United States Department of Agriculture

**Forest Service** 

Reports 2400-D and 2400-M

# Reforestation and Timber Stand Improvement Report

National Summary Fiscal Year 2004

September, 2005



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### **Message from the Director of Forest Management**

The following is the Reforestation and Timber Stand Improvement Report for fiscal year (FY) 2004. The contents of this report also appear on the Forest Service Internet web site, <a href="http://www.fs.fed.us/forestmanagement/reports/reforest-tsi/index.shtml">http://www.fs.fed.us/forestmanagement/reports/reforest-tsi/index.shtml</a>. The report provides the following information:

- First, it summarizes production levels at each Forest Service nursery and seed extractory and displays service-wide production trends at these facilities. This section also provides information on genetic resource improvement programs.
- Second, it displays reforestation program accomplishment by each region and examines reforestation program trends nationally. This section also summarizes reforestation success in terms of plantation establishment.
- Third, it illustrates timber stand improvement (TSI) program accomplishment by each region and displays TSI trends nationally.
- Fourth, graphs and tables provide more detailed information pertaining to Forest Service nurseries and seed extractories, regional reforestation and TSI programs, and reforestation success. This report also includes in tabular form reforestation and timber stand improvement needs by region, State, and national forest by productivity class as of the end of fiscal year 2004. In addition included is the certification of reforestation and timber stand improvement acreages by State and national forest for fiscal year 2004. This information is required by the National Forest Management Act of 1978 Sec. 4(d)1 and was previously included in the Report of the Forest Service to Congress

I hope you find this report both informative and useful in examining the trends, achievements, and challenges for forest vegetation management on National Forest System lands.

/s/ *William Timko*WILLIAM TIMKO
Acting Director, Forest Management

#### Preface

This report provides a summary of the Forest Service's nursery; genetic resource improvement, reforestation, and timber stand improvement programs. This report addresses the reporting requirements outlined in FSM 2470, 2490, and FSH 2409.14. Resource data summarized in this report was derived from automated reports extracted from the TRACS-SILVA data base, and non-automated information compiled by Forest Service nursery managers, reforestation/TSI specialists, geneticists, and silviculturists.

Following the Executive Summary, this report is organized in four major sections:

# • SUMMARY OF THE FY 2004 FOREST SERVICE NURSERY AND GENETIC RESOURCE PROGRAMS

This section of the report summarizes FY 2004 production data at FS nurseries and seed extractories and assesses the production trends and future outlook for these facilities. Forest Service genetic resource improvement programs are included in this section.

#### SUMMARY OF THE FY 2004 REFORESTATION PROGRAM

This section displays FY 2004 reforestation accomplishments and program trends, which also includes information on plantation survival.

# • SUMMARY OF THE FY 2004 TIMBER STAND IMPROVEMENT (TSI) PROGRAM

This section displays FY 2004 TSI accomplishments and program trends.

#### APPENDICES SECTION

This section includes numerous tables providing detailed information pertaining to Forest Service nurseries and seed extractories, regional reforestation and TSI programs, and reforestation success. In addition, is detailed information of reforestation and timber stand improvement needs by region, State, and national forest by productivity class and certification of reforestation and timber stand improvement acreages by State and national forest for fiscal year 2004. Appendix C includes the common names for tree species identified by code on selected tables harvest; reforestation and timber stand improvement accomplishment codes identified by code on selected tables in this report.

#### **Executive Summary**

Some of the highlights for FY 2004 include:

- Forest Service nurseries produced about 25 million seedlings in FY 2004, a decrease of about -14% from FY 2003 production levels (29 million seedlings).
- Forest Service seed extractories produced roughly 20 thousand pounds of seed representing over 258 species of grasses, forbs, shrubs, and trees.
- Silvicultural examinations were done on about 466 thousand acres and silvicultural prescriptions were developed on about 537 thousand acres to achieve a diverse array of management objectives on National Forest System lands.
- Reforestation treatments occurred on more than 152 thousand acres. About one-half of this work was K-V financed, approximately 36% was financed using appropriated funds, and the remainder (12%) was accomplished using contributed funding sources.
- Timber stand improvement (TSI) treatments occurred on about 250 thousand acres. About 69% of the treated acres were precommercially thinned, about 24% were treated to eliminate competing weed species and release trees to maintain or improve stand growth. Pruning and fertilization treatments were done on the balance of these acres.
- Reforestation needs increased by about 3 thousand acres while TSI needs decreased by about 6 thousand acres nationally over the corresponding values reported last year.
- Nationally, first-year and third year survival for planted acres averaged 69% and 60% respectively.

