Alaska Department of Natural Resources Division of Forestry

2002 Annual Report

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Alaska Division of Forestry

The Alaska Department of Natural Resources Division of Forestry:

- Manages a wildland fire program on public, private, and municipal land;
- Encourages development of the timber industry and forest products markets;
- Conducts timber sales for personal use, commercial use, and fuelwood;
- Protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act;

- Manages the Haines and Tanana Valley state forests, which cover a total of 2.6 million acres;
- Administers Community Forestry, Conservation Education, Forest Health, and Forest Stewardship programs;
- Gives technical assistance to owners and managers of forested land;

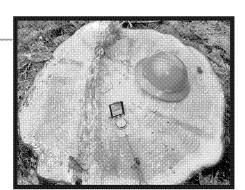
The State Forester's Office is located in Anchorage. In addition, the division has two regional offices and nine area offices responsible for program support and field work.

In 2002, the division employed 72 people full-time,150 seasonally, and 11 student interns.

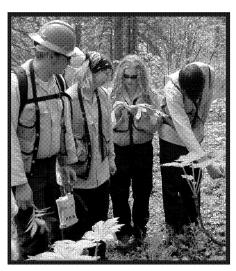


Second growth forest at Icy Bay in Gulf of Alaska. (Joel Nudelman)

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Stump of 45-year-old tree harvested in Southeast Alaska. (Michael Curran)



Student interns learning about Alaska forest plants. L to R: Jason Mercer, Sarah Dewees, Kelly Gilmore, Dan Hill. (Matt Weaver)

State Forester's Comments

In reflecting on the events in Forestry in 2002, I look back upon the five and one-half years I have been director of the Division of Forestry and at the changes anticipated in the coming year and I am optimistic. The division has established a reputation for solving controversial issues by bringing together the forest industry, environmental groups, state agencies, and the public in a constructive and effective problem solving process.

Timber sales have been consistent, although low due to the continued depressed timber market nationally and internationally. Southeast timber sales have been focused on supporting local value-added processors. State timber sales have become an increasingly important factor in keeping alive small and medium sized sawmills in the Prince of Wales, Wrangell, Mitkof and Ketchikan areas. In the interior, demand has remained fairly constant and the division has been able to meet that demand. Our ability to respond to increases in demand in the interior, however, has been reduced as a result of budget reductions. On the Kenai Peninsula, we have seen a resurgence of interest in bark beetle salvage timber primarily fueled by our increased ability to provide support for reforestation following harvest.

In 2002, the wildland fire program experienced the fifth largest year of fire activity on record. Wildland-urban interface fires threatened the communities of McGrath, Central, Circle Hot Springs, Medfra, and the Chena Hot Springs resort.

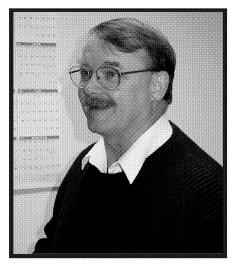
Fire danger was high in the Kenai, Mat-Su, Anchorage, and Fairbanks areas for an exceptionally long period in the spring, resulting in numerous initial attack responses for humancaused fires. The Alaska Type 1 team was mobilized nationally on three occasions and spent 50 days on assignment. Alaska benefits from the experience and training our firefighters receive on complex wildland-urban interface fires in the Lower 48. Initial attack capability was enhanced with federal fire plan funding that permitted hiring 20 initial attack positions in critical urban areas across the state.

The Cooperative Forestry Programs—Conservation Education, Stewardship, Community Forestry, and Forest Health, have all experienced significant success this year. These programs, made possible through a partnership with the USDA Forest Service, provide forest and vegetation management advice to local communities and private landowners that is much in demand.

As I think you will find from reading this annual report, the division has had a productive and successful year. This is largely due to the support and help that the people of Alaska have provided us. I would like to thank all of you who have shown an interest or provided support for the Alaska Division of Forestry.

I encourage each of you to be involved in Forestry, make your opinions known and let's work together toward a positive future.

Jeff J. Jahnke State Forester



State Forester Jeff Jahnke (Karen Gordon)

2002 at a Glance

Resource Management

- The Division of Forestry offered 94 commercial timber sales in Fiscal Year 2002. Of these, 56 sold for a volume of 16,880 MBF, nearly double the volume sold in 2001.
- State timber sales contributed \$454,100 to the state treasury in FY 2002. This is an increase of \$83,000 over the amount generated in 2001.
- The division issued 317 fuelwood permits and 34 personal-use house log permits.
- DOF planted 208,876 seedlings on 569 acres of state land. It scarified 510 acres in preparation for planting, and thinned 175 acres.
- The division registered 48 log brands, of which 19 were new and 29 were renewals.
- Revised the Haines State Forest Management Plan and established a system to manage commercial recreation in the forest.
- The division processed 112 forest practices notifications of timber harvest and 56 renewals of harvest on 35,140 acres.
- Conducted 132 forest practices field inspections.
- The division revamped the forest practices compliance monitoring procedures to make the program more efficient and effective.

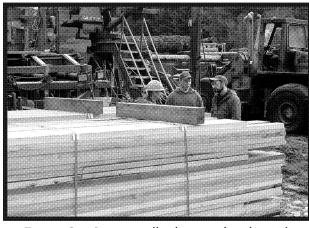
- The division, in cooperation with the US Forest Service, mapped forest insect and disease activity on 24 million acres through aerial surveys.
- The Board of Forestry held three meetings around the state, discussing the Forest Resources & Practices Act with the public, and working with the administration and the legislature on forestry legislation.
- Wasilla became the first city in Alaska, other than military bases, to be named a Tree City USA.
- The Community Forestry Program provided technical assistance to 16 communities, recorded 897 student hours of training for tree care professionals and community members, and benefitted from 129 days of volunteer time.
- The Forest Stewardship Program helped 31 private forest landowners prepare stewardship plans for 1,391 acres.
- Two Native corporations completed forest stewardship plans for a total of 72,957 acres. Another Native corporation received a stewardship planning grant for 29,510 acres.
- Private landowners planted 98,618 seedlings with funds from a federal cost-share program and the Kenai Peninsula Borough.
 - The Conservation Education Coordinator trained 84 people in Project Learning Tree, a curriculum that uses the forest to teach about the wise use and management of natural resources.
 - The Conservation Education Program developed the Fire in Alaska curriculum for grades 5-8 and held two workshops to train educators.



Firefighters Brian Carver (l) and Phil Blydenburg (r) remove fuels as part of federally funded project to reduce fire danger on the Anchorage hillside. (Dean Brown)

Fire Management

- In cooperation with federal agencies, the division provided fire protection for 150 million acres of private, municipal, and state land.
- During one of the most active fire seasons on record, 543 wildfires burned 2.18 million acres in Alaska.
- The Alaska Type 1 Team completed assignments in Arizona, Utah and Oregon.
- The division administered federal Volunteer Fire Assistance Grants totaling \$159,592. These funds allowed volunteer fire departments in 39 communities to train firefighters and purchase tools, equipment, and supplies.
- Emergency firefighters collected \$7.5 million in state and federal wages.
- The division's Northern Region received a \$600,000 NASA grant to map communities in the Tanana Valley. The maps will be used for disaster response and planning.
- DOF acquired 10 items for fire fighting, valued at \$265,446 through the Federal Excess Personal Property Program.
- The State Fire Warehouse provided \$450,000 worth of fire fighting supplies and equipment to 39 local governments in Alaska, and materials valued at \$1.2 million to Lower 48 efforts.



Forester Greg Staunton talks about wood quality with workers at Ed Braur's mill in Petersburg. (Michael Curran)

Forest Resources & Practices

The Division of Forestry administers the Forest Resource and Practices Act (FRPA) on private, municipal, and trust lands. The division reviews notifications of timber harvests, conducts forest inspections, monitors compliance, and when necessary, takes enforcement action. An important aspect of the program is informing landowners, harvest operators, and the public about requirements of the act and responsible forest practices.

The forest practices notification and review process does not require a permit before an activity is begun. Rather, timber operators submit a Detailed Plan of Operations (DPO) to the Division of Forestry for review. The division then coordinates review of the plan with the departments of Environmental Conservation and Fish and Game. When the review is completed the operator may begin harvest operations. Timber operators usually submit

notifications well in advance of beginning operations, and reviews are completed within 30 days.

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.

2002 Highlights

The FRPA continued to be effective in protecting water quality and fish habitat, while supporting the timber and fishing industries. With support from federal water resource program funding, the Division of Forestry was able to maintain sufficient field presence to ensure that the act was implemented properly. Only one notice of violation was issued this year after 133 field inspections. This indicates a high degree of compliance and continued success in preventing problems through Detailed Plans of Operations review or by correcting them during field consultations with operators. No waters are listed as impaired waters under Section 303(d) of the Clean Water Act, based on forestry activities governed by the FRPA.

Other 2002 achievements included:

- a review of the compliance monitoring program, which led to a more efficient and effective monitoring process, and
- increased emphasis on reforestation compliance review.

Activity Summary

Most statewide indicators of FRPA activity increased this year. The total number and acreage of new Detailed Plans of Operations received, DPO renewals, road miles notified, and variation trees requested all increased. (see table on pg. 6) New DPOs increased by 35 percent and the acreage in new DPOs was up by 12 percent. Increases in notified activities occurred primarily in the Southern Southeast and Kenai-Kodiak areas. Activity in the Northern Southeast area decreased. There continues to be little harvesting on private land in the interior. The Northern Region received one new notification for an operation on Fairbanks North Star Borough land. The division emphasized review of reforestation compliance in Regions II and III this year. More than 26,000 acres were reviewed for reforestation in the Tok, Copper River, and Kenai-Kodiak areas.

Notifications and inspections. The division received and reviewed 112 new DPOs and 56 renewals for private, municipal, and trust lands in 2002. Staff conducted 133 field inspections. (see table on pg. 6) Total inspections were down this year, primarily due to a reduction in activity on Mat-Su Borough land. Demand for timber from borough lands decreased due to increased timber supply from land clearing and subdivision development activities not subject to the Forest Resources & Practices Act.

Enforcement. The division issued one notice of violation, two directives, and no stop work orders in 2002. One directive and the notice of violation concerned failure of operations to submit a DPO in advance of harvesting. The second directive was for failure to clear harvested spruce in the Mat-Su Area. Approximately 1,500 harvested white spruce were left on the ground in a timber sale for more than one year. Clearing is required to minimize the risk of wildfire and the spread of insects. Compliance with the first directive is complete; the other two cases are still pending.

Forest Practices Implementation on Private, Municipal, and Trust Land

Monitoring

The Forest Resources and Practices Act requires monitoring to:

- assess how well the Best Management Practices (BMPs) are being applied,
- ensure that the measures for controlling non-point source pollution are being implemented,
- identify training needs, and
- determine whether the BMPs are workable on the ground.

The Division of Forestry's top priority for monitoring is to ensure that operators are complying with the act and the best management practices in the regulations. The second priority is to conduct monitoring research that addresses the effectiveness of the act and regulations.

In 2002, the division:

- developed and field-tested BMP compliance score sheets for Southeast Alaska. The score sheets are used during routine field inspections to quantify the compliance of the operators regarding BMP implementation.
- purchased sub-meter resolution satellite imagery of operational areas on private land where there are closed or inactive operations. The imagery will be used to analyze and prioritize field monitoring efforts.
- worked with the University of Alaska Environment and Natural Resources Institute (ENRI) to collect field samples for a bioassessment study of sedimentation on the Kenai Peninsula. ENRI completed the final report on this project.
- worked with ADF&G to develop a joint road condition and compliance monitoring project for past operations on private land in Southeast Alaska.

Reforestation

Reforestation compliance. DOF emphasized review of reforestation compliance in 2002. The Northern Region conducted reforestation compliance studies on land owned by the Tetlin and Ahtna Native corporations, and on state land in the Delta area. All surveyed units on Tetlin land met the FRPA standards. Hardwoods have come in on many areas. Around Tetlin Lake where winter logging occurred, stocking levels are lower, but still meet the standards. On Ahtna land initial results indicate that reforestation is more abundant than expected. Studies on beetle-infested Ahtna land in the Copper River area will continue in 2003.

On state land in the Delta area all units in completed timber sales met the stocking standards with a combination of residuals and seedlings, or with seedlings alone. These units were partially harvested and scarified, but not planted. The units appear to provide good wildlife habitat as well as adequate regeneration.

One landowner on Afognak Island found that natural tree regeneration of logging units was not uniform or successful in many areas and conducted comprehensive regeneration surveys of logging units. The division worked with the landowner to develop a reforestation plan, under which the landowner will provide annual reports describing methods used to address reforestation, the numbers of trees planted, and acreage reforested.

Exemptions and variations. Salvage harvesting of bark beetle-killed timber continued in the Kenai-Kodiak area. As a result, the division continued to receive requests for exemptions from reforestation requirements. In 2002, the Kenai-Kodiak Area received 19 new requests: five from Native corporations (3,049 acres), one from the Mental Health Trust (99 acres), eight from the Kenai Peninsula Borough (2,906 acres), and five from other private landowners (628 acres). The

division approved exemptions on 7,044 of the 7,385 acres reviewed, including 703 acres that were submitted in prior years. This is down from the 16,517 acres reviewed and 9,363 acres approved for exemptions in 2001. Requests from Native corporations decreased dramatically as the corporations neared completion of salvage harvests on the Kenai Peninsula. However, the Kenai Peninsula Borough submitted requests for the first time. The Kenai-Kodiak Area also received four requests for variation for certain reforestation requirements.

Planting on private land. In 2002, the federal government provided costshare assistance through state forestry divisions for reforestation on small parcels of private land. A total of 98,618 tree seedlings were planted on private land in Alaska: 92,118 on the Kenai Peninsula, 5,000 in Anchorage, and 1,500 in the Interior. A total of 214 private acres were planted.

Approximately \$237,000 was obligated for private land reforestation for 2003. Funding came from the Forest Incentive Program and Stewardship Incentive Program. The Kenai Peninsula Borough Spruce Beetle Program provided \$60,000 for staff foresters and supplies to assist private land reforestation. The Forest Stewardship Program also contributed personnel to reforestation efforts. Alaska Native corporations planted 190,000 seedlings on 1,005 acres.

Summary. Since 1995, reforestation exemptions have been used much more extensively than anticipated when the FRPA was adopted. During this period, DOF reviewed exemption requests from 67 landowners on 88,696 acres in the Kenai-Kodiak Area. Overall, 77 percent of the requests were approved. The division supports public and private efforts to reforest infested harvest areas even when they are exempt from reforestation standards. On state land, DNR reforests all salvage areas.

Forest Resources & Practices Act Administrative Activities on Private Land

Region	New F Not	Iarves ificati		}	irvest Renew			vest Acreaș v Notificat		1	umber spectio		1	ariati eque	
	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
Coastal															
Kenai-Kodiak	28	27	55	13	11	19	9,502	16,008	21,185	52	61	57	0	0	3
Mat-Su/SW	4	0	3	11	11	11	13,312	0	367	46	22	8	0	0	0
No. Southeast	0	19	10	0	7	5	3,779	9,619	5,839	0	25	24	0	2	2
So. Southeast	104	36	43	28	10	21	20,542	5,599	7,667	89	44	43	14	4	13
Coastal Total	136	82	111	52	39	56	47,135	31,225	35,058	187	152	132	14	6	18
Northern															
Copper River	0	1	0	0	0	0	0	275	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairbanks	1	0	1	0	0	0	90	0	82	0	0	1	0	0	0
Tok	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Total	1	0	1	0	0	0	0	0	82	0	0	1	0	0	0
State Total	137	83	112	52	39	56	47,225	31,500	35,140	187	152	133	14	6	18

Region		Variatio es Revio		for	eage Revi Reforesta Exemptio	ation	for	es Revie Refores complian	tion	0:	tificat f FRP iolatic	A		oad M in Ne otifica	w
	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
Coastal															
Kenai-Kodiak	0	0	0	3,843	16,517	7,385	0	480	7,324	1	0	0	44	65	146
Mat-Su/SW	0	0	0	0	0	0	0	8,778	0	0	0	0	0	0	3
No. Southeast	0	144	126	0	0	0	0	655	0	0	0	1	0	104	20
So. Southeast	330	103	165	0	0	0	1,722	106	0	0	2	0	130	39	58
Coastal Total	330	247	291	3,843	16,517	7,385	1,722	10,019	7,324	1	2	1	174	208	227
Northern															
Copper River	0	0	0	0	0	0	0	0	16,000	0	0	0	0	0	1
Delta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairbanks	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Tok	0	0	0	0	0	0	0	0	3,000	0	0	0	0	0	0
Northern Total	0	0	0	0	0	0	0	0	19,000	0	0	0	3	0	1
State Total	330	247	291	3,843	16,517	7,385	1,722	10,019	26,324	1	2	1	177	208	228

^{*} Variation Trees Reviewed covers all trees inspected on site in site-specific variations. This includes trees approved or denied for harvest plus other trees, such as those that are withdrawn from the variation request or that are found to be outside the riparian buffer. It does not include trees harvested in small streamside zones under 11 AAC 95.240.

