.8	\$3,047.2	\$9,348.5

¹ All dollar figures are in thousands

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

Citizen Advisory Groups - 1995

Alaska Board of Forestry

Tomas Boutin, State Forester, Juneau
Larry Hartig, recreation organization, Anchorage
Steve Kallick, environmental organization, Anchorage
Daryl McRoberts, non-governmental forestry, Juneau
Andy Miscovich, mining organization, Fairbanks
Don Schmiede, non-governmental fish or wildlife biologist, Juneau
Paul Swartzbart, commercial fishermen's organization, Cordova
John Sturgeon, forest industry trade association, Anchorage
Bill Thomas, native corporation, Haines

Tanana Valley State Forest Citizens' Advisory Committee

Pete Shepherd, general public, Fairbanks
Edmond Packee, forestry profession, Fairbanks
John "Chris" Maisch, native community, Fairbanks
Ron Ricketts, business community, Fairbanks
Sylvia Ward, environmental protection, Fairbanks
Steve Adams, hunting, fishing, trapping; Fairbanks
Tyler Conkle, forest industry, Delta Junction
Doug Bowers, outdoor recreation, Fairbanks
Lane Thompson, private forest-user, Fairbanks
Al Pagh, forest industry, Fairbanks
Josh Moore, mining industry, Fairbanks

Forest Stewardship Coordinating Committee

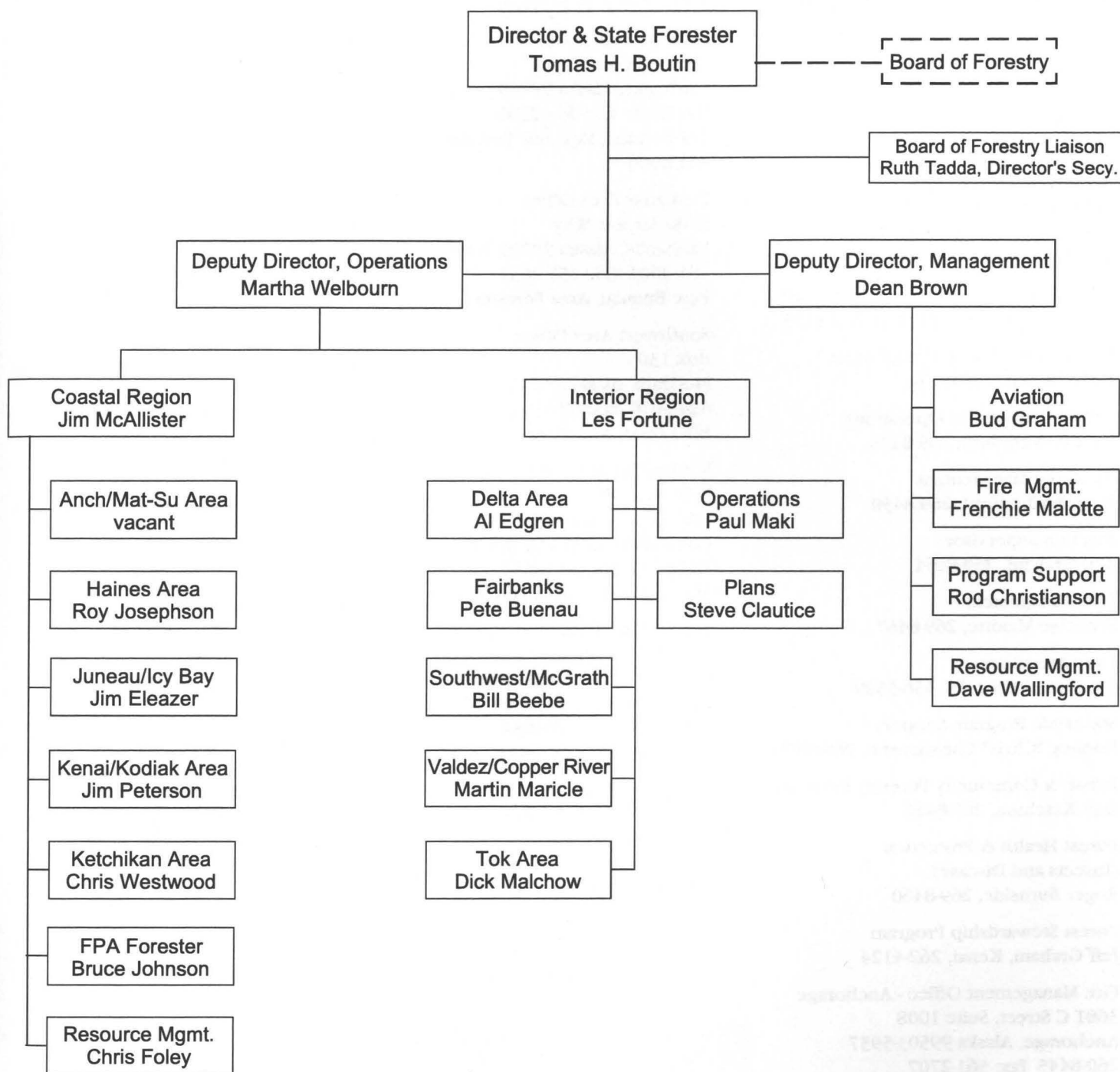
Steve Bush, U.S. Forest Service, Anchorage
Jim Carter, Soil & Water Conservation Board, Willow
Tom Ward, U.S. Soil Conservation Service, Anchorage
Tony Gasbarro, Alaska Cooperative Extension, Fairbanks
Max Huhndorf, Gana-A' Yoo, Ltd., Galena
Alan Kingsbury, landowner, Talkeetna
Ted Smith, Consulting Forester, Willow
Jimmy LaVoie, Consolidated Farm Service Agency, Palmer
John Mohorcich, Kenai Peninsula Borough, Soldotna
Loisann Reeder, Susitna Valley Association, Anchorage
Tony Urvina, Bureau of Indian Affairs, Juneau