# SUMMARY OF THE FY 2004 FOREST SERVICE NURSERY AND GENETIC RESOURCE PROGRAMS

#### **Seedling Production at Forest Service Nurseries**

Forest Service (FS) nursery production, including both bare-root and container stock, was down by about 14% from the previous year at about 25.1 million seedlings (Tables 1 & 2 in Appendix A). This continues the trend of declines experienced in prior years resulting from reduced timber harvest, shifting emphasis toward intermediate treatments (commercial thinning) and salvage removals, and increasing reliance on natural regeneration to achieve reforestation objectives. Production trends from FY 1991 through FY 2004 are shown in Figure 1.

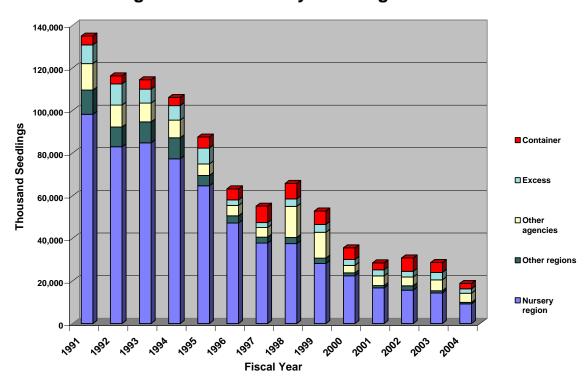


Figure 1 -- FS Nursery Seedling Production

# Seedling Production Trends, Sowing Requests, and Acquisition from Other Sources

Seedling production levels have generally been declining at FS nurseries since FY 1991. As of the end of FY 2004, production levels at these facilities (25.1 million seedlings) had declined by 81% from the levels reported for FY 1991 (134.9 million seedlings). The outlook for future seedling orders and sowing requests are shown in Tables 1A and 1B in Appendix A. The data presented in these tables shows a slight decline in inventory levels at these facilities in the next year, followed by continued declines in anticipated seedling production levels thereafter. Table 4 summarizes seedling acquisition from sources other than FS nurseries.

#### **Seed Production at Forest Service Seed Extractories**

Approximately 19 thousand (M) pounds of tree seed were produced during FY 2004; an increase of 14% from FY 2003 extraction levels (16 M pounds). Seed production levels can be highly variable from year-to-year, reflecting the unique characteristics of individual plant species and the periodicity of good seed crops in each species.

Table 3 in Appendix A summarizes the source of origin for tree seed processed at FS facilities in FY 2004. About 27% of this seed was collected from seed orchards. The list of plant species being processed at these facilities includes about 258 species of grasses, forbs, shrubs, and woody plants.

Table 5 in Appendix A summarizes seed production area (SPA) status for FY 2004. No additional seed production areas were established in FY 2004; however, SPA's were eliminated on 27 acres resulting in a total of 2,253 acres in SPA status.

#### **Genetic Resource Programs (GRP)**

These programs continue to make valuable contributions to improved forest health by identifying and conserving important genetic traits that control resistance to major pests, providing baseline genetic information for forest management activities using genetic test plantations and lab studies, producing adequate quantities of improved seed to meet demand, and by incorporating genetic principles into silvicultural treatment prescriptions and planning efforts.

During FY 2004, a revision to the 1992 Forest Service Genetic Resource Program Strategic Action Plan (GRSP) was completed. The Strategic Action plan was developed to guide genetic activities within the National Forest System. The plan's intent is to bridge barriers, reduce organizational functionalism, and foster decisions to ensure sustainability of plant and animal species and wise use of our renewable resources.

National Forest System geneticists' past role focused primarily on breeding trees that will grow faster and produce more solid wood and fiber. While this function is still important, geneticists now contribute much more to plant and animal species programs. The Forest Service's mission has evolved since the 1992 action plan and new initiatives and policies require the agency to examine National Forest Service geneticists' support of the Chief's emphasis areas and implementation of Forest plans.