Region I	Coastal Alaska
Region II	Southcentral - boreal forest south of the Alaska Range
Region III	Interior Alaska

Riparian Management Standards

Region III. House Bill 131, a bill to implement the recommended revisions in the riparian management standards for Region III, came very close to passing in 2002. The bill was heard in the House Resources, Senate Resources, and Senate Finance committees, passing each without opposition. The bill was passed unanimously on the House floor, but the Senate did not vote on the bill before it adjourned. DNR will work with the resource agencies and the Board of Forestry for passage of this legislation in 2003. In the interim, DNR and ADF&G continued field review of Type IIIC streams in interior Alaska. These are high value resident fish streams less than three feet wide. Preliminary results show little occurrence of commercial timber types near this stream type. Studies will continue in 2003 in the Tok area. The agencies will look at more streams for at least one more season before making recommendations on BMPs for this stream type.

Region II. DNR worked with ADF&G to establish the scientific and technical committee for review of the Region II riparian management standards. The agencies will convene the committee early in 2003 to begin review of the Region II standards.

Fish Passage

In 2002, there was considerable concern by the timber industry and ADF&G about appropriate means of ensuring fish passage on non-anadromous waters on forest operations. Although the authority for fish passage is subject to Title 16 rather than the FRPA, DOF is very interested in working with the agencies and industry to establish a fair, efficient, and effective way to ensure fish passage on forest operations.



Coastal Region Forester Jim Eleazer and Forest Planner Alison Arians inspect culvert installation on Thorne Bay #1 Timber Sale on Prince of Wales Island. (Michael Curran)

Clean Water Actions

The division continued to work with the Department of Environmental Conservation, Department of Fish & Game, and Division of Governmental Coordination to implement Alaska's Clean Water Actions. ACWA is designed to better coordinate the many state programs that address water quality, water quantity, and fish habitat protection. It emphasizes that Alaska's priority for water quality protection is prevention of problems through good stewardship, including the Forest Practices Program. DOF helped reprioritize work for agency funding, rank water bodies for data collection and restoration, and assess the effectiveness of existing water programs.

Training

The Division of Forestry held staff training this year on FRPA hearing officer procedures. Training for landowners and operators is an ongoing process. Forest Practices foresters provided training on the act and regulations through eight sessions in southeast and southcentral Alaska this year. Sessions included formal office training and informal field sessions tailored

to individual operators. In Northern Southeast, staff attended the Icy Bay Operators meeting in January and discussed forest practices issues from the previous operating season and expectations for the 2002 season.

Kenai Floods

In October, up to 15 inches of rain fell on the Kenai Peninsula in a two-day period. This tropical storm was rated as a 100-year plus flood event and caused widespread damage to roads, including logging roads.

The Kenai-Kodiak Area found, during a field review of logging roads, that about 10 percent of the bridges and culvert crossings experienced some level of impact from the flood. In several cases, bridge embankment material washed away during the flood caused bridges to fall into stream courses. As winter set in, landowners mobilized to salvage and remove the bridge structures from streambeds. Most of the road repair will be addressed in 2003 after the winter season. In some cases, landowners are considering removing structures permanently and closing roads.



Jetty Creek tributary bridge in Icy Bay. (Joel Nudelman)

2003 Activity Projections

In southern southeast Alaska the division projects harvest activity in 2003 will be slightly higher than 2002. The acreage harvested may increase sharply, due to two proposed helicopter salvage operations. In northern Southeast, the University of Alaska will continue harvest operations on state land at Icy Bay, however the Mental Health Trust concluded its Icy Bay harvests in 2002. A variety of operations are expected in other areas of northern southeast, including Cape Yakataga, Hoonah, Sitka, and Yakutat.

In southcentral Alaska, timber harvest operations on Afognak Island are expected to increase slightly over the next couple of years. Salvage of beetle-killed spruce on the Kenai Peninsula is expected to continue at a steady pace for the next few years. The university has recently offered timber for salvage on its trust lands, and the Kenai Peninsula Borough plans to offer more salvage sales to address fuel hazards in urban interface areas. Some increase in forest practices activity is also anticipated in the Mat-Su as interest in the use of hardwoods grows.

Forest practices harvest activity in the the Northern Region is expected to be similar to that in 2002.

FRPA Budget

State funding for the Forest Practices Program was level in Fiscal Year 2002; federal Section 319 funding declined from \$266,800 to \$250,000. Section 319 funding is essential to maintaining adequate funding for the program. The division had 7.9 full-time equivalent positions funded for forest practices spread over 12 positions. This small staff coordinates forest practices work among the resource agencies, reviews notifications, conducts field inspections and enforcement actions, does implementation monitoring, provides training, and leads review and development of FRPA standards. DNR depends on federal funding for the Forest Practices Program and there is no guarantee that federal funding will continue. This year the division also received one-time funding from federal Section 309 and Section 6217 funds to assist with monitoring.

Alaska Board of Forestry

The nine-member Board of Forestry advises the state on forest practices and provides a forum for discussion and resolution of forest management issues on state land. The board also reviews all proposed changes to the Alaska Forest Resources and Practices Act and its regulations. Board members are appointed by the governor for three-year terms and represent a variety of forest-related interests. All board meetings include an opportunity for public comment. Board members are listed on page 44.

In 2002, the board held three hearings. Main topics included:

- House Bill 131 and riparian management standards in Regions II and III (southcentral and interior),
- Log transfer facility permitting and ecological assessment of log transfer facility impacts,
- Protocols for coordination with the Board of Fisheries on issues of common interest,
- Reforestation standards and compliance in the boreal forest,
- Updates to the Haines State Forest management plan,
- Funding for forest practices, including funding under Section 319 and the Sustainable Salmon Fund,
- Alaska Clean Water Actions effort,
- FRPA monitoring strategy, procedures, and results,
- Regulation of herbicides for forest vegetation management, and
- Fish passage on non-anadromous streams.

Resource Management

The Division of Forestry manages forests for multiple use and sustained yield of renewable resources on 20 million acres of state land. This includes the Tanana Valley State Forest and Haines State Forest with a combined total of over two million acres. The division conducts personal use,

commercial timber, and fuelwood sales. It emphasizes in-state use of wood for value-added processing.

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

Forest Products Market Overview

Coastal Region

Southeast. Timber manufacturers in Southeast Alaska continue to expand market opportunities and explore new niches. Most mills are installing additional equipment for secondary manufacture of lumber. One dry kiln is operating in Southeast and four more are expected to be operational in early 2003. Some mills have installed resaws and planers to enhance their products.

Southern Southeast expects an increase in manufacturing of high-value-added products in 2003. Export and domestic log and lumber prices are still very low and are not expected to increase in the foreseeable future. This is especially true for the low end products of spruce and hemlock. Demand for western red-cedar and Alaska yellow-cedar has remained strong, both in the export and domestic markets. The limited supply of these species will keep their value high.

The demand for state timber sales has remained high, especially in Southern Southeast due to the inconsistent and diminishing federal supply of timber. Requests to export smaller, low quality spruce and hemlock from small- and medium-sized mills is growing, an indication of the economically uncertain domestic markets for this type of log. Manufacturers of value- and high-value-added products continue to respond positively to timber sales with significant quantities of average or better quality wood.

Kenai Peninsula. Most timber being harvested on the Kenai Peninsula is beetle-killed or low quality spruce, which is being processed as chips. Chips are being delivered to the facility on the Homer Spit operated by Gates Construction. Most of the chips are being exported to the Pacific Rim.

There are a handful of small mills still operating on the Kenai Peninsula but there are no more mid-sized mills. Most of the beetle-killed spruce has deteriorated too much to produce sawn lumber. The current high level of activity is expected to decline rapidly over the next five years as beetle-killed spruce deteriorates. Stumpage prices for dead spruce are at a record low, with no price increase expected. Due to the large amount of dead timber and the concern over fire danger, most landowners just want to remove these hazardous fuels.

Matanuska/Susitina Valleys. A market for chips from low quality birch, aspen, and spruce may develop when the deep-water Port Mackenzie is completed. The market is expected to increase in 2003 for sawlog quality birch from local and out-of-state markets. One large over-the-counter sale is being divided into smaller units and individual sales to meet the demand for smaller sales.

Demand for firewood from state land will likely remain low because of the amount available on lots being cleared for subdivision development.

Northern Region

Interior. The division expects a stable level of harvest to continue in interior Alaska. Mills are well established and have a consistent need for timber. Most have increased their business by manufacturing value-added products or using their timber for construction. This has decreased their dependence on logging.

No significant increase in harvest levels is expected until export markets develop.

Timber Program

Timber Volume Offered and Sold in Commercial Sales

Timber Volume Offered (MBF)*

Fiscal Year	Coastal Region Southeast	Coastal Region Southcentral	Northern Region	State Total	Number of Sales
' 98	15,128	18,412	22,689	55,229	84
' 99	5,302	7,777	15,522	28,601	55
'00	11,599	9,361	14,966	35,926	88
' 01	5,954	8,568	17,999	32,521	98
'02	16,655	3,749	17,756	38,160	94

Timber Volume Sold (MBF)

Fiscal Year	Coastal Region Southeast	Coastal Region Southcentral	Northern Region	State Total	Number of Sales
'98	14,623	17,754	13,211	45,588	60
' 99	4,797	2,803	6,953	14,553	32
'00	8,365	5,774	6,640	20,779	60
' 01	954	1,857	6,064	8,875	60
' 02	11,340	1,333	4,207	16,880	56

^{*}Timber offered includes new offerings, reoffers, and over-the-counter sales.

Timber Program Revenue

Fiscal Year	Revenues
1998	\$773,200
1999	\$339,900
2000	\$334,300
2001	\$370,200
2002	\$454,100

Note: Timber program revenue is primarily from timber sales; approximately two percent of the revenue comes from other sources, including log brands, seedlings, retained damages, and document fees.

State Fiscal Year 2002: July 2001 - June 2002

Personal Use Permits - Fiscal Year '02

Location	Fuelwood	House/Saw Log
Coastal Region Southcentral Area	4	9
Northern Region	317	25
State Totals	317	34

Conversion Factors

Board foot (bf) = 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.

MBF = thousand board feet MMBF = million board feet

Forest Management

Northern Southeast

Timber harvest. Timber operations on the Haines State Forest focus on small timber sales to local sawmills for value-added timber processing. Interest has been expressed in two larger sales available for purchase over the counter but no one has bid on them.

The division sold 10 small negotiated sales to local operators for a total volume of 641 MBF. This volume helped supply seven or eight local mill owners with material for processing. Three of these mills operate year-round. Some timber was processed as house logs and shipped to a nearby Yukon market. Local operators continue to search for specialty markets with a focus on primary product manufacturing.

Thinning. Pre-commercial thinning continued on the forest with 147 acres completed in 2002 and contracts begun for another 37 acres. This brought the total acres thinned (or under contract) since the program began in 1993 to 1,606. Thinning trees that compete for sunlight maintains the tremendous growth of these stands and creates larger trees in a shorter period. Thinning has the added benefit of maintaining browse species for moose.

The stands where the most thinning is occurring were harvested in the late 1960s and early 1970s and are now 20 to 60 feet tall and 6 to 14 inches in diameter. Several areas not being thinned to create diversity and allow comparison to thinned stands.

Pruning. The division added 40 acres to its pruning program, making a total of 93 acres completed or under contract since the program began in 2000. A local contractor prunes branches in second growth stands from the base of the tree to 16 feet up. The larger diameter, dominant trees are selected for pruning at a density of about 75 trees per acre. The goal is to provide clear, knot-free lumber, which has higher value over the 120-year rotation age.

Southern Southeast Area

Timber harvest. The Southern Southeast Area sold 10,699 MBF in Fiscal Year '02. The SSE Area made timber available for three mid-sized and small saw mills, in an area from Petersburg south to the Canadian border. The local timber industry is adding equipment to produce high-value-added products. Two shake and shingle mills purchased state timber sales this year. One operator continues to log and process timber from a high-value-added sale sold in 2001.

The SSE Area refined the proposal process used to select a purchaser to negotiate for a timber sale. The process makes selecting a purchaser as fair as possible at a time when demand for state timber sales is high.

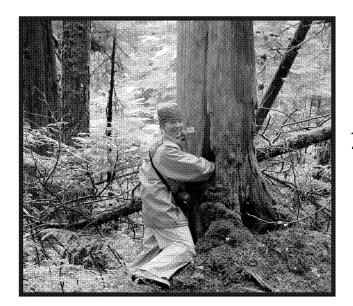
Thinning. Area staff completed a 55-acre pre-commercial thinning operation at Whipple Creek near Ketchikan as a demonstration of the management potential of pre-commercial thinning in southeast Alaska. A grant will fund pre-commercial thinning of 400 acres of second growth on Prince of Wales Island in 2003.

Inventory. The division began an inventory of all potential state timber in the SSE Area in 2002 and expects

to complete the inventory by 2005. Results will allow refinement of the annual allowable cut over time and a long-term harvest plan that allows for efficient use of the timber. The inventory will also identify regenerating timber stands that are in need of precommercial or commercial thinning.

Assistance to agencies. Assistance to other state agencies included working with the Alaska Mental Health Trust to lay out and sell three small sales of combined state and AMHT timber, helping the Division of Mining, Land, and Water appraise timber values on proposed subdivisions, and doing field inspections for a power line construction project.

SHPO. The area office and the State Historical Preservation Office cooperated to have an archeological survey performed in a designated timber sale area on Prince of Wales Island that was thought to have archeological or historical significance. The surveyors identified and tagged a grove of culturally modified trees for further study. Natives used the bark and made planks from these western red-cedar as long ago as 300 years. The division and SHPO developed a plan to use tree rings to date the activity on these trees after the logging process.



Forest Planner Alison
Arians checks condition of
a red-cedar on a Prince of
Wales Island timber sale.
The bark was removed
many years ago for use by
Natives living in the
area. The division is
working with the State
Historical Preservation
Office to identify these
culturally modified trees.
(Michael Curran)

Delta Area

Forest management. The Delta Area continues to design and sell timber sales for local value-added processing. Area sawmills are continuing to invest in additional equipment to enable the expansion of products and markets, such as wood fuel pellets. The forest industry has potential for growth, especially if the railroad and gas line are extended to the area. Markets are needed for low value white spruce, birch, and aspen logs.

Area timber sales are designed and harvested to facilitate natural regeneration. Harvest units incorporate boundary seed trees, partial and selective tree harvesting, and scarification to encourage natural seeding.

The Delta Area hired the professional services of Tanana Chiefs to complete a reforestation analysis by an independent third party. Tanana Chiefs completed intensive surveys of 126 acres targeted to include the lowest known stocked harvest units in the management area. Tanana Chiefs also reviewed reforestation on an additional 420 acres. All of the areas examined were in compliance with the Forest Practices Act by the seventh year after harvest as required. One five-year-old, 35-acre harvest area was identified as having low stocking and was subsequently scarified and planted in early September.