Alaska Urban & Community Forest Council

Mark Malin, arborist, Fairbanks
Thom Pence, forester, Juneau
Panthea Redwood, municipal planner, Anchorage
Linda Cyra-Korsgaard, landscape architect, Anchorage
Leah Spaulding, horticulture, Soldotna
Dennis Kennedy, construction, Fairbanks
Kenneth Suel, small community service, Chuathbaluk
Carol Sanner, community forestry and beautification, Girdwood
Ray Dinger, business, Delta Junction
Tony Gasbarro, Alaska Cooperative Extension, Fairbanks
Cathy Wright, member-at-large, Palmer
Douglas Crevenson, member-at-large, Fairbanks
Ole Andersson, member-at-large, Soldotna
Melanie Fullman, member-at-large, Ketchikan
Malcolm Ford, member-at-large, Anchorage

Division of Forestry Organization Chart

12/96



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Director & State Forester
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Dean Brown, 269-8476

Deputy Director of Operations
Martha Welbourn, 269-8473

Resource Management
Dave Wallingford, 269-8450

Aviation Supervisor
Bud Graham, 269-8464

Fire Management
Frenchie Malotte, 269-8467

Fire Operations
Joe Stam, Fairbanks, 356-5529

Statewide Program Support
Rodney "Chris" Christianson, 269-8477

Urban & Community Forestry Program
Dan Ketchum, 269-8466

Forest Health & Protection
(Insects and Disease)
Roger Burnside, 269-8460

Forest Stewardship Program
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Jim Lewandoski, Fire Mgmt. Officer

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Les Fortune, Regional Forester
451-2666

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Pete Buenau, Area Forester

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Bill Beebe, Area Forester

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Martin Maricle, Area Forester

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Chris Westwood, Area Forester

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