The plan's has three major areas: **Genetic Conservation**, **Ecosystem Restoration**, **and Partnerships**. The plan continues to emphasize the need for genetic work supporting tree improvement activities and, at the same time, recognizes the important role Forest Service geneticists play in the genetic conservation of plant material needed for ecosystem restoration processes. A synopsis of the regional genetic resources accomplishments for FY 2004 is included in Appendix C. Specific information related to the genetic resources program is available from each Forest Service region upon request.

#### **National Forest Genetic Electrophoresis Laboratory**

The National Forest Genetic Electrophoresis Laboratory (NFGEL) is a facility dedicated to providing genetic analyses to resource managers throughout the agency. The facility was established in 1988 as part of the National Forest System. The purpose of the Laboratory is to analyze molecular genetic markers (proteins and DNA) in plant material submitted by Forest Service employees and those from other cooperating entities. Early NFGEL projects focused primarily on conifers, exploring genetic variation patterns to refine seed zones and to resolve questions about clones, populations, and genetic sources. More recently, following the development of the FS Genetic Resources Strategic Plan, NFGEL was given the mandate to begin work examining forest vegetation other than trees. NFGEL provides baseline genetic information, determines the effect of management on the genetic resource, supports genetic improvement programs, and contributes information in the support of conservation and restoration programs, especially those involving native and threatened, endangered, and sensitive species.

NFGEL projects were processed to meet a variety of management objectives. Project results were used to guide restoration and conservation projects, and assist in silviculture and tree improvement activities.

During FY 2004, NFGEL continued to follow its mission to "provide state-of-the-art molecular genetic information to the National Forests and other cooperating agencies for the evaluation and protection of our nation's genetic resource". NFGEL performed the following:

- Continuing the development of a database for ponderosa pine that will be used to identify off-site plantations. Information will be used to improve overall forest health since offsite stands are generally associated with disease and declining performance.
- Determined the source of seed used to replant Monterey Pine (*Pinus radiata*) in California (determined the location of native vs. non-native plantings).
- Determined ramet, clone, and progeny identity in Port-Orford cedar. Results were used to aid in disease resistance breeding of the species.
- Provided genetic fingerprints for *Populus* species to track individuals in breeding programs.
- Provided information on ploidy variation in *Acacia koa* to aid in conservation efforts for this Hawaiian species.
- Completed the DNA profiling the 13 surviving trees planted under the direction of George Washington growing at Mt Vernon.
- Determined taxonomy and gene/species conservation strategies for threatened and endangered species (*Erysimum*, wallflower; *Arnica lessingii*; *Lupinus constancei*; *Erythronium*, Fawn-lily).
- Characterizing the genetic diversity and evolution of native grass material to be used for restoration.
- Genetically characterizing revegetation plant materials by comparing source, indigenous, and rehabilitation site native plants. Results will improve fire rehabilitation and restoration projects.

NFGEL continued to host a variety of visitors. Tours of the facility and operation were provided to (1) Forest Service employees representing the Research branch, the Washington Office, and National Forest System, (2) members of the public, both from within and outside of California, (3) private industry, (4) university faculty, and (5) employees from other state and federal government agencies. NFGEL formed collaborations with FS Research Stations, Bureau of Land Management, California Department of Transportation, US Fish and Wildlife Service, University of California at Davis, and private companies. Detailed Fiscal Year accomplishment reports for fiscal years 1998 to 2004 is found at <a href="http://www.fs.fed.us/psw/programs/nfgel/">http://www.fs.fed.us/psw/programs/nfgel/</a>.

#### SUMMARY OF THE FY 2004 REFORESTATION PROGRAM

#### FY 2004 Reforestation Accomplishment and Program Trends

About 153 thousand acres of National Forest System lands were reforested during FY 2004 using appropriated (NFVW), reforestation trust (RTF), and Knutson-Vandenberg (K-V) funds. Funds provided through partnership opportunities with American Forests, Batesville Casket Co, National Association of Garden Clubs-Penny Pines Program and donations to the Plant-A-Tree Program contributed to reforest an additional 18 thousand acres, bringing the grand total for FY 2004 to 152,655 acres. However, overall there was a slight decrease on reforestation acres from FY 2003 163,495 acres totals.