Pogo Gold Mine. The division is coordinating with the planning for the Pogo Gold Mine. The access route for the mine overlays access routes marked on the ground for several timber sales on the north side of Shaw Creek Flats. There will be roughly 700 acres of forest cleared for the right-of-way and the mine site. All commercial sized trees (greater than 9" DBH) will be salvaged and sold.

Fairbanks Area

Timber harvest. In 2002, 65 active timber sales were under contract and included road construction valued at \$605,000. Overall, market demand is lower than in past years. However, interest is high from local operators for fire- or beetle-killed wood to satisfy the demand from the eight local turning mills. State timber sales may also include large birch sales if there is interest from potential markets.

The division anticipates offering timber sales in Unit 2 (Nenana, Minto, Manley Hot Springs area) of the Tanana Valley State Forest when planning for the unit is completed this summer.

The Fairbanks Area has been awarded a grant to study mechanical hazardous fuels reduction near communities and to explore markets for small wood removed by the fuel treatments. So far, there are potential markets for chunk wood, used to reduce soil erosion on forest roads, and for hog fuel for cogeneration at local power plants or

boilers. DOF is working with the University of Alaska Fairbanks Forest and Agricultural Research Station, UAF Arctic Energy Technology Development Laboratory, and the Alaska Department of Community & Economic Development on exploring the feasibility of co-generation using fuel treatment residue. Creating a bio-energy market for small wood would greatly improve profitability of current forest industry operations and open up new markets for wood now going to waste.

White Spruce Enterprises was awarded a grant from the Department of Energy to install a gasifying generator that uses wood chips from their slab pile as fuel. This demonstration project may open up new markets for wood by-products in the interior.

Reforestation. More than 130,000 white spruce seedlings were planted during the summer on 260 harvested acres. Planted areas continue to grow well, providing trees for the forest industry in the future.



A partial, or selective, cut leaves some trees standing. These trees protect seedlings from drying winds and sun, serve as future crop trees, provide wildlife habitat, and reduce regeneration costs. However, the costs for this harvesting method are higher. In addition, trees left may have defects that limit their future value as crop trees and they may harbor pathogens that spread to young trees. Each forest stand has unique ecological conditions. Foresters choose harvest and regeneration practices that are best for a particular site. (Steve Joslin)

Ruffed grouse habitat improvement.

The Division of Forestry, Department of Fish and Game, and Ruffed Grouse Society continue improving habitat in the Fairbanks Area. This project is a unique opportunity for long-term, cooperative land management by the state's foresters, wildlife biologists, and the Ruffed Grouse Society. Funds raised at the 2002 Fairbanks Ruffed Grouse Society banquet were donated to Fish and Game to enhance grouse habitat. The Alaska Legislature provided additional funds.

Foresters and biologists use timber harvest to create young, vigorously growing stands of aspen and birch in the project area. Such stands are critical sources of nutrition and cover for wildlife. In addition to ruffed grouse, the project benefits snowshoe hares, lynx, moose, goshawks, great horned owls, and several species of migratory songbirds, which use early- to midsuccessional habitats. Over the 40-year cycle of the project, it is predicted that habitat for 100 breeding pairs of ruffed grouse will be created and maintained, producing 20,800 grouse on the 800 harvested and treated acres. Many thousand days of hunter opportunity will be provided.

In May, DOF and Fish and Game prepared 75 acres for a spring prescribed burn to improve habitat near the lower reaches of Nenana Ridge Road. Due to poor weather conditions for burning, the burn was re-scheduled for the spring of 2003.

In August, DOF used funds from Fish and Game and the Ruffed Grouse Society, to contract with Spruce Park Enterprises to have 37 acres at Standard Creek scarified with a bulldozer blade. The scarification will dramatically increase birch regeneration in an over-mature birch forest that is in decline from decay and wind-throw.

Participants are ahead of schedule to clear at least 200 acres each decade through 2030. Since 1994, project managers have constructed 7.5 miles of forest roads, felled 476 acres of mature aspen in 42 cutting units ranging from 6 to 20 acres, and burned 67 acres.

Kenai Area

Timber harvest. DOF continued to offer and sell salvage sales on the Kenai Peninsula in 2002.

Due to dwindling supplies on private land and other public lands, operators expressed more interest in state offerings. This interest could allow the state to reduce fuels in the wildland/ urban interface without the cost of paying for fuel treatment.

Most of the timber being harvested on the Kenai Peninsula is beetle-killed spruce of low quality. Damage from windstorms in 2002 increased the difficulty of recovering and using the wood fiber. Most harvested timber is processed as pulp chips or delivered to log yards in Homer. Log yard buyers have multi-year contracts with mills in British Columbia and Japan that will ensure a market for the next few years.

Harvest of beetle-killed trees on the peninsula and west side of Cook Inlet continues. The supply of privately owned timber, however, is decreasing. Salvage operations by Native corporations will be finished within a few years. Owners of small parcels have been salvaging their timber to reduce the wildfire hazard and to realize what value is left in the beetle killed trees.

The University of Alaska and the Kenai Peninsula Borough have also offered timber salvage and fuel reduction sales. The university offered approximately 2,500 acres of timber for salvage in 2002. The Kenai Peninsula Borough Fuel Reduction/ Salvage Sale Program sold 28 sales on 6,000 acres concentrated in the wildland-urban interface. Ninety percent of the completed sales have been reforested. The borough will continue with this program for two to three years.

Mat-Su/Southwest Area

Timber harvest. Approximately 150,000 board feet of white spruce saw-timber was harvested on 160 acres of commercial timber sales in the Mat-Su and Southwest Area in 2002. Of nine commercial timber sale contracts, two were turned back with no harvesting, one was abandoned after 20 percent of the volume was removed, and one was completed. About two million board feet are under contract on the five remaining sales. There are two sales with an additional 985 MBF of spruce saw-log volume available for purchase over the counter.

Demand for spruce saw-timber by local mills declined. State stumpage prices for spruce and birch saw-timber declined by about 15 percent because of a reduced demand and an increased supply from land being clearing for subdivisions. Local industry also cites a significant increase in the cost of insurance as a reason for the downturn in demand for state timber.

Nearly all of the timber harvested off state land went to high-value-added wood products within Alaska. Several Mat-Su mills are gearing up for an expected increase in demand for birch saw-timber for products such as flooring and trim.

Several million board feet of high quality birch logs were harvested on Mat-Su Borough lands. They went to Anchorage by rail and were shipped to Washington to be used in the manufacture of furniture.

Non-timber forest products. Three companies applied to collect false-tinder conks, the fruiting bodies of a fungus found on decaying birch. The conk is boiled to make a medicinal tea that is sold locally and to Southeast Asia markets. A birch syrup company has also applied for a permit to tap birch on state lands. The Division of Mining, Land, and Water is issuing permits for these products.

Ruffed grouse habitat improvement.

The Ruffed Grouse Society gave a grant to the state to improve grouse habitat in the Mat-Su by regenerating aspen. DOF and the Department of Fish & Game identified areas where aspen are declining due to old age, for regeneration cuts. A contractor cut 100 acres in the Moose Range this year and will cut an additional 100 acres in 2003. The wood is not commercially valuable at this time but there may be a market for chips in the future. Local residents used a small portion of the cut aspen. The project appears to be effectively re-establishing aspen.

Intern Program. The division hired a new Intern Crew Foreman this year to work with nine high school interns. The interns completed projects for the Division of Forestry, Mat-Su Borough, State Parks, Fish & Game, National Park Service, and Bureau of Land Management. They planted 5,000 spruce seedlings; did thinning and pruning projects for timber production, defensible space, and aesthetics; worked on trail up-grades; and received training in various disciplines of resource management.

The intern program is a cooperative effort between the division and the Anchorage School District to give students experience in natural resources professions.

Tok Area

Timber harvest. The Tok Area sold one timber sale in FY '02 and two additional sales in recent months. These sales are within the perimeter of the 1990 Porcupine Fire and are instrumental in the continued clean-up of the area that burned. Material from the largest of the sales, 300 cords over 100 acres, will be sold by a local purchaser as construction material for cabin kits. The other two sales are for commercial fuelwood operations.

Staff continued to coordinate with the Department of Fish and Game on the Tok River Wildlife Habitat Timber Sale (NC-837-T). This sale is being designed as a value-added timber sale and is expected to sell during Fiscal Year '04. Region III Riparian Buffer Standards are being applied to this sale, which lies southwest of Tok.

Reforestation. Area staff conducted a reforestation and regeneration survey on Tetlin Native Corporation lands and determined that stocking levels were in compliance with requirements of the Alaska Forest Resources and Practices Act.

In August, 39,836 seedlings were planted on 84 acres of state land. Prior to planting, 42 acres of the Tok River and Ski Run timber sales were scarified. The remaining 42 acres on Johnson Slough island were not scarified. With completion of this planting, the Tok Area remains up-to-date with its planting schedule.

Valdez/Copper River Area

Timber harvest. The Valdez/Copper River Area sold two small sales in FY '02. One sale, to Regal Enterprises in the Tolsona Ridge area, was never harvested and the sale was relinquished at the end of the year. The other sale was to a new operator who successfully harvested timber from units along Tolsona Ridge. The timber will be used primarily for house logs, with a portion being used to produce saw timber.

Personal use products. The division continues to work with the Cordova District of the U.S. Forest Service to provide personal use products to Cordova residents. Local residents obtained permits for fuelwood and house logs and picked up decked timber that was hauled to a central location near the Cordova Airport.

Forest regeneration. Valdez/Copper River Area staff surveyed more than 10,000 acres on Ahtna, Inc. and Chitina Village Corporation lands near Chitina to assess regeneration. They established and collected data from 2,300 plots on lands harvested by Rayonier in 1994, and by Copper River Forest Products from 1994 through 1996. Preliminary estimates show that natural regeneration was successful in the areas that had been heavily attacked by bark beetles.

Pipeline timber bridge. VCRA staff worked with the Association of Soil and Water Conservation Districts, and the Kenny Lake Soil and Water Conservation District to successfully complete a timber bridge over the Trans- Alaska Pipeline. This was a critical step in allowing DNR's Division of Agriculture to offer an agricultural sale. The VCRA also assisted the contractor, Regal Enterprises, in selecting timber for the bridge.

Regal Enterprises built a double-diffusion processing facility to treat the bridge timbers as required by the Alyeska Pipeline Service Company engineers who designed the bridge. The bridge was completed in the summer and installed by Alyeska in the fall. This cooperative project will provide agricultural opportunities for the farmers. In addition, a small timber sale will be offered to remove timber prior to conversion of the land to agricultural production.

Reforestation

Regeneration of harvested or naturally disturbed areas is an essential part of forest management on state land. To achieve a sustained yield of wood fiber from forestland, the division collects cones for seed processing and contracts for seedling growth. DOF cooperates with the university and other agencies to conduct research for success in seedling survival.

The division maintains a tree seed bank in Palmer with assistance from the DNR Division of Agriculture. Tree seed is cleaned, tested, stored, and shipped to nurseries. No new seed collections were entered into the seed bank in 2002. Fortunately, white spruce seed can be stored for over 20 years if properly treated. The division has been collecting and storing seed for over 25 years and provides seed to other forestry organizations that grow seedlings for reforestation.

This year, 208,876 seedlings were planted on 569 acres of state land. This is an increase over the 191,000 seedlings planted on 502 acres in 2001. Scarification was done on 510 acres to prepare the ground for planting and natural regeneration. In Southeast, 175 acres of state lands were precommercial thinned to improve timber growth and wildlife habitat.

Through federal cost-share assistance programs, the division supervised planting 98,618 seedlings on 214 acres

of private forest lands. Alaska Native corporations reported planting 190,000 seedlings and thinning 850 acres. The Kenai Peninsula Borough reported planted 86,000 seedlings. In addition, the Valdez/Copper River Area Office grew 10,000 seedlings for distribution at the Kenny Lake Fair.

The Division of Forestry assists the Alaska Reforestation Council, which provides forest regeneration research and education. In 2002, the council made field evaluations of over 50 plantations of lodgepole pine or Siberian larch in interior and southcentral Alaska for growth, adaptation, animal damage, and regeneration. The council also prepared a report for publication on carbon sequestration potential in Alaska. A provenance trial was established for the Kenai Peninsula Borough and a provenance trial established on the peninsula in 1999 was evaluated.

Log Brands

In 2002, the Division of Forestry registered 48 log brands. Of these, 19 were new and 29 were renewals. This is an increase over the 2001 total but a decrease from 2000. Log brands are required for any log that is transported by water and they must be renewed after five years. A new log brand book with all brands issued or renewed for calendar years 2001 and 2002 will be available in March 2003.

Areas	Seedlings Planted	Acres Planted	Acres Scarified	Acres Thinned
Delta	3,000	35	60	0
Fairbanks	102,040	216	236	0
Haines	12,000	50	0	147
Kenai	41,400	172	172	0
Ketchikan	0	0	0	28
Mat-Su	10,600	12	0	0
Tok	39,836	84	42	0



Contractor Joe Lieverman and his crew planted 3,000 seedlings on 35 acres in a timber sale area near the Tanana River. The area was also scarified to encourage natural regeneration of birch. (Steve Joslin)

Beach Log Salvage

The beach log salvage program allows operators to recover a valuable forest resource from coastal waters and beaches in Southeast Alaska for personal or commercial use. Removing floating timber from navigable waters also makes water travel safer. The Division of Forestry works with the U.S. Forest Service to permit licensed salvagers to retrieve logs from above the mean high water mark on Forest Service property.

The division issued 10 beach log salvage licenses in 2002 with two additional licenses pending. Operators obtain a license that remains in effect for four years after paying an annual fee and meeting the salvage requirements for the previous license period.

At the end of the year 12 of the 56 identified salvage areas had been applied for or licensed. A depressed export market and dwindling pulp market have affected beach log salvage activity this year. Another contributing factor is that the mode of log transport is slowly shifting from log rafts to barges, thus decreasing the number of logs in the water. However, the division continues to receive inquiries about salvage opportunities.

Alaska State Forests

About two percent of state land in Alaska is in two designated state forests. In 1982, the Alaska Legislature established the 286,208-acre Haines State Forest in southeast Alaska. The following year the legislature created the 1.78-million-acre Tanana Valley State Forest in the Interior. In addition to these two designated state forests, much of the state's public domain land is available for multiple use, including forest management.

State Forest Management

DNR manages the state forests for a sustained yield of many resources. The primary purpose is the production, utilization, and replenishment of timber while perpetuating personal, commercial, and other beneficial uses of resources through multiple use management. State forests provide fish and wildlife habitat, clean water, opportunities for recreation and tourism, and minerals. The main difference between state forests and other areas set aside by the legislature is that state forests must also permit timber harvesting for commercial and personal use (AS 41.17.200).

A DNR management plan guides the use of each state forest. Plan guidelines determine how to manage different uses to complement each other.

The Tanana Valley State Forest Management Plan. The TVSF plan revision was adopted in September 2001. However, several issues related to the Lower Tanana Unit 2, a remote 160,000-acre block about 45 miles west of Fairbanks, required more detailed planning. The division conducted substantial public outreach during the summer of 2002 prior to hosting planning team meetings to address these issues. Team members have agreed on general guidelines. A plan amendment incorporating the changes is scheduled for spring 2003.

The Haines State Forest Management Plan. A revised plan for the Haines State Forest was adopted in September 2002. The public process to review the management plan began in September of 2000 along with revision of the Chilkat Bald Eagle Preserve Management Plan and creation of the Northern Southeast Area Plan. These plans have also been adopted.

This forest plan retains the same timber harvest areas as the 1986 management plan. The allowable harvest level dropped from 6.96 million board feet (MMBF) per decade to 5.88 MMBF due to removal from the plan of university and Mental Health Trust lands, which the division no longer manages.