The distribution of these acres by the type of reforestation treatment is shown in Tables 9, 10, 11, and 11A in Appendix A. Included in the reforestation accomplishment total for FY 2004 are 45,912 acres of natural regeneration without site preparation. Reforestation accomplishment by K-V funding occurred on a total of 79,863 acres, representing a slight decrease from FY 2003 (83,149 acres). National trends in reforestation accomplishment from FY 1991 through FY 2004 are shown in Figure 3, illustrating the steady decline in reforestation accomplishment since FY 1991.

Additional information concerning reforestation accomplishments in FY 2004 is presented in Table 12 (Site Preparation for Planting or Seeding), Table 18 (Animal Control for Reforestation), and Table 21 (Certification of Reforestation treatments), as well as summary of harvest acres by cutting method in Table 20 in Appendix A.

#### **FY 2004 Reforestation Needs and Trends**

Current reforestation needs are estimated at 901,346 acres, representing about 6 years of reforestation work at present levels of accomplishment. It generally takes 2-3 years of lead time to prepare the site, grow seedlings adapted to specific sites, and make arrangements for getting the trees planted using either contract or force-account crews. Nationally, the net increase in reforestation needs was about 3 thousand acres in FY 2004.

As was the case with the trends in reforestation needs observed in past few years, the slight increase in reforestation needs is primarily attributable to the wildfires occurring in the western U.S. during the past four summers. It is notable that the rate of reforestation treatment in FY 2004 was insufficient to keep pace with the increase in added reforestation needs for the fifth year in a row.

National trends in reforestation needs are depicted in relation to reforestation treatments and reforestation failures in Figure 2. Reforestation failure rates were declared on about 15 thousand acres nationally in FY 2004 representing about 10% of reforestation treatment needs acres.

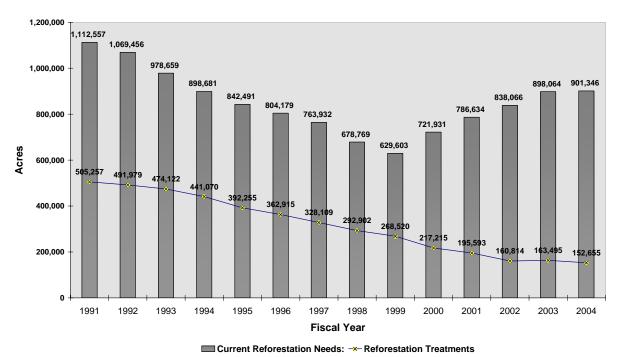


Figure 2 - National Trends in Reforestation Needs

#### **Plantation Survival**

The results of the plantation surveys made following the 2003 growing season are summarized in Table 22 in Appendix A. First-year survival nationally averaged 69%, an increase from the average posted in last year's report (63%). The national average for third-year survival was reported at 60%, the same average for third-year survival reported in the FY 2003 report.

Despite the decline between first and third year survival, reforestation success on most sites is sufficient to satisfy management objectives and to certify these areas as satisfactorily stocked. Where survival levels are not sufficient to meet management objectives, a failure is declared and the area is programmed for re-treatment. The decline in third-year survival as compared with first year figures can be attributed to animal damage, and dryer than normal conditions prevailing over much of the west.

#### SUMMARY OF THE FY 2004 TIMBER STAND IMPROVEMENT (TSI) PROGRAM

#### **FY 2004 TSI Accomplishment and Program Trends**

About 252 thousand acres of National Forest System lands received TSI treatments during FY 2004 from all funding sources. This represents a decrease of about -3% from FY 2003 attainment levels (258 thousand acres).

As in the past three years, TSI treatments reflect some work done under the National Fire Plan. The distribution of these acres by the type of TSI treatment is shown in Tables 13, 14, 15, and 16 in Appendix A. National trends in TSI accomplishment for the past 14 years are shown in Figure 3.