The major change was creation of a forest-wide special use designation that gives DNR more authority for managing commercial recreation activities. Under this designation, DOF created three categories of commercial recreation operations based on the number of clients per day.

Each management unit states whether particular commercial recreation activities are allowed, not allowed, or require a permit. The plan limits commercial recreation in the West Chilkat, Takhin/Kicking Horse, and the Kelsall, East Chilkat and Ferebee Alpine areas and the Ripinski Trail corridor to small and medium-sized groups. All areas require a permit for large commercial recreation operations. Small operations must get permits in the Ripinski Trail corridor and the Mosquito Lake Campground areas only. All of the state forest remains open for personal use recreation.

The management plan also created a special use designation for Ripinski Mountain, just above Haines, which makes Ripinski Mountain off limits to motorized vehicles for commercial recreation activities. A popular hiking trail runs from the edge of Haines to the top of the 3,500-foot mountain overlooking Haines and the Lynn Canal. The non-motorized designation keeps the four-wheeler trail below the 1,500-foot elevation.

Haines State Forest

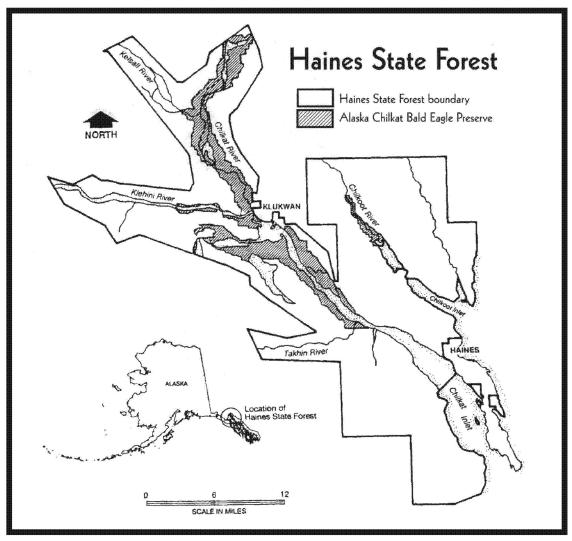
The Haines State Forest contains 286,208 acres, including the watersheds of some of the major tributaries to the Chilkat River. Located in a transition zone between the moderate, wet coastal climate and the dry, cold interior, the forest provides suitable conditions for a diversity of vegetation. The rugged topography ranges from sea level to 7,000 feet.

The forest is composed mostly of two forest types – western hemlock/Sitka spruce, and black cottonwood/willow. Lodgepole pine and paper birch occur as minor species throughout the forest. About 15 percent of the state

forest (41,652 acres) is dedicated to timber harvest, which has occurred in the forest since the 1960s. The annual allowable harvest is 5.88 million board feet. Although natural regeneration occurs readily, all large commercial sales have been replanted since the 1970s to accelerate reforestation.

Prospectors and miners have worked in this mineral-rich area since the turn of the century and continue operating today. Backcountry logging roads, rivers, and hiking trails provide access to remote areas and abundant recreational opportunities. Hunting, fishing, berry-picking, camping, hiking, snow machining, and skiing are popular activities. Several commercial operators provide tours in the forest.

Both photographers and hunters pursue the forest's moose, black and brown bears, and mountain goats. Wolves, marten, lynx, wolverine, porcupine, beaver, river otter, and many small mammals live in the forest. Trumpeter swans, geese, ducks, and a variety of song birds are also present. The forest surrounds the 45,000-acre Chilkat Bald Eagle Preserve, which is managed by the Alaska Division of Parks and Outdoor Recreation.



The Haines State Forest covers 286,208 acres and is managed for multiple uses. Increasingly, ecotourism and recreatonal uses coexist with active timber operations.

Tanana Valley State Forest

The Tanana Valley State Forest's 1.78 million acres lie 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 to over 5,000 feet in the Alaska Range. The Tanana River flows for 200 miles through the forest.

Almost 90 percent of the state forest (1.59 million acres) is forested, mostly with birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack. Half of the Tanana Basin's productive forest land (1.1 million acres) is located in the state forest. About 85 percent of the forest

is within 20 miles of a state highway. Adjacent to the forest are 18 communities with a total of 70,000 residents.

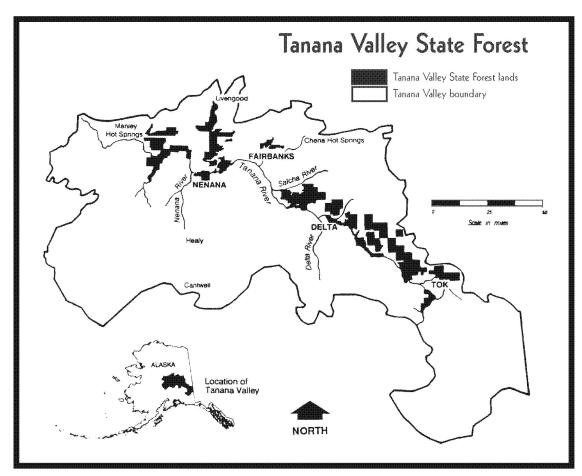
The Tanana Valley State Forest offers many recreational opportunities including hunting, fishing, trapping, camping, hiking, dog mushing, crosscountry skiing, wildlife viewing, snow machining, gold panning, boating, and berry-picking.

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

In 2002, DNR issued a gas exploration license to Andex Resources that involves the eastern portion of Unit 2 near Old Minto and other state lands.

Teck-Pogo, Inc. has applied for authorizations to develop the Pogo Gold Mine, which is on state land in the Goodpaster River Valley 38 miles northeast of Delta Junction. The company hopes to begin project construction in 2003. An access road for the mine will cross a portion of the state forest in Unit 9.

A 12-member citizen's advisory committee, representing a variety of state forest users, actively participates in forest planning in the Tanana Basin. The committee makes recommendations on management of the forest and assists with revision of the forest plan. Members are listed on page 44.



The Tanana Valley State Forest consists of 1.78 million acres and lies almost entirely within the Tanana River Basin. Nearly 90 percent of the area (1.59 million acres) is forested, mainly with birch, quaking aspen, balsam poplar, black spruce, white spruce, and tamarack.

Forest Health Management

Statewide Aerial Surveys

Division of Forestry and USDA Forest Service entomologists do aerial detection mapping each year to document the location and extent of active forest insect and disease damage. Approximately one-fifth of the forested land in the state is surveyed each year. Trained observers in fixed-wing aircraft prepare sketch maps depicting the extent of various types of forest damage.

Forest damage information is sketched onto 1:250,000 scale USGS quadrangle maps at a relatively small scale. The sketch map information is then digitized and computerized in a Geographic Information System for permanent storage and to allow retrieval by a number of users.

Entomologists survey state and federal agencies and other landowners to determine high priority areas for mapping each year. They also map some areas over several years to establish trends

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

2002 Aerial Survey Results

In 2002, 24 million acres were surveyed throughout Alaska. Insect and disease activity surveyed was nearly double that of 2001 (484,626 acres vs. 266,299 acres). This significant increase was due to an outbreak of aspen leaf miner in Interior Alaska near Fort Yukon, that totaled 300,000 acres.

Insects

The largest outbreak of aspen leaf miner ever recorded in Alaska was mapped 40 miles east of Fort Yukon, between the Yukon and Porcupine rivers. Activity was noted on 271,000 acres. An additional 20,000 acres were mapped near Big Delta, and another 6,000 acres between Fairbanks and Minto. In most cases the activity is moderate to heavy.

Significant birch leaf roller activity was mapped in three areas. There was a heavy infestation on 30,000 acres in the Wood/Tikchik State Park, north of Dillingham; 15,000 acres of moderate activity near Mt. Susitna, 50 miles northwest of Anchorage; and 6,000 acres of light activity 20 miles east of Lake Minchumina.

Cottonwoods were defoliated by **leaf rollers** on 5,287 acres along the shores of Russell Fjord and Yakutat Forelands. Another 8,849 acres were defoliated in Glacier Bay National Park.

Spruce beetle activity declined statewide by 50 percent over 2001 levels to 52,000 acres, the lowest level in more than 30 years. This follows an epidemic that lasted for more than a decade and eliminated most of the beetle's host material, white spruce, on four million acres. Activity at Lake Iliamna accounted for one-half of the total activity in 2002. The spruce beetle is still active in several other areas, most notably McCarthy, the Kenai Peninsula, and near White Mountain on the Seward Peninsula.

Throughout the remainder of the state, with the exception of a few small areas, populations have fallen to endemic or near-endemic levels. The outbreak on the Haines State Forest continues to collapse, with less than 300 acres mapped in 2002.

The willow leaf miner infestation in the Yukon Flats area of northeastern interior Alaska has subsided to nearly undetectable levels. This infestation impacted hundreds of thousands of acres over a span of more than 10 years. In its wake, there remains a considerable, though unquantified, amount of dead willow.

Amber-marked birch leaf miner populations once again exploded in the Anchorage Bowl. More than 30,000 acres of heavily defoliated birch were detected this year. This introduced insect has spread north and south of Anchorage and was recently introduced onto Eielson Air Force Base, apparently by transplating infested birch from southcentral Alaska. Biological control opportunities are being investigated for this potentially significant pest.

Spruce aphid defoliation occurred on approximately 2,300 acres in southeast Alaska, from Dall Island on the south end of the Alexander Archipelago to Skagway. Most of the defoliation occurred on national forest lands (1,640 acres) on the outside islands from Heceta Island south to Port Bazan, Dall Island, and along Lynn Canal to Skagway. Spruce aphid defoliation was virtually absent in the Juneau, Sitka, Ketchikan, and Wrangell boroughs.

Black-headed budworm activity was mapped on 3,400 acres, down significantly from 2001 levels of 51,000 acres. Nearly all of the acreage was mapped in Prince William Sound.

Hemlock sawfly occurred on 1,400 acres, most of it south of Sumner Strait. Much of the hemlock sawfly defoliation, 1000 acres, occurred where it commonly does, on state and national forest lands on the southwest end of Kosciusko Island.

Diseases

The most important diseases and declines of Alaskan forests in 2002 were wood decay of live trees, root disease of white spruce, hemlock dwarf mistletoe, and yellow-cedar decline. Except for yellow-cedar decline, trees affected by these diseases are difficult to detect by aerial surveys. Nonetheless, all are chronic factors that significantly influence the commercial value of the timber and alter key ecological processes including forest structure, composition, and succession. Wildlife habitat is enhanced through the development of hollow tree cavities by heart rot fungi, and witches' brooms by hemlock dwarf mistletoe and broom rust fungi.

Southeast Alaska. Approximately one-third of the gross volume of forests is defective due to stem and butt rot fungi. Hemlock dwarf mistletoe continues to cause growth loss, top-kill, and mortality in old growth forests. Its impact in managed stands depends on the number of large infected trees left on site after harvesting.

Nearly 500,000 acres of yellow-cedar decline have been mapped across an extensive portion of southeast Alaska. The areas with the most mortality were in Peril Strait, on western Baranof Island, and on southwest Chichagof Island. Snags of yellow-cedar accumulate on affected sites and forest composition is substantially altered as the trees die, giving way to other tree species. The wood in dead standing trees remains valuable long after tree death and salvage opportunities are now being recognized.

Cone and other foliar diseases of conifers were generally at low levels throughout Alaska. Canker fungi on hardwood species in southcentral and interior Alaska were at endemic levels, causing substantial, but unmeasured, damage. Canker fungi on conifers, especially Sitka spruce and sub-alpine fir, occurred at higher than normal levels and caused branch die-back.

A late spring **frost** damaged vegetation throughout Southeast. Many conifer species and evergreen broadleaf plants

had shoot die-back as a result of warm spring temperatures followed by a cold spell in early April.

Southcentral and interior Alaska. Tomentosus root rot continues to cause growth loss and mortality of white spruce in all age classes. Various stem and butt rot fungi cause considerable defects in mature white spruce, paper birch, and aspen stands. Saprophytic decay of spruce bark beetlekilled trees, caused primarily by the red belt fungus, continues to rapidly develop and degrade dead spruce.

Invasive Organisms

Arthropods. In the past several years, several exotic pests have been introduced into the Anchorage area. In 2002, the amber-marked birch leaf miner, ugly nest caterpillar, and the European black slug were reported. The amber-marked birch leaf miner caused heavy birch defoliation throughout Anchorage. This defoliator is the larval form of a sawfly. These invasive pests and others may become established throughout Alaska if detection and eradication methods are not employed early. Primary detec-

tion has been through the Integrated Pest Management Program sponsored by the USDA Forest Service and administered by the Cooperative Extension Service.

Plants. Several species continue to spread into different areas of the state. White sweet clover, Melilotus alba, occupies hundreds of acres along the Stikine River in southeastern Alaska and is showing up along the Nenana River in the interior. Bird vetch, Vicia cracca, is widely distributed in Anchorage, the Matanuska Valley, and in portions of Fairbanks. A new species of noxious weed for Alaska is garlic mustard, Alliaria petiolata, which was first found in Alaska in 2001. Thousands of plants were collected to prevent seed set at a site just down the hill from the governor's mansion in Juneau this year.

Several other species are being mapped across the state. Agencies are cooperating to enter inventories into a statewide GIS inventory base. As a result of these cooperative efforts, control projects are expected to increase to address these new threats to Alaska resources.



A field trip during a three-day class in May on identification of non-native bark beetles, led by retired Forest Service entomologist Malcolm Furniss, now with University of Idaho. The training prepared DOF and partner agency staff for an exotic bark beetle monitoring project that took place in Anchorage and Juneau during the summer. The project was funded by the USDA Animal & Plant Health Inspection Service. (Malcolm Furniss)

2002 Forest Insect and Disease Activity							
Damage Agent	State & Private	National Forest	Other Federal	Native Corporation	Total 2002		
Alder defoliation ¹	75	1,159	113	502	1,848		
Aspen leaf miner	104,482	0	128,115	66,871	299,468		
Birch leaf miner	29,702	0	159	310	30,171		
Birch leaf roller	37,380	0	6,060	9,384	52,824		
Black-headed budworm	524	2,494	2	334	3,354		
Cedar decline faders ²	150	2,835	8	39	3,033		
Cottonwood defoliation ³	1,337	3,842	14,640	38	19,857		
Hemlock canker	9	230	0	0	239		
Hemlock sawfly	612	743	0	0	1,355		
IPS engraver beetle	241	32	601	379	1,253		
Larch beetle	0	0	4,849	0	4,849		
Large aspen tortix	283	0	2,197	0	2,480		
Spruce aphid	537	1,640	32	127	2,336		
Spruce beetle	13,157	2,133	13,406	23,692	52,388		
Spruce budworm	4,239	0	0	943	5,182		
Spruce needle cast	0	0	2,236	1,277	3,512		
Sub-alpine fir beetle	212	8	0	0	212		
Willow defoliation ³	265	0	62	0	265		
Total Acres	193,132	15,118	172,481	51,725	484,626		

¹Significant contributors include leaf miners and leaf rollers for the respective host

The figures above are from Forest Insect & Disease Conditions in Alaska - 2002, prepared by the USDA Forest Service, State and Private Forestry, Forest Health Management, Region 10 Alaska. The number of acres are estimates based on surveys of about 20 percent of Alaska's forested land. Ownership is derived from the 1999 land status GIS coverage from the Department of Natural Resources Land Records Information Section.

The figures do not give the total accumulated pest damage over a span of years but report visible, new pest activity for the current year. Some damage is not immediately apparent or the cause cannot be determined

from the air. For example, spruce bark beetle damage is not visible from the air until the foliage turns red. The table also does not include many of the most destructive diseases, such as wood decays and dwarf mistletoe, because they are not detectable in aerial surveys.

Compare aerial survey acreage figures with other information, such as previous years' condition reports and onthe-ground surveys, for the most reliable picture of damage severity and trends. More information is available from entomologists at the Division of Forestry (907-269-8460) or the USDA Forest Service (907-743-9455).

²Acres represent only spots where fading (reddish) trees were noticed.

³Significant contributors include cottonwood leaf beetle and leaf rollers

Damage Agent	1998 Total	1999 Total	2000 Total	2001 Total	2002 Total	10-Year Cumulativ
Alder defoliation	0.8	1.8	5.6	1.2	1.8	11.2
Aspen defoliation	21.9	13.4	12.6	9.4	301.9	522.1
Birch defoliation	0.7	2.8	2.8	3.2	83.0	375.2
Cottonwood defoliation	6.6	5.6	5.4	9.9	19.9	61.2
Hemlock defoliation	3.9	0.1	5.2	1.3	1.4	35.4
Hemlock mortality	0	0	0	0.1	0.2	0.6
Larch defoliation	461.8	159.5	64.9	17.8	0	1,556.6
Larch mortality	0	18.4	0	0	4.8	23.5
Spruce defoliation	136	5.1	84.7	61.1	11.0	814.9
Spruce mortality	331	258.0	120.9	104.2	53.6	2,630.3
Spruce/hemlock defoliation	0	0.1	0	50.7	3.4	460.2
Spruce/larch defoliation	0	0	0	0	0	16.8
Sub-alpine fir mortality	0	0	0	0.1	0.2	0.3
Willow defoliation	123.2	181.6	36.5	10.9	0.3	428.6
Total Acres	1,085.8	646.3	338.6	481.6	481.6	6,936.9

Most damage shown in this chart was caused by insects. However, foliar disease contributed to spruce defoliation and hemlock mortality. Damage agents such as fire, wind, flooding, landslides and animals are not shown.

The cumulative total is the number of newly infested acres, not the sum of

Insect & Disease Information

For information on forest health and forest insect surveys, and links to forest health web sites, see the Division of Forestry website: www.dnr.state.ak.us:80/forestry/web_bugs.htm

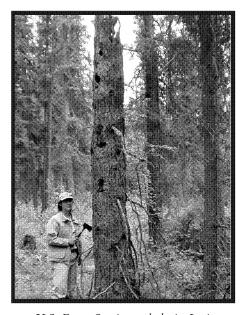
For addresses of federal entomologists and plant pathologists, current forest insect and disease conditions (aerial and ground survey data), lists of forest health research and publications, and a bibliography of Alaska forest health management publications, see the USDA Forest Service State and Private Forestry home page: www.alaska.net/~cnfspf/fhpr10.htm

infested acres each year. The same stand may have an active infestation for several years. The cumulative total is a union of all areas 1993-2002.

Acreage is in thousands of acres. For actual number, move the decimal three spaces to the right, for example, 2.2 is 2,200.

To request maps or other products from statewide surveys and GIS databases, contact:

Roger Burnside Alaska Division of Forestry 550 W. Seventh Avenue, Suite 1450 Anchorage, AK 99501-3566 (907) 269-8460; fax: (907) 269-8902 roger_burnside@dnr.state.ak.us



U.S. Forest Service pathologist Lori
Trummer assessing volume loss from root rot
in the Delta Area as part of a statewide
study. Trees planted on infected sites can
also become infected by pathogens that cause
root rot. Mature dead trees, such as these,
provide habitat for a variety of cavitynesting birds. DOF and ADF&G are
cooperating to protect cavity-nest trees
within timber sale areas. (Steve Joslin)

Forest Stewardship Program

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

2002 Highlights

- Thirty-one individual forest landowners and two Native corporations completed forest stewardship plans.
- An Alaska Native corporation was awarded a forest stewardship planning grant of \$15,000.
- Private landowners planted 98,618 seedlings using funds from federal cost-share programs and the Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program.
- Foresters provided expertise to public schools, non-profit community organizations, and local governments.
- The Stewardship Program Coordinator participated in the Western States Forest Stewardship Committee.

Assistance to Landowners

In 2002, plans were prepared for 31 landowners covering 1,391 acres. Since the program began in 1992, a total of 424 forest stewardship plans have been developed for individual landowners covering 33,426 acres. While participation is greatest on the Kenai Peninsula, there are also many participants in the Matanuska-Sustina Borough and Tanana Valley. The most common management objective is reforestation after loss of trees to spruce bark beetles. Many participating landowners have strong interest in aesthetics and wildlife. Defensible space from wildfire is a growing concern.

Cost-Share Programs

The Forest Stewardship Program provides field inspections on private lands to implement management practices funded by cost-share programs. Unlike recent years, the Stewardship Incentive Program and Forest Incentive Program both received substantial federal funding in 2002. Using these funds, \$261,000 was obligated for forestry projects. Approximately \$207,000 went to reforestation of land impacted by spruce beetles on the Kenai Peninsula. The Kenai Peninsula Borough contributed \$60,000 toward private land reforestation. Spruce beetle restoration also occurred in Anchorage, the Matanuska-Susitna Borough, and the Tanana Valley. Cost-share programs funded the planting of 98,618 tree seedlings on 214 acres.

Indications are that in 2003 Alaska will receive federal funds for private forest landowners under the newly enacted Forest Land Enhancement Program. The Forest Stewardship Program will also administer costshare projects for fuel reduction in some wildland/urban interface zones.

Assistance to Native Corporations

An important goal of the Forest Stewardship Program is to provide grants for forest planning to Native corporations and reservations, the largest private landowners in Alaska. In 2002, Kootznoowoo Inc. and Chickaloon-Moose Creek Native Association completed Forest Stewardship plans for a total of 72,957 forested acres. This brings the number of Alaska Native corporations with forest stewardship plans to 17, covering 3.15 million forested acres. One new forest stewardship planning grant was awarded for 29,510 acres. Projects supported by Forest Stewardship Planning grants are underway with five other Native corporations.



Gary Nilsson, of Delta Junction, built bird boxes, made brush piles, and planted spruce seedlings to improve wildlife habitat as part of his Stewardship Plan. (Kathryn Tietz)

Other Public Services

Forest Stewardship Program personnel provided a variety of public services to local governments, public schools, and community fairs. Services included general education, technical forestry, and tree seedling distribution. Program staff also made site visits and referrals for numerous landowners who did not pursue a written plan. The Forest Stewardship Program Coordinator participated in several teleconferences with the Western States Stewardship Committee, which addresses private forest landowner issues common to western states.

Stewardship Committee

The Forest Stewardship Committee, which is comprised of representatives from a broad range of Alaska private landowner interests, provides guidance to the Division of Forestry. Areas of consideration include grant and costshare rates, eligibility criteria, and forest stewardship plan requirements. The committee met twice in 2002. Important topics discussed were the Forest Legacy Program—Alaska Assessment of Need, and the Forest Land Enhancement Program—Alaska State Priority Plan. Stewardship Committee members are listed on page 44.

Community Forestry Program

Community, or urban, forestry is the management of forests and related natural resources in communities. The community forestry program helps local governments and communities establish programs to care for their valuable resources. The program:

- Fosters partnerships between government, business, non-profits and volunteers to promote community forestry.
- Helps fund development of programs that provide sound management of the natural resources within a community.
- Encourages the private sector to support and fund community forestry efforts.
- Supports good arboricultural and community forestry practices.
- Administers federally funded grants for pilot programs, research projects, and demonstrations that support the program objectives.
- Provides information, training, and technical assistance to local governments, tree care professionals, and volunteers.

2002 Accomplishments

- The Alaska Community Tree Steward Course was held in Wasilla in May. A series of speakers covered tree biology; soils and fertilization; selecting, planting and caring for trees and shrubs; pruning; problem diagnosis; landscape design, insects and diseases, and other urban forestry topics. Eleven people completed the 30-hour course and agreed to donate 30 hours each to community forestry projects.
- The Community Forestry Program, Municipality of Anchorage, and ConocoPhillips sponsored the fourth annual TreeMendous Anchorage Tree Adoption. Applications were drawn for 1,000 people to pick up trees on May 18. Staff and arborists provided handouts and answered questions.

- Wasilla became the first city in Alaska, other than military bases, to be named a Tree City USA.
- Staff organized certified arborists to participate in the Day of Caring on September 11 at the Anchorage Memorial Cemetery. Four tree service companies donated time, equipment, and expertise to climb and prune trees, and chip debris. The work improved the trees' appearance, made them safer, and will likely extend their lives.
- The Juneau Tree Committee established a grove between the state office building and governor's residence in honor of the new millennium. This was also the site of a celebration of the planting of the National Tree Trust's ten millionth tree, which took place in every state capitol in November.
- The 15-member Alaska Community Forest Council met regularly, advising the division on program priorities and activities. Members placed displays and publications on tree planting and care at 12 nurseries in seven towns. In addition to supporting the state program, members are valuable partners in local community forestry programs. A list of council members is on page 44.
- Staff are supporting the Anchorage Firewise Initiative by helping develop a GIS fuels and vegetation layer that will be used to plan evacuations, predict the spread and intensity of escaped fires, and promote defensible space standards. Staff also helped train members of a Student Conservation Association Fire Education Corps to work with home owners and produce publications on fire-wise landscaping.



Juneau Tree Committee Chair Chris Mertl, Juneau Mayor Sally Smith, and Community Forestry Program Coordinator John See planted a Japanese larch to celebrate the ten millionth tree planted by the National Tree Trust. (Susan Christianson)

- Staff assessed training needs of certified arborists and offered a two-hour field class on tree and shrub identification at UAA, attended by 22 people. Chugach Electric Association sponsored a two-hour Arboriculture Overview by Asplundh Technical Services, attended by 28 people.
- Completed the Alaska Community
 Forestry Program Five-year Strategy,
 a comprehensive plan that outlines
 goals, objectives, and actions that
 will direct the program until 2006.
- Staff provided technical assistance to 16 communities and recorded 897 student hours of training for tree care professionals and community members.
- The program benefited from 129 days of volunteer time on a variety of state and local projects.

Conservation Education

2002 was an exciting year for the Division of Forestry's Conservation Education program. In addition to providing 13 Project Learning Tree workshops for teachers, resource professionals, and others, the program began new educational initiatives and entered into partnerships that are transforming natural resources education here and across the country.

Standard PLT workshops reached six different Alaskan communities this year. Three of these communities, Fort Yukon, Emmonak, and Nulato, hosted PLT workshops for the first time. In all, 189 participants completed PLT training and most received graduate credit through the University of Alaska. These workshops included sessions at UAA, UAF, and APU. Most student teachers and elementary methods students attending Alaskan post-secondary institutions now participate in natural resources education delivered through the Division of Forestry.

PLT Alaska is also pioneering the delivery of natural resource education through the internet; a type of delivery called distance education. For the first time anywhere, educators in Alaska are collaborating with other teachers and a PLT facilitator through weekly conference calls and internet discussion to design curriculum suited to their particular locations.

The division is in the process of developing other resource education courses using this exciting new technology. The two distance education courses offered in 2002 reached 25 educators in 12 communities stretching from Thorne Bay in Southeast Alaska to Point Barrow in the Arctic.

Another innovation in 2002 was the Fire in Alaska curriculum and educators' training. Modeled after the PLT workshop format, these trainings teach educators of students grades 5-8 about fire ecology, fire behavior, fire prevention, and home defense. This curricu-

lum is very activity-oriented, extremely timely and relevant, and uses an inquiry-based approach to learning. Fire in Alaska workshops have been conducted in Homer and Palmer. Several more are planned for 2003.

In addition to workshops, the division sponsored or participated in a variety of other conservation education activities. Among these were scout meetings, the Anchorage School District's Outdoor Week, and Tapping into Spring, a birch tapping project with third grade classes.

In Alaska, PLT is supported by the Division of Forestry, USDA Forest Service, Department of Fish and Game, and Alaska Natural Resources and Outdoor Education Association.



Conservation Education Coordinator Matt Weaver helps teachers use a key to identify Alaska's native trees at a PLT workshop. PLT is a nationally recognized curriculum that uses the forest to teach students about the wise use of natural resources. (Patricia Joyner)

Wildland Fire Management

The Division of Forestry, Bureau of Land Management, and USDA Forest Service are responsible for wildland fire suppression in Alaska. Each agency protects specific geographic areas under cooperative agreements. The state thus avoids duplication of fire protection resources and efforts, realizes substantial savings, and provides for the most efficient fire response.

Alaska is the only state with an interagency fire plan. The plan divides the state into fire protection levels based on major natural fire breaks and the objectives of land managers. Firefighting resources can be allocated to the highest priority areas -- those areas

where communities and valuable resources are located. It also gives options for lower cost strategies in remote and unpopulated areas.

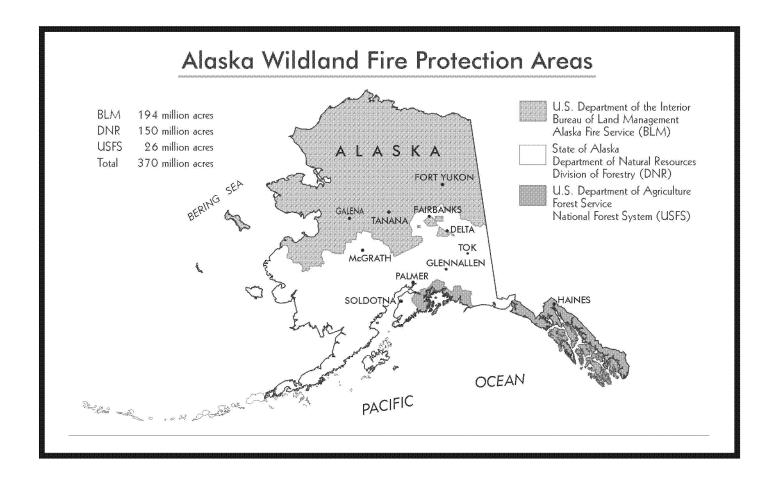
Fire Protection Levels

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

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

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

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



2002 Fire Season

The 2002 fire season in Alaska was an exceptional one, with 543 fires burning a total of 2,183,363 acres. The season ranks as the fifth most active since the mid-1950s when reliable fire records began to be compiled. The worst season recorded was 1957 when five million acres burned. In 2002, humans caused 378 fires and lightning started 165.

The first fire of the year was reported on January 1 at Quartz Lake in the Delta Area. The Chip Cove Fire on Kodiak Island marked the beginning of the fire season. The fire, started by a hunter and reported on April 6, grew to 700 acres by April 8. Over the next two days, 46 fires were reported, 26 in Mat-Su alone.

The first lightning fire, Galatea Creek, ignited on May 22. Between July 15 and July 25, more than 35,000 lightning strikes were recorded, with nearly 8,000 strikes reported on July 18. A total of 165 lightning fires burned 1,749,333.8 acres. This is significantly greater than the 10-year average of 133 fires and 535,340 acres.

The last reported fire of the season was a camping fire in the Mat-Su Area on November 20.

Fires occurred as follows in 2002:

January	1	July	148
March	1	August	37
April	22	September	7
May	235	November	1
June	91		

Alaska had seven Type 2 incidents: Geskakmina Lake, Reindeer, Vinasale, Milepost 78, West Fork Chena, Northfork, and Ketchem Creek. The Galena Zone managed one Type 3 incident, the Goblet Fire.

Weather played a significant role in the level of fire activity in 2002. Record high temperatures statewide during the second week of May were followed by gusty winds that caused fire acreages to greatly increase.

Ten Largest Fir	Ten Largest Fires in Alaska in 2002						
Fire	Location	Cause	Acreage				
Geskakmina Lake	Tanana Zone	Lightning	257,549				
Reindeer	Southwest Area	Lightning	226,833				
Vinasale	Southwest Area	Human	189,688				
Yetna River	Galena Zone	Lightning	152,962				
Sischu	Tanana Zone	Lightning	128,983				
Moose Lake	Tanana Zone	Lightning	117,648				
Milepost 78	Tanana Zone	Human	115,328				
Colorado Creek	Southwest Area	Lightning	88,917				
Long Creek	Galena Zone	Lightning	74,931				
Galatea Creek	Galena Zone	Lightning	74,511				

Record high temperatures were again set the first week of August. The preparedness level was raised to level 5 on August 5, for the first time since the Miller's Reach Fire in 1996. It returned to level 4 on August 8.