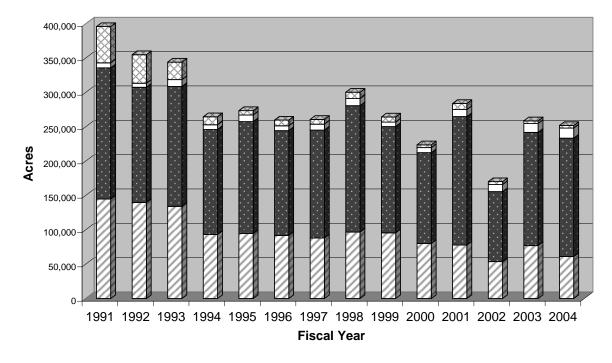


Figure 3 - National Trends in TSI Accomplishment

☑ Release/Weed ■ Precommercial Thin □ Pruning ☑ Fertilization

The slight decrease in TSI activities may reflects the need to allocate resources toward fire recovery efforts. TSI accomplishment will continue to reflect work accomplished under the National Fire Plan.

Additional information on TSI accomplishments is provided on Table 17 (Prescribed Burning to Control Understory Species), Table 19 (Animal Control for TSI), and Table 21 (Certification of TSI Treatments) in Appendix A.

#### FY 2004 TSI Needs and Trends

Current TSI needs are estimated at about 2.17 million acres nationally, a slight decrease of about -6 thousand acres over the TSI needs level reported in FY 2003 (2.18 million acres). FY 2004 TSI needs represent about 9 years of work at FY 2004 levels of accomplishment. National trends in TSI needs and accomplishments from 1991 through 2004 are shown in Figure 4.

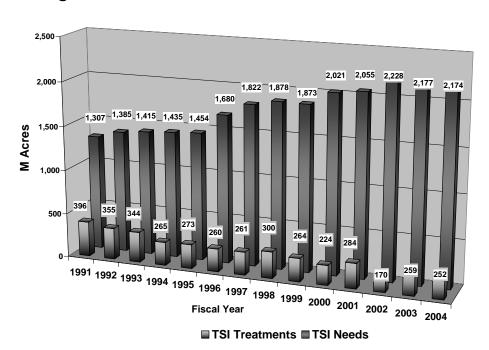


Figure 4 - National Trends in TSI Needs and Treatments

TABLE 1

FOREST SERVICE NURSERY PRODUCTION -- BAREROOT

(Thousand trees)

			Sold	То		
		Nursery	Other	Other		Total
Region	FS Nursery	Region	Regions	Agencies 1/	Surplus 2/	Production
1	Coeur d' Alene	3,191	479	1	36	3,707
2	Bessey	76	0	1,650	146	1,872
3	NONE	0	0	0	0	0
4	Lucky Peak	460	8	283	150	901
5	Placerville	1,823	14	521	539	2,897
6	J.H. Stone	3,190	207	1,356	741	5,494
8	NONE	0	0	0	0	0
9	Toumey	3,684	0	454	500	4,638
10	NONE	0	0	0	0	0
ALL		12,424	708	4,265	2,112	19,509

<sup>1/</sup> Other Agencies column includes GSA sales and trees donated to other agencies.

<sup>2/</sup> Includes amounts donated, sold, and destroyed.

TABLE 1A

FOREST SERVICE NURSERY PRODUCTION (THOUSAND TREES)--INVENTORY

		Nursery Region Other Region			Other Agency			Total					
Region	FS Nursery	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07	FY 05	FY 06	FY 07
1	Coeur d' Alene	2,827	1,824	81	98	107	0	0	0	0	2,925	1,931	81
2	Bessey	8	20	0	0	0	0	1,389	370	0	1,397	390	0
3	NONE	0	0	0	0	0	0	0	0	0	0	0	0
4	Lucky Peak	286	49	0	0	19	0	360	0	0	646	68	0
5	Placerville	2,487	355	0	3	0	0	52	25	0	2,542	380	0
6	J. Herbert Stone	7,291	3,150	0	326	0	0	1,385	437	0	9,002	3,587	0
8	NONE	0	0	0	0	0	0	0	0	0	0	0	0
9	Toumey	4,550	4,525	2,826	0	0	0	0	0	0	4,550	4,525	2,826
10	NONE	0	0	0	0	0	0	0	0	0	0	0	0
ALL		17,449	9,923	2,907	427	126	0	3,186	832	0	21,062	10,881	2,907