Infrared Aircraft. Infrared aircraft were ordered on two occasions. The King Air N107Z was ordered on May 28 and flew seven fires for a total of 36 hours. The Cessna Citation -N100Z was ordered on August 4 and flew 13 fires for a total of 19.3 hours.

Lower 48 Assistance. By May, fires were burning actively in the Lower 48. Colorado's Hayman Fire was absorbing many of the national resources. On May 13, three of the four Alaska Type 1 hotshot crews were ordered for Colorado incidents. Less than two weeks later three of the season's largest fires in Alaska had begun — the Vinasale, Milepost 78, and Chena Hot Springs. Two Type 2 teams and six interagency hotshot crews were ordered because Alaska's resources were being spread thin by heavy initial attack and these three rapidly growing incidents.

All 66 available Emergency Firefighter Type 2 crews were dispatched to incidents during the 2002 season and 32 had multiple assignments. Fifty-two EFF crews worked on Alaska fires and 25 crews worked on Lower 48 fires. The crews earned approximately \$7.5 million this year.

Disaster Assistance. Division of Forestry personnel and aircraft assisted in several non-fire incidents. In November, the Alaska Division of Emergency Services (ADES) requested a Type 2 Incident Management Team to report to Tok to respond to the Denali earthquake. DOF personnel also staffed the ADES Emergency Operation Center at Ft. Richardson to help coordinate the statewide response to the quake.

The Division of Forestry again assisted ADES when September and October rainfall caused extensive flooding on the Kenai Peninsula. Additionally, division helicopters and personnel assisted Alaska State Troopers on four search and rescue missions.

2002 Fire Statistics

Statewide Statistics					
Year	Fires	Acres Burned			
1996	724	599,197.1			
1997	716	2,026,899.3			
1998	413	119,899.8			
1999	486	1,005,428.0			
2000	369	756,296.2			
2001	351	218,113.9			
2002	543	2,183,363.0			

Emergency	Out-of-State	Crew Use
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Year	Crews	Year	Crews
1993	0	1998	2
1994	83	1999	11
1995	1	2000	73
1996	59	2001	20
1997	0	2002	25

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

* 7	mm 1			
Year	State	Federal	Total	
1996	6,778,022	4,273,774	11,051,796	
1997	3,869,912	1,485,846	5,355,758	
1998	2,734,442	1,897,356	4,631,798	
1999	2,873,600	2,301,122	5,174,722	
2000	4,434,380	3,734,483	8,168,863	
2001	3,236,581	1,867,826	5,104,407	
2002	6,002,237	2,999461	9,001,698	
Total	\$29,929,174	\$18,559,868	\$48,489,042	

Landowner	Number	Acres
State	113	864,310.7
Bureau of Land Mgmt.	37	702,775.5
Fish & Wildlife Service	32	341,451.6
National Park Service	10	133,809.9
Military	12	65,210.8
Native Corporations	39	53,231.7
Private	255	22,434.1
Boroughs/Cities	16	104.6
Bureau of Indian Affairs	7	17.1
USDA Forest Service	22	17.0
Total	543	2,183,363.0

Causes of Fires		
Cause	Number	Acres
Lightning	79	584,782.2
Repelling wildlife	1	189,688.0
Trash burns	69	22,348.5
Burning dumps	7	4,147.9
Campfires	34	1,314.2
Children	24	105.1
Field burns	10	37.7
Other causes	52	28.0
Slash burns	33	26.5
Land clearing	24	15.3
Powerlines	19	10.0
Burning buildings	16	4.2
Smoking	7	3.2
Exhaust	6	2.8
Fireworks	8	1.9
Vehicles	11	1.3
Total	399	802,516.8

2002 Fires by Area and Protection Level

	Cri	Critical		Full		Modified		Limited		Total	
Area No.		No. Acres		No. Acres		No. Acres		No. Acres		No. Acres	
Anch/Mat-Su	130	87.4	19	1,680.7	2	3.7	0	0	151	1,771.8	
Copper River	6	3.9	15	3.0	2	0.2	2	1.0	25	8.1	
Delta	21	17.9	3	1.5	2	1.1	0	0	26	20.5	
Fairbanks	60	127.9	13	22,264.7	1	87.0	1	4,468.0	75	26,947.0	
Haines	4	0.6	1	0.1	1	0.5	0	0	6	1.2	
Kenai/Kodiak	37	37.6	11	1,271.4	0	0	0	0	48	1,309.0	
Southwest	2	43.7	17	110,920.0	9	2,815.4	36	658,676.7	64	772,455.8	
Tok	3	0.3	1	2.5	0	0	0	0	4	2.8	
Totals	263	319.3	80	136,143.9	17	2,907.9	39	663,145.7	399	802,516.8	

	Critical		Fu	Full		Modified		Limited		Total	
Area	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	
Chugach N.F.	3	0.3	0	0	0	0	2	0.6	5	0.9	
Chugach N.F. Tongass N.F.	2	0.2	21	25.9	1	0.5	4	0.4	28	27.0	
Totals	5	0.5	21	25.9	1	0.5	6	1.0	33	27.9	

	Critical		Full		Modified		Limited		Unplanned		Total	
Zone	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Galena	2	167.0	7	54,813.9	11	26,802.0	22	385,600.3	0	0	42	467,383.2
Military	0	0	1	0.5	0	0	10	65,209.8	0	0	11	65,210.3
Tanana	0	0	5	115,345.5	5	259,718.0	22	407,308.3	0	0	32	782,371.8
Upper Yukon	1	0.2	7	7,081.7	2	194.1	12	33,330.7	4	25,246.3	26	65,853.0
Totals	3	167.2	20	177,241.6	18	286,714.1	66	891,449.1	4	25,246.3	111	1,380,818.3

Statewide Totals by Protection Level												
Cr No.	Critical No. Acres		Full No. Acres		Modified No. Acres		Limited No. Acres		Unplanned No. Acres		Total No. Acres	
190.	Acres	110.	Acres	140.	Acres	140.	Acres	140.	Acres	110.	Acres	
271	487.0	121	313,411.4	36	289,622.5	111	1,554,595.8	4	25,246.3	543	2,183,363.0	

Special Assignments. The National Interagency Fire Center (NIFC) asked State Forester Jeff Jahnke to join a team to plan a long-term strategy in response to the fires in Colorado and Wyoming. The summer of 2002 started early with the Hayman and Missionary Ridge fires. It was the second largest and most expensive fire year in the West. As the only state forester, Jeff worked with a group of administrators to determine prevention measures that might be necessary given the fire situation, closures, and public media actions that were presented in a final report to the Region IV Geographic Area Coordinating Committee.

Joe Stam successfully completed an Area Commander Trainee assignment in July. Joe worked with two area command teams assigned to manage the national Type 1 teams responsible for suppressing the Hayman Fire in Colorado. At the completion of his trainee assignment, Joe was asked by the National Multi-Agency Coordination Group to form an additional area command team for possible use during the disastrous 2002 fire season. This is the first time that a state employee has been asked to be an area commander on a national area command team.

Alaska Interagency Incident Management Team. The Type 1 Team completed three assignments in the one of most active Lower 48 fire seasons on record. With Joe Stam stepping down as Incident Commander after five noteworthy seasons, Dave Dash of the Alaska Fire Service took the reins. Most of the team members returned from previous seasons.

Lower 48 team assignments included: June 22 – July 11: Rodeo-Chediski Complex, Ft. Apache Agency, Arizona, the largest fire in Arizona's history. July 16 – July 27: Canyon Complex,

Manti-LaSal National Forest, Utah. Two fires separated by 100 miles.

August 25 – September 10: Biscuit Fire, Siskiyou Nat'l Forest, Oregon, a 500,000-acre, \$153 million fire.

DNR personnel assigned to the Type 1 Team in 2002:

Lynn Wilcock, Deputy Incident Commander

Martin Maricle, Logistics Section Chief

Bill Beebe, Public Information Officer John See, Fire Behavior Analyst Ken Bullman, Safety Officer Rich Webster, Air Operations Branch Director

Ray Kraemer, Operations Branch Director

Jim Odden, Logistics Section Chief trainee

Tamatha Whitmer, Ordering Manager Ken Cruickshanks, Ground Support Unit Leader

Jeri Vasquez, Food Unit Leader Alan Martin, Resource Unit Leader Tom Kurth, Situations Pete Buist, Public Information Officer Frank Cole, Situations Unit Leader Darla Hasselquist, Resource Unit Leader

Joanne Singer, Status Check-in Recorder

Doug Harris, Helicopter Manager Paul Keech, Field Observer Joe Faulise, Receiving & Distribution Manager

Ric Plate, Supply Unit Leader Bill Johnson, Display Processor Wyn Menefee, Information Officer Scott Christy, Equipment Manager Marc Lee, Base Camp Manager

DOF Employee Participates in Air Tanker Investigation

During the 2002 fire season, the wings of a C130A air tanker operating in the Lower 48 failed, resulting in a crash that killed all three crew members. A USDA Forest Service investigation team, in conjunction with the National Transportation Safety Board accident investigation team conducted a fact finding investigation. The Forest Service selected DOF Aviation Supervisor Matt Tomter to be a member of the review board that would hear the findings of the investigation and make final recommendations to the USDA. The board made a number of recommendations that changed air tanker operations for federal and state air tanker programs.

Miller's Reach Fire

In 1996 the Miller's Reach Fire in the Mat-Su Valley burned 37,336 acres and 334 structures, becoming the first major wildland-urban interface fire in Alaska. Thanks to the heroic efforts of division, federal, structure, and volunteer firefighters there was no loss of life or serious injuries.

Two lawsuits were filed against the state. At issue is a critical concept of state immunity in decision-making for fire fighting, a well established precept that was reaffirmed in the Ninth Circuit Court of Appeals in 2001. Alaska state law does not have such a provision, although it is well established in federal law and other states.

Superior Court Judge Cutler found in the state's favor on the first suit and Superior Court Judge Reese dismissed the second suit as essentially the same suit. Upon appeal, the Alaska Supreme Court determined that the state does not have a broad blanket immunity for fire fighting and referred each case back to the Superior Court to determine which actions are immune. Further, the court determined that the state does have a duty to perform and dismissed that argument. Since the plaintiffs objected to Judge Cutler, the Superior Court combined both lawsuits under Judge Reese.

The state and the Division of Forestry dedicated substantial time and resources to the discovery effort and responses in preparation for the trial scheduled for February 2003. The plaintiffs are represented by the Minnesota law firm of Benson & Fagre, which accepted the suits on contingency. The state is represented by the Attorney General's Office and the law firm of Delaney & Wiles.

Fire Program Implementation

Statewide Fire Prevention

Much of the land protected by the Division of Forestry shares a serious wildland-urban interface fire problem. The problem is exacerbated by the increasing numbers of homes, businesses, and subdivisions being built in forested lands near roads and towns. Fire prevention programs allow the division to educate the public about safe burning practices and reduce the number of human-caused fires.

Humans cause approximately 85 percent of the fires within DOF's protection area, often in populated areas. Because of the immediate threat to human life, these are the most critical fires to stop with initial attack, or better yet, prevent from happening.

Fire prevention education is one of the most effective tools for reducing these numbers. These programs include school presentations, appearances at fairs and other public gatherings, and public service announcements. In 2002, staff made presentations at more than 80 schools, reaching about 9,500 students and teachers. Many students receive these messages a number of times in their elementary school years and hopefully they will pay long term benefits.

Burn permits are required from May 1 through September 30. Burn permits allow the division to educate the public on a one-to-one basis about safe burning practices and are an effective means of reducing the number of human-caused fires and expensive false alarms. Burn permits are free and are issued from DOF offices and local fire departments,. Soon they will be available over the internet. In 2002, the division issued 6,000 permits. There were over 17,000 active permits, as many are good for three years. Burn suspensions are managed on a daily basis depending on the fire danger.

If burning violations occur, written warnings or citations are issued that can result in a combination of fines, restitution of suppression costs, and public service or jail terms. A warning is a documentation of a violation. A citation is issued when a violation occurs and where a fire escapes or requires suppression action. In 2002, 129 written warnings and 18 citations were issued for escaped fires.

The prevention message is one that all Division of Forestry employees incorporate into their daily interactions with the public during fire season. Programs such as Firewise were created to provide direction on safe practices for communities and individual homeowners.

Fire Cost Recovery

Escaped, controlled burns ignited by landowners or contractors caused 30 percent of the wildfires in the Kenai-Kodiak Area this year. In eight of 28 fires, the landowners had an active burn permit but were in violation of the terms of the permit. The greatest factor in the escape of the fires was the lack of a firebreak around brush piles, which, in addition to being a permit violation, is a violation of Alaska Statutes. Lighting fires in violation of Alaska Statutes is a misdemeanor and the person responsible is liable for the costs to suppress that fire. The Kenai-Kodiak Area is seeking suppression costs from individuals for nine fires totaling \$55,477 for the 2002 fire season.

Grants to Rural Communities

The Volunteer Fire Assistance Program assists in training, equipment purchases, and prevention activities on a cost share basis. The assistance is provided to increase firefighter safety, improve the fire fighting capabilities of rural volunteer fire departments, and enhance protection in the urbanwildland interface. Funds for this program come through the USDA Forest Service and are administered by the Division of Forestry.

In 2002, all 40 fire departments that applied for grants received funding. The total granted was \$159,592. In

addition to the grants, the division issues fire stores and equipment valued at more than \$500,000 to volunteer fire departments annually.

In 2002, grants were given to the following volunteer fire departments:

Andersen	\$5,000
Bethel	4,950
Big Lake	5,000
Chena-Goldstream	5,000
Chugiak	5,000
City of Alakanuk	2,600
City of Houston	5,000
City of Kenai	1,650
City of Kupreanof	5,000
City of Palmer	5,000
Coffman Cove	1,250
Cooper Landing	5,000
Craig	2,250
Delta	2,875
Deltana	5,000
Dillingham	5,000
Eastland	4,300
Ester	3,000
Homer	5,000
Katchemak Bay	5,000
Kake	2,500
Kalwock	2,500
Lowell Point	5,000
McGrath	5,000
Meadow Lakes	5,000
Naukati	1,250
Ninilchick	500
North Pole	4,173
North Star	5,000
Sand Point	3,750
Seldovia	5,000
Seward	1,250
South Tongass	4,619
Steese	1,600
Sutton	5,000
Unalaska	5,000
Valdez	5,000
Whittier	5,000
Willow	5,000
Womens Bay	4,575
Total	\$159,592

National Fire Plan Projects

The National Fire Plan was adopted in 2000 to provide funds to states, some on a competitive basis, to reduce the threat of fire in wildland/urban interface areas. Funds are also available for wildfire prevention and education programs, mitigation, capacity building, and homeowner and community assistance. The 2002 funding in Alaska is being used for the following:

Hazardous Fuels Removal. The forests around Moose Pass and Crown Point pose a significant threat of wildland fire due to impacts of the spruce bark beetle infestation. The division used NFP funds and assistance from the Chugach National Forest and Kenai Peninsula Borough to contract with a local operator to log dead timber. The Kenai crew helped complete the fuel reduction. Approximately 420 acres were treated.

Tok Hazardous Fuels Removal. Crews removed hazardous fuels to

create defensible space along roadsides, on state land, and in other high risk areas in the Tok area. Hazardous Fuels Removal on Private Land. The division's Forest Stewardship Program is administering costshare contracts to reduce fuels on private land near North Pole, Houston, and Nikiski.