<sup>1/</sup> State and private nurseries

TABLE 1B

FOREST SERVICE NURSERY PRODUCTION (THOUSAND TREES)--SOWING

		Nι	ırsery Re	egion	Other Region			Other Agency			Total		
Region	FS Nursery	FY 06	FY 07	FY 08	FY 06	FY 07	FY 08	FY 06	FY 07	FY 08	FY 06	FY 07	FY 08
1	Coeur d' Alene	0	1,600	3,000	0	0	150	0	50	0	0	1,650	3,150
2	Bessey	20	15	0	0	0	0	2,999	3,000	3,025	3,019	3,015	3,025
3	NONE	0	0	0	0	0	0	0	0	0	0	0	0
4	Lucky Peak	0	500	500	0	0	0	250	250	250	250	750	750
5	Placerville	417	47	0	0	0	0	0	130	0	417	177	0
6	J. Herbert Stone	1,995	2,525	229	293	50	0	1,453	358	0	3,741	2,933	229
8	NONE	0	0	0	0	0	0	0	0	0	0	0	0
	Other 1/	0	0	0	0	0	0	0	0	0	0	0	0
	Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
9	Toumey	2,070	1,500	1,000	0	0	0	300	150	150	2,370	1,650	1,150
10	NONE	0	0	0	0	0	0	0	0	0	0	0	0
ALL		4,502	6,187	4,729	293	50	150	5,002	3,938	3,425	9,797	10,175	8,304

<sup>1/</sup> State and private nurseries

TABLE 2

CONTAINERIZED NURSERY STOCK PRODUCTION

(Thousand plantable trees)

	Disposition									
			Plantable	National		Surplus		Anticipated		
			Seedlings	or		Held Sowing Next				
Region	Facility	Ordered	Produced	Forests	Sold I	Destroyed	Over	Fiscal Year		
1	Coeur d'Alene	2,871	3,005	2,922	0	0	21	0		
2	Bessey	660	247	243	14	42	130	640		
3	NONE	0	0	0	0	0	0	0		
4	Lucky Peak	736	736	640	736	0	0	0		
5	Placerville	850	745	642	64	39	0	80		
_	Chico	367	367	369	0	0	0	10		
	Subtotal	1,217	1,112	1,011	64	39	0	90		
6	NONE	0	0	0	0	0	0	0		
8	NONE	0	0	0	0	0	0	0		
9	Toumey	474	457	407	50	0	0	0		
10	NONE	0	0	0	0	0	0	0		
ALL		5,958	5,557	5,223	864	81	151	730		

TABLE 3
FOREST SERVICE SEED EXTRACTORY PRODUCTION

(Pounds of clean seed)

		•								
		Number	Level 5	Level 4	Level	3	Level 2	Level 1		
		of	Selective	Seed	Select		Seed	Seed	1	Grand
Region	Extractory	Species	Breeding	Orchard	Trees	SPA	Stand	Zone	Other	Total
1	Coeur d' Alene	3	289	0	0	82	1,214	521	0	2,106
2	Bessey	6	0	0	0	0	0	1,199	0	1,199
3	NONE	0	0	0	0	0	0	0	0	0
4	Lucky Peak	47	0	0	0	0	0	245	0	245
5	Placerville	7	0	0	338	0	354	66	0	758
6	Bend Pine	169	0	153	44	5,629	178	1,944	0	7,948
	Dorena	6	9	110	66	0	0	0	0	185
	Subtotal, R-6	175	9	263	110	5,629	178	1,944	0	8,133
8	Region 8 1/	0	0	4,577	0	0	0	1,887	0	6,464
9	Oconto River SO	0	0	0	0	0	0	0	0	0
	J.W. Toumey	20	0	40	0	1	749	0	0	790
	Subtotal, R-8	20	0	40	0	1	749	0	0	790
10	Heintzleman	0	0	0	0	0	0	0	0	0
ALL	Percent of Total	258	298 1.5	4,880 24.8	448 2.3	5,712 29.0	2,495 12.7	5,862 29.8	0 0.0	19,695 100.0

<sup>1/</sup> Seed Zone collection of 1,897 pounds includes 1,468 lbs. of open pollinated acorns from native oak species and 429 lbs. of sand pine seed.

TABLE 4

OTHER PLANTING STOCK AND SEED ACQUISITION

-	Planting Stock (Thousand Trees)						Clean Sec	ed (Pounds)	)	_
_	Service	Other		Commercial		Service	Other		Commercial	
Region	Contract	Regions	Agencies	Sources	Total	Contract	Regions	Agencies	Sources	Total
1	0	38	0	0	38	0	0	0	0	0
2	0	0	0	0	0	0	0	0	2,948	2,948
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	530	159	1	0	690	0	0	0	0	0
6	2,048	20	0	299	2,367	63	0	0	0	63
8 1/	5,702	0	0	0	5,702	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
ALL	8,280	217	1	299	8,797	63	0	0	2,948	3,011

<sup>1/</sup> Service contract includes 250M shortleaf pine seedlings lost due to flooding. Clean seed procurement includes 698 lbs. of native oak acorns adquired from commercial sources.

TABLE 5

SEED PRODUCTION AREA STATUS

Region	Number Of Areas	Acres Current Year	Areas Removed	Total Established To Date
1	61	0	27	1,643
2	0	0	0	0
3	3	0	0	40
4	12	0	0	96
5	4	0	0	80
6	49	0	0	364
8	0	0	0	0
9	30	0	0	30
10	0	0	0	0
ALL	159	0	27	2,253

TABLE 6

# SEED ORCHARD (SO) AND/OR CLONE-BANK (CB) STATUS

THIS TABLE IS NO LONGER PART OF THIS REPORT.
INFORMATION IS AVAILABLE FROM EACH FOREST SERVICE REGION UPON REQUEST.

TABLE 7

National Forest Planted with Known Seed Source

					Seed					
		Selective			Production	Seed			Vegetative	
Region	Species	Breeding	Seed Orchard	Select Tree	Area	Stand	Seed Zone	Other	Material	Total
1	THPL	0	0	0	0	5	0	0	0	5
	PSME	0	0	80	0	1,401	611	0	0	2,092
	LAOC	0	0	0	0	2,923	553	0	0	3,476
	PICO	0	0	0	0	383	345	0	0	728
	PIPO	0	0	0	87	4,377	902	0	0	5,366
	PIEN	0	0	0	0	211	487	0	0	698
	PIMO3	0	2,535	0	0	0	0	0	0	2,535
	Subtotal, R-1	0	2,535	80	87	9,300	2,898	0	0	14,900
2	PICO	0	0	0	0	0	298	0	0	298
	PIEN	0	0	0	0	4	270	0	0	274
	PIPO	0	0	3	0	65	884	0	0	952
	PSME	0	0	0	0	0	46	0	0	46
	Subtotal, R-2	0	0	3	0	69	1,498	0	0	1,570
3	PIEN	0	0	0	0	0	36	0	0	36
	PIPO	0	0	0	0	0	673	468	0	1,141
	PSME	0	0	0	0	0	57	0	0	57
	Subtotal, R-3	0	0	0	0	0	730	468	0	1,234

TABLE 7

National Forest Planted with Known Seed Source

					Seed					
		Selective			Production	Seed			Vegetative	
Region	Species	Breeding	Seed Orchard	Select Tree	Area	Stand	Seed Zone	Other	Material	Total
4	LAOC	0	0	0	0	0	80	0	0	80
	PICO	0	0	0	0	200	378	0	0	578
	PIEN	0	0	0	0	0	346	0	0	346
	PIJE	0	0	0	0	0	130	0	0	130
	PIPO	0	0	0	0	0	881	0	0	881
	PSME	0	0	0	0	0	805	0	0	805
	Subtotal, R-4	0	0	0	0	200	2,620	0	0	2,820
5	ABCO	5	38	10	0	0	0	0	0	53
	ABMA2	40	22	100	1	0	20	0	0	183
	LIDE3	0	1	22	0	0	1	0	0	24
	PICO2	0	0	0	0	0	45	0	0	45
	PIJE	44	1,054	328	0	0	357	0	0	1,783
	PILA	130	232	122	125	0	90	9	0	708
	PIPO	0	850	3,175	0	570	1,861	229	0	6,685
	PIAT2	0	26	0	0	0	0	0	0	26
	PSMA2S	0	0	0	0	0	54	0	0	54
	PSME	0	236	217	0	0	460	0	0	913
	SEGI2	0	3	1	0	0	17	0	0	21
	Subtotal, R-5	219	2,462	3,975	126	570	2,905	238	0	10,495