Fire in Alaska! Curriculum. The division's Conservation Education Coordinator developed a fire education curriculum adapted for conditions in Alaska and aimed at teachers of fifth through tenth grade. Twenty-three educators and resource professionals attended workshops to learn about the science of fire behavior, home assessment, and remediation techniques. This program will be incorporated into classrooms across the state, particularly in communities impacted by the spruce bark beetle infestation.

Fairbanks Defensible Space. Prevention technicians visited 1,069 homes on the Chena Hot Springs Road to provide information on fire prevention and defensible space. They talked to 432 homeowners and left information for the others. The effort will continue in 2003.

McCarthy Prevention and Education Center. Planning began to create an education center in McCarthy, a gateway to the Wrangell St Elias National Park. The center will offer prevention material, burn permit applications, and emergency preparedness literature to the 15,000 visitors who pass through the area each summer. Examples of defensible space and fuels reduction projects at the center will demonstrate the Firewise Program in action.

Anchorage Prevention and Education. DOF and the Anchorage Soil and Water Conservation District developed and delivered a public education program. Public service announcements, cinema advertisements, coffee cup jackets, bus signs, workshops, and distribution of Firewise informational packets increased public awareness.

Chena Goldstream Water Tank. The Chena Goldstream Fire and Rescue Department installed a 20,000-gallon water tank in the College district. The tank was placed in a strategic location for wildland fire suppression activities.

Initial Attack Employees. The division hired and trained 20 non-permanent initial attack firefighters in Palmer, Fairbanks, Soldotna, Delta, and Tok. These firefighters improved the initial attack capabilities of the state, local governments, and volunteer fire departments in the urban interface areas. Effective initial attack of a fire reduces overall suppression costs and minimizes threats to private and public property from wildland fire.

Fairbanks and Mat-Su Fuel Mapping. Work continued on fuels maps used in computer models of how a fire will spread under different scenarios. This allows fire managers to plan appropriate mitigation and fire suppression tactics for specific locations.



During the Moose Pass Fuel Mitigation Project, the Kenai Crew skidded trees to access points, when practical, for the public to take for firewood. (Wade Wahrenbrock)

Kenai Hazard Tree Removal and Prescribed Burn

The Division of Forestry and the Kenai Peninsula Borough teamed up to cut and burn hazardous trees around campgrounds, schools, and other public places. Federal dollars to the borough funded the local Kenai Emergency Firefighter Crew's work from Homer to Sterling for 44 days.

The US Fish & Wildlife Service began planning the Mystery Creek prescribed fire on the Kenai National Wildlife Refuge several years ago but were unable to complete it due to weather or lack of resources until 2002. State and federal employees successfully burned 1,000 acres in June and July.

The Kenai crew worked a second year on a fuel reduction project to thin trees within 100 feet of Funny River Road. The road, which is on the Kenai National Wildlife Refuge, is the only access to the community of Funny River, which has a moderate to high wildfire threat.

Federal Excess Personal Property Program

The Federal Excess Personal Property Program provides equipment and supplies for wildland fire fighting in Alaska. The Division of Forestry has acquired \$6.4 million in federal excess equipment and supplies since it began participating in the program in 1971. The division also assigns FEPP equipment to cooperating volunteer and structural fire departments. This program provides needed equipment to the division and its cooperators as budgets decline and costs rise.

In 2002, the division acquired 10 items with a total value of \$265,446. Significant items acquired included: two forklifts, three cargo trucks, one van, one generator, and one bulldozer.



The Kenai Crew burns dead trees removed near communities to reduce fire danger. Water hoses were used to control the heat intensity of the fire even during rainy weather.

(Wade Wahrenbrock)

Anchorage Partnership

The division's Mat-Su Area Office and the Anchorage Fire Department cooperated to operate a Type 2 helicopter based at Merrill Field in Anchorage. Combined, the organizations provide a strong mix of wildland and structural fire fighting expertise. By working together, the agencies provided the Anchorage area with a quick response to fires in the urban interface. DOF provided AFD members with required classroom and hands-on experience over the course of the summer. A Federal Fuels Mitigation Grant obtained by the Municipality of Anchorage funded the project.

The Mat-Su fire crew worked on fuels reduction projects on the Anchorage hillside for the second season. The 20-person crew was certified as the state's first Type 2 IA crew. During the summer the crew created 45 acres of firebreaks around Anchorage hillside neighborhoods. With assistance from area technicians, over 700 brush piles were stacked and burned in the fall.

Besides the benefits of separating large stands of beetle-killed spruce from neighborhoods, there were other benefits as well. Crew members and technicians were aware of the fire potential in the area but this was the first time for many to experience the fuels and topography first hand. It allowed them to become familiar with the area and the challenges a large-scale fire would present. By working in the neighborhoods, the crews were able to talk to homeowners about defensible space, learn the road systems, and familiarize themselves with water sources.

The project also made a fully equipped and trained fire crew available for the Mat-Su Area. The crew was essential in helping control the Thursday Creek Fire, west of Willow, during the initial attack. Fire assignments also took the crew to Fairbanks, McGrath, and Tanana. The crew will continue its work on the Anchorage hillside during the 2003 fire season using funds from a Federal Fuels Mitigation Grant.

State Fire Warehouse System

The State Fire Warehouse System operates out of facilities in Fairbanks and Palmer. With an inventory valued at over \$7 million, the warehouse provides support for initial attack in wildland/urban interface areas protected by the Division of Forestry. The warehouse system also supports local government cooperators and federal cooperators in Alaska, the Lower 48, and Canada.

The role of the warehouse system is expanding aided by a state-of-the-art computer program and a skilled and efficient staff. In 2002, five non-permanent employees were hired to assist in operations.

In 2002 the warehouse system:

- Provided wildland firefighting supplies and equipment valued at \$450,000 to 39 local government cooperators.
- Supported project fire activity in a year in which 2.2 million acres burned in Alaska and some of the larger fires burned for three months. These large incidents require a major support effort from the warehouse system.
- Deployed four mobile support cache vans to project fires that were road accessible. The warehouse also built two other cache vans to have on stand-by. Each cache van contains \$160,000 worth of supplies and equipment.
- Sent supplies and equipment to the Lower 48, during a season that began in early May and lasted into October. The warehouse provided equipment and other materials valued at \$1.2 million. Items included 57 pumps, 55 chainsaws, 1,000 nozzles, and 110 miles of fire hose. By December all supplies and equipment were back on the shelves ready for the next fire season.

- Supported the Denali earthquake recovery effort in November. The warehouse system often aids non-fire emergencies such as search and rescue, flood control, and avalanche damage.
- In cooperation with other agencies, published the Alaska Interagency Catalog of Fire Supplies and Equipment. This easy-to-use catalog provides firefighters access to fire stores of all agencies. The State Fire Warehouse is listed as a local cooperator in the National Cache System.

NASA Grant for Mapping

The division's Northern Region GIS unit received a \$600,000 grant from NASA in the fall of 2001 to solve mapping problems related to emergency services. Services, such as mapping, that are common in most of the United States often do not exist in Alaska. Many Alaska villages and towns have no accurate maps of roads, utilities, structures, landforms, or natural hazards that could cause fire, flooding, or riverbank erosion.

Because of Alaska's size and limited access, remote sensing, such as satellite imagery, may be the only practical solution. Grant fund will provide ortho-rectified satellite imagery and resources for emergency service organizations.

The division will obtain satellite imagery for villages, towns, and inhabited areas in the Tanana Valley and large portions of the valley containing criti-

cal community resources. The project will cover approximately 11,475 square miles and all 15 villages and towns in the Tanana Valley except Fairbanks and Northpole. The communities included are Northway, Tok, Tetlin, Tanacross, Dot Lake, Healy Lake, Delta Junction, Salcha, Two Rivers, Nenana, Anderson/Clear, Healy, Minto, Manley and Tanana. Fairbanks and North Pole are covered by another project.

This project will ortho-rectify satellite imagery that will be used to develop fuel mapping across large portions of the valley. It will also produce general community base maps for each town for which high-resolution imagery was obtained. The project is estimated to take three years to complete.

The imagery will be used for disaster planning and emergency response such as fire fighting and evacuation, fuel mapping and wildfire threat to communities, flood response and evacuation, and community planning. It will improve public safety by providing information to protection safety officers and Alaska State Troopers.

Other important products include maps of:

- Facilities such as sewer, water sources, power, and structures
- Roads and access trails
- Fuel hazards and defensible space issues
- Airstrips and airstrip approach information.

Fire Program Training

The division provides training to maintain a safe and qualified workforce that meets national standards. All interagency courses are open to the structure fire departments, emergency firefighters, and Canadian agencies that cooperate with the state.

National Level Training

National level training helped the division meet the need for qualified, advanced level personnel to serve on Alaska's incident management teams; fill finance, information, logistics, air, and operations positions; stay current on contract administration, fire leadership, advanced fire behavior, and aerial firefighting.

Forestry employees and/or cooperators attended the following courses:

- S-403 Information officer
- S-420 Command and general staff exercise
- Contracting officer training
- S-360 Finance/admin. unit leader
- Fire management leadership
- National aerial firefighting academy
- S-470 Air operations branch director
- S-430 Operations section chief
- S-490 Advanced fire behavior calculations

The division made advances in training personnel to fill incident management team positions at the Type 2 level. Employees attended the S-420 course in the positions of logistics and information. Those who attended training on air operations branch director and operations section chief qualify as trainees in these positions.

Instate Training

Annual refresher training was offered in fireline safety, aerial ignition devices, first aid, blood-borne pathogens, hazardous materials for first responders and warehouse personnel, and helicopter manager.

The division continued to provide training to cooperator fire departments. Several 300 level unit leader courses were offered as interagency courses. These included task force/strike team leader, resource unit leader, facilities unit leader, fire behavior, and finance/administration unit leader.

Fire Department Training

Statewide, 32 fire department personnel were certified in fire overhead positions. Many other fire department employees were certified as Basic Firefighters.

Structure fire departments across the state assist the division in fire suppression in populated areas through cooperative agreements. These cooperators are a valuable source of trained, experienced firefighters. The division offers evening and weekend courses to make the training convenient for volunteer firefighters.

The division conducted an aggressive wildland fire training program in 2002 to meet the training needs of structure fire department cooperators. One hundred two fire department personnel attended statewide training in 2002. Many others attended training sponsored by area offices.



Firefighter Phil Blydenburg demonstrates fire fighting equipment to high school interns Jason Mercer, Sarah Dewees, Chelsey Gribbon, Laura Boomershine, Kelly Gilmore, Dan Hill and Garrett Myren. Intern Foreman Nelson Stegall stands at far right. (Norm McDonald)

Type of Course	Courses	Participants	Hours
Incident Command System	6	108	106
Basic Firefighter	17	377	363
Fire Management	12	113	171
Dispatch	2	25	30
Suppression Skills	43	510	794
Prevention	1	15	2
Defensible Space	2	54	10
School Programs - Prevention	ı 15	1,300	20
First Aid/CPR/BBP	11	158	80
Fire Line Safety	59	1,235	213
Hazardous Materials:			
Warehouse	2	25	16
First Responders	7	115	83
Other	5	36	12
Totals	182	4,071	1,900

Chart includes training sponsored by the division statewide and other training attended by division and cooperating fire department personnel. It includes emergency fire-fighter crews and participants from other agencies.

Type of Course	Courses	Participants	Hours
Fire Management	5	6	280
Suppression Skills	7	7	280
Dispatch	1	1	40
Totals	13	14	600

Interagency Fire Training Co	ourses
Incident Command System	Task Force/Strike Team Leader
Dispatch Recorder	Crew Representative
Fire Business Management	Resource Unit Leader
Interagency Helicopter Training	Demobe Unit Leader
Helicopter Manager Workshop	Facilities Unit Leader
Aerial Firing Training	Leadership/Organizational Development
Intermediate Fire Behavior	Interagency Aviation
Fire Behavior Calculations	Management & Safety
CFFDRS	Fireline Safety
Information Officer	Retardant Worker
Fire Operations in the Interface	Hazardous Materials Transportation
Single Resource Boss Crew and Engine	

Employee Recognition

30 Years of State Service

Paul Maki

Paul Maki began his career with the Division of Forestry in December 1971 shortly after he left the military. He began as a temporary employee and was promoted to Forester I in March 1972. Paul worked in Anchorage for eight years before the area offices were formed. He laid out and administered timber sales from Talkeetna to the Kenai Peninsula, to Icy Bay. He also worked in the fire and aviation program during its formative years and was Line Boss on the 1976 Eagle River Fire, the state's first project fire. Paul was also one of the first pilots of the DeHavilland Beavers when DOF received four in 1976. He transferred to Juneau in 1979 to become the Southeastern Region Forester. Besides managing all forestry operations in Southeast, he coordinated preparation of the state's first forest management plan, which was for the Haines State Forest. He also coordinated the Forest Practices Program during its first eight years. When his position was eliminated during deep statewide budget cuts in 1986, Paul moved to Anchorage and the position of statewide training coordinator for the division. In 1988, when a new Assistant Regional Forester position opened in Fairbanks, Paul transferred into it. Responsibilities have changed over the years but have included forest and fire management, aviation, forestry administra-



tion, and planning. Paul is a 35-year member of the Society of American Foresters and a Certified Forester since 1997. He was elected Fellow in 1999, an honor bestowed on less than five percent of the membership.

25 Years of State Service

Pete Buist

Pete Buist began working for the state in the spring of 1977 as a Forest Warden (now Prevention Tech) in the Northcentral District (now Northern Region) for the District Forester (now Regional Forester) Les Fortune (now retired).

After a season of writing burn permits, Pete accepted a promotion and transfer to the Division of Lands as a Land Management Officer and later, Natural Resources Officer in Fairbanks until 1990. From there, Pete was transferred to the Central Office in Anchorage to work on the Forest Health Initiative, first for the Kenai Peninsula and later for the Copper River Valley.

Pete moved back to Fairbanks and the Northern Region Office in 1992, where he was the primary DOF contact for the Tanana Valley State Forest Citizens' Advisory Committee. In 2000, Pete was named Resource Management Forester for the Fairbanks Area. He has also served as a Fire Information Officer for many years, both locally and in the Lower 48.

Pete holds an Alaska Master Guide license and guides in Alaska and New Mexico. He has served on the Alaska Guide Board, the Governor's Task Force on Guiding and Game and was recently appointed to a seat on the Alaska Board of Game.



20 Years of State Service

Ken Cruikshanks

Ken came to Alaska from Connecticut in 1975 and found work as a maintenance worker on the haul road for Alyeska Pipeline. When that job ended Ken worked various jobs until he landed a job with DOT in 1980 and worked in remote camps until 1983. Ken joined the Division of Forestry in the summer of 1985. As a maintenance worker and mechanic in the Fairbanks shop, he learned about the various types of fire fighting equipment. Ken

transferred from the Fairbanks shop to the Eagle River equipment shop in 1990 and has become a full-time mechanic. Over the years Ken has expanded his role in the Fire Program. He has served as faculty unit leader for the Type 1 Team and is currently the ground support unit leader. One of Ken's most memorable assignments was with the Type I1 Team in New York City at the site of the World Trade Centers.



Martha Freeman

Marty Freeman began working with DNR as a Division of Land intern in 1980. She went back to graduate school in New York but returned to Alaska to research the impacts of the state's land disposal policy on fire management options. Marty completed an M.S. in forest soils and a Ph.D. in forest policy and planning at Cornell University and began her career with DNR in land use planning.

Marty worked on the Susitna and Tanana area plans, and was project manager for the Kuskokwim Area Plan and Kashwitna Management Plan, and Susitna Forestry Guidelines. She managed the Division of Land's planning program from 1989 to 1992 and was chief of the Land Resources Section from 1992 to 1994. The job included management of DNR's surveying, appraisal, land-use planning, and public access programs.

Marty was glad for the opportunity to join the Division of Forestry in 1994 and to focus on forestry issues. As deputy director of operations and, now, as Forest Resources Program Manager, she has been involved in the forest practices, forest management, and cooperative forestry programs. Key projects have been updates of the Forest Resources and Practices Act, the Tanana Valley State Forest Management Plan update, and other forest planning issues, spruce bark beetle



issues and litigation on the Kenai Peninsula, forest, practices monitoring, development of regulations, interagency coordination on water resource issues, and integration of the cooperative programs with forest and fire management activities.

Thomas Marok

Tom began his career with the Division of Forestry in April 1979 as a Forest Technician III, Engine Foreman, at the Kenai-Kodiak Area Office. He was promoted to Forest Technician IV, Forest Warden, in May 1980. Tom was active in wildland fire investigation statewide and involved in some of the division's first fire cost recovery actions in the early 1980s on the Kenai Peninsula. He was also active in implementing the first division-wide arson investigation class taught by the late Dick Jackson in 1983 at Moose Pass. Tom remained in the

Forest Warden position until 1990 when he became the Kenai-Kodiak Area Logistics Coordinator, the position he currently holds. Tom has served as Acting Fire Management Officer on numerous occasions, including a period of nearly a year in 1993. He has held numerous fire line and logistics red card positions, working on fires both in Alaska and the Lower 48.

Tom has also worked in the timber program during the non-fire months doing timber sale layout, cruising, and insect damage surveys.



15 Years of State Service

Timothy Mattoon

Tim grew up in Anchorage and started fire fighting in 1976 on Jay Peterson's BLM hotshot crew. He spent three seasons on that crew, until accepting the position of Engine Foreman with the Division of Forest, Land, and Water Management in the newly created Soldotna Area Office in 1979.

Tim worked initial attack as an Engine Foreman for six seasons and in 1985 accepted a logistics position in the Soldotna office. In 1990 Tim was named Logistics Coordinator for the Copper River Area, where he continues to serve. During the off season Tim resides in Anchorage with his wife, two daughters, and son.



Barbara Phegley

Barbara was hired as Administrative Clerk by the Division of Forestry in Soldotna in June 1987, after holding a variety of jobs from security guard to construction worker. Her decision to join State Forestry brought her into the fire arena and began her fire suppression education. Finance seemed the logical avenue of pursuit, and over the years Barbara earned her finance stripes by working her way up from

time recorder to Finance Section Chief Type II. With the field knowledge and education she gained, Barbara was recruited as an instructor in S-260 and contributed significantly in creating the S-260 refresher course. She is, perhaps, the longest serving administrative clerk in the division. Barbara and her husband Dave have an appliance business in Soldotna and a family of six children.



10 Years of State Service

Terry Anderson, Forest Technician III, Soldotna

Jeffrey Browne, Forest Technician IV, McGrath

Douglas Harris, Forest Technician III, McGrath

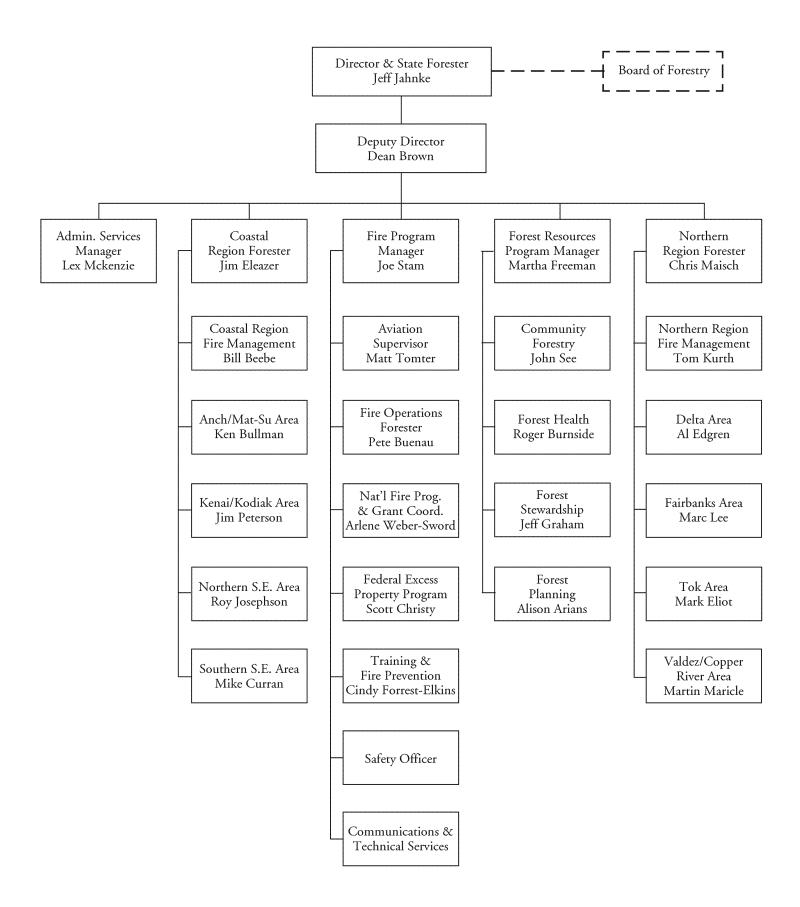
Alma Hibpshman, Stock & Parts Svc., Palmer

Michael Roos, Forester I, Palmer

Arlene Weber-Sword, National Fire Plan/Grant Coordinator, Anchorage

Paul Van Hees, Forest Technician IV, McGrath

Robert Zimmerman, Forest Technician IV, Fairbanks



Division of Forestry Directory

State Forester

State Forester's Office

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State Forester

Jeff Jahnke, 269-8474

Deputy State Forester

Dean Brown, 269-8476

Admin. Services Manager Lex McKenzie, 269-8477

Fire Program Manager Joe Stam, 269-8467

Forest Resources Program Mgr. Martha Freeman, 269-8473

Forest Planning

Alison Arians, 269-8450

Community Forestry Program John See, 269-8466

Conservation Education

Matt Weaver, 269-8481

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

Forest Stewardship Program

(Landowner Assistance) 101 Airport Road Palmer, Alaska 99645 Jeff Graham, 761-6309

State Fire Operations

P.O. Box 35005 Ft. Wainwright, AK 99703 356-5850 fax: 356-5220

Pete Buenau, Operations Forester

Logistics: 356-5645 Intelligence: 356-5671 Air attack: 356-1375

Training, Anchorage: 269-8441

State Fire Warehouse

3700 Airport Way Fairbanks, AK 99709-4699 451-2640 fax: 451-2669

Bill Simonsma

Aviation Program

101 Airport Rd. Palmer, Alaska 99645 761-6271

Matt Tomter, Aviation Mgr.

Northern Region

Northern Region Office

3700 Airport Way Fairbanks, Alaska 99709-4699 451-2660 fax: 451-2690 Chris Maisch, Regional Forester

Northern Fire Management Office

3700 Airport Way

Fairbanks, Alaska 99709-4699 451-2675 fax: 451-2690

Tom Kurth, Fire Mgmt. Officer Reception: 451-2660

Logistics: 451-2680

Fire management: 451-2675 Aviation mgmt.: 451-2676

Delta Area Office

P.O. Box 1149

Delta Junction, Alaska 99737 (Mi. 267.5 Richardson Hwy.) 895-4225 fax: 895-2125 Al Edgren, Area Forester

Fairbanks Area Office

451-2600 fax: 451-2690 Marc Lee, Area Forester Fire line: 451-2626

Fire operations: 451-2633

Tok Area Office

Box 10 (Mile 123 Glenn Hwy.) Tok, Alaska 99780 883-5134 fax: 883-5135 Mark Eliot, Area Forester Fire line: 883-5657

Valdez/Copper River Area Office

P.O. Box 185

Glennallen, Alaska 99588 (Mi. 110 Richardson Hwy.) 822-5534 fax: 822-8600 Martin Maricle, Area Forester

Coastal Region

Coastal Region Office

101 Airport Road Palmer, Alaska 99645 761-6200 fax: 761-6201 Jim Eleazer, Regional Forester

Coastal Fire Management Office

101 Airport Road Palmer, Alaska 99645 761-6238 fax: 761-6227 Bill Beebe, Fire Mgmt. Officer

Reception: 761-6200 Logistics: 761-6218 Aviation mgmt.: 761-6229

Kenai-Kodiak Area Office

42499 Sterling Highway Soldotna, Alaska 99669 (Mi. 92.5 Sterling Hwy.) 262-4124 fax: 262-6390 Jim Peterson, Area Forester Fire line: 260-3473 Burn permits: 260-4269

Mat-Su/Southwest Area Office

101 Airport Road Palmer, Alaska 99645 761-6300 fax: 761-6311 Ken Bullman, Area Forester Fire line: 761-6311

Fire line: 761-6311 Burn permits: 761-6312

McGrath Field Office (Seasonal)

Box 130

McGrath, Alaska 99627 524-3011 fax: 524-3932 Vacant, Fire Mgmt. Officer

Fire line: 524-3366

Northern Southeast Area Office

P.O. Box 263 (Gateway Building) Haines, Alaska 99827 766-2120 fax: 766-3225 Roy Josephson, Area Forester

Southern Southeast Area Office

2030 Sea Level Dr., #200 Ketchikan, Alaska 99801 225-3070 fax: 247-3070 Mike Curran, Area Forester

Fiscal Year 2002 Actuals

Funding Sources	Forest Mgmt. & Development	Fire Suppression	Emergency Firefighters Non-emergency	Totals
General Funds	7,011.1	23,587.8		30,598.9
Federal Funds	805.6	10,281.3	MACHINA MACHIN	11,086.9
Capital Improvement Receipts	270.2		259.2	529.4
Interagency Receipts	1,542.3	405.9	**********	1,948.2
Timber Receipts	261.3		-	261.3
Other	9.7			9.7
Totals	\$9,900.2	\$34,275.0	\$259.2	\$44,434.4
Positions				
Permanent Full-time	64	8		72
Permanent Part-time	116	34		150
Non-permanent	12		***************************************	12
Total Positions	192	42	0	234

Renewable Resource Development & Sales	Coastal Region	Northern Region	Statewide	Totals
Board of Forestry			11.4	11.4
Forest Practices	331.6	0.2	39.3	371.1
Forest Management	586.6	1,203.1	310.0	2,099.7
Interagency Recip. Svc. Agreements		***************************************	1,542.3	1,542.3
Timber Receipts			261.3	261.3
Subtotals	918.2	1,203.3	2,164.3	4,285.8
Wildland Fire Protection Services				
Anchorage School District Interns	40.3			40.3
Preparedness	1,967.2	1,753.1	560.4	4,280.7
Subtotals	2,007.5	1,753.1	560.4	4,321.0
Forest Administration				
Federal Cooperative Forestry Assistant	ce —		805.6	805.0
Director's Office			207.9	207.9
Subtotals			1,013.5	1,013.
Other Receipts				
Capital Improvement Receipts			270.2	270.2
General Fund/Program Receipts		_	9.7	9.7
Subtotals			279.9	279.5
TOTALS	\$2,925.7	\$2,956.4	\$4,018.1	\$9,900.2

Fiscal Year 2003 Budget

Funding Sources	Forest Mgmt. & Development	Fire Suppression	Emergency Firefighters Non-emergency	Totals
General Funds	6,583.2	3,144.6		9,727.8
Federal Funds	1,181.2	7,321.8		8,503.0
Capital Improvement Receipts	568.3		250.0	818.3
Interagency Receipts	468.4	***************************************	*******	468.4
Timber Receipts	681.1		***************************************	681.1
Other	30.0	and contained and	***************************************	30.0
Totals	\$9,512.2	\$10,551.4	\$250.0	\$20,228.6
Positions				
Permanent Full-time	63	10		73
Permanent Part-time	118	74	********	192
Non-permanent	12		-	12
Total Positions	193	84	_	277

Renewable Resource Development & Sales	Coastal Region	Northern Region	Statewide	Totals
Board of Forestry			9.1	9.1
Forest Practices	358.3		54.7	413.0
Forest Management	606.6	630.9	243.0	1,480.5
Interagency Recip. Svc. Agreements			468.4	468.4
Timber Receipts			681.1	681.1
Subtotals	964.9	630.9	1,456.3	3,052.1
Wildlangd Fire Protection Servic	es			
Anchorage School District Interns	40.5			40.5
Preparedness	2,042.6	1,779.6	441.6	4,263.8
Subtotals	2,083.1	1,779.6	441.6	4,304.3
Forest Administration				
Federal Cooperative Forestry Assistan	ice —	MAGAMANA.	1,181.2	1,181.2
Director's Office			376.3	376.3
Subtotals			1,557.5	1,557.5
Other Receipts				
Capital Improvement Receipts			568.3	568.3
General Fund/Program Receipts		_	30.0	30.0
Subtotals			598.3	598.3
TOTALS	\$3,048.0	\$2,410.5	\$4,053.7	\$9,527.7

Alaska Board of Forestry

Adrian LeCornu, ANCSA corporation, Hydaburg

Chris Stark, non-governmental fish or wildlife biologist, Fairbanks

Larry Hartig, recreational organization, Anchorage

Jeff Jahnke, State Forester, Anchorage William Jeffress, mining organization, Fairbanks

Craig Lindh, non-governmental forester, Juneau

Rick Smeriglio, environmental organization, Seward

Rick Rogers, forest industry trade association, Anchorage

Tim June, commercial fishermen organization, Haines

Alaska Community Forest Council

John Alden, member-at-large, Fairbanks

Monique Anderson, landscape architect, Anchorage

Ann Lawton, horticulture, Eagle River Sue Lincoln, Cooperative Extension

Service, Anchorage

Michael Post, arborist, Anchorage

Michael Rath, forester, Anchorage Beverly Richardson, member-at-large, Petersburg

Sue Rodman, municipal planner seat, Anchorage

Corinne Smith, construction/right-of-way, Anchorage

Sondra Stanway, member-at-large, Juneau Warren Templin, member-at-large, Palmer

John Trautwein, community forestry/ beautification, Anchorage

Dave Wolfe, member-at-large, Anchorage

Vacant, industry/business

Vacant, small community service

Forest Stewardship Coordinating Committee

Ole Andersson, landowner, Soldotna Steve Bush, USDA Forest Service, Anchorage

Jeff Graham, Division of Forestry, Palmer

Mike Green, Alaska Association of Conservation Districts, Fairbanks

Doug Hanson, Tanana Chiefs Conference, Fairbanks Max Huhndorf, Gana-A' Yoo, Ltd., Galena

Jimmy LaVoie, USDA Farm Service Agency, Palmer

Allen Leman, landowner, Kasilof George Matz, The Audubon Society, Anchorage

Mitch Michaud, USDA Natural Resources Conservation Service, Kenai

John Mohorcich, Kenai Peninsula Borough, Soldotna

Charlie Nash, forest industry rep., Big Lake

Erica Reith, USDI Bureau of Indian Affairs, Juneau

Bob Wheeler, Cooperative Extension Service, Fairbanks

Tanana Valley State Forest Citizens' Advisory Committee

Tricia Wurtz, Chair, forest science Jerry Gustafson, forest industry Brad Cox, value-added processing Chris Stark, environmental interests Susan Bishop, private forest user Jim Ostlind, recreation Tom DeLong, tourism industry Dave Payer, fish and wildlife interests Shelly Basketfield, mining industry Edna Hancock, Native community Vacant, Upper Tanana Valley representative Lawrence Smith, Lower Tanana Valley representative

Alaska State Foresters

Earl Plaurde October 1959 to June 1968

William Sacheck

George Hollett

July 1968 to June 1974

July 1974 to June 1976

Theodore Smith

July 1976 to April 1982

John Sturgeon May 1982 to June 1986 George Hollett (acting) July 1986 to February 1987

John Galea March 1987 to May 1988

Tom Hawkins (acting) June 1988 to December 1988

Malcolm "Bob" Dick January 1989 to November 1992

Dean Brown (acting) December 1992 to February 1993

Tomas Boutin March 1993 to January 1997

Dean Brown (acting) January 1997 to July 1997

Jeff Jahnke July 1997 to present