TABLE 7

National Forest Planted with Known Seed Source

					Seed					
		Selective			Production	Seed			egetative	
Region	Species	Breeding	Seed Orchard	Select Tree	Area	Stand	Seed Zone	Other M	aterial	Total
6	Softwood	0	0	0	0	0	0	8	0	8
	PICO	0	0	49	2	0	174	0	0	225
	PILA	0	0	16	386	58	206	0	0	666
	PIMO3	16	38	96	0	32	127	0	0	309
	PIPO	0	6	5,860	98	842	2,028	0	0	8,834
	ABCO	0	0	0	0	0	135	0	0	135
	ABGR	0	0	0	10	0	0	0	0	10
	ABLA	0	0	0	0	0	2	0	0	2
	PIJE	0	0	0	0	0	35	0	0	35
	PSME	0	13	203	2,804	213	3,602	0	0	6,835
	PSMEE	247	0	13	0	0	128	0	0	388
	PSMEW	0	0	2	0	0	0	0	0	2
	ABMAS	0	0	0	0	0	73	0	0	73
	ABPR	0	0	36	53	2	44	0	0	135
	THPL	0	0	0	41	0	79	0	0	120
	TSHE	0	62	0	36	0	47	0	0	145
	TSME	0	0	0	3	0	0	0	0	3
	ALRU2	0	0	0	0	0	1	0	0	1
	Hardwood	0	0	0	0	33	3	0	0	36
	ACRU	0	0	12	0	0	0	0	0	12
	CHLA	0	0	0	19	35	21	0	0	75
	LAOCW	0	0	198	0	224	332	0	0	754

TABLE 7

National Forest Planted with Known Seed Source

		Coloctivo			Seed	Cood			Vagatativa	
Pogion	Species	Selective	Seed Orchard	Soloct Trop	Production Area	Seed	Seed Zone	Othor	Vegetative Material	Total
Region	Species	Dieeuing	Seed Orchard	Select free	Alta	Stariu	Seed Zone	Other	Material	Total
6 (cont.)	POTR	0	0	0	0	0	0	0	9	9
	LIDE	0	0	0	0	0	153	0	0	153
	PIBR	0	0	0	0	0	40	0	0	40
	PIEN	0	0	16	12	21	54	0	0	103
	PISI	0	0	30	0	0	13	0	0	43
	Subtotal, R-6	263	119	6,531	3,464	1,460	7,297	8	9	19,151
8	PIEC2	0	5,470	0	0	0	5	362	0	5,837
	PIEL	0	10	0	0	0	0	34	0	44
	PIPA2	0	1,599	0	157	100	0	442	0	2,298
	PIRI	0	89	0	0	0	0	0	0	89
	PITA	0	434	0	0	0	0	0	0	434
	TADI2	0	0	0	0	0	0	0	0	0
	QUERCUS (800)	0	0	0	0	0	0	0	0	0
	QUAL	0	0	39	0	0	0	0	0	39
	QUFA	0	16	0	0	0	0	8	0	24
	QURU	0	20	5	0	0	0	15	0	40
	Subtotal, R-8	0	7,638	44	157	100	5	861	0	8,805

TABLE 7

National Forest Planted with Known Seed Source

					Seed					
		Selective			Production	Seed			Vegetative	
Region	Species	Breeding	Seed Orchard	Select Tree	Area	Stand	Seed Zone	Other	Material	Total
9	PIGL	0	165	0	0	26	13	0	0	204
	PIBA2	0	56	492	0	1,351	130	161	0	2,190
	PIEC2	0	600	0	0	0	0	0	0	600
	PIRE	87	181	7	0	688	384	285	0	1,632
	PIST	286	3,148	88	0	115	0	0	0	3,637
	THOC2	0	0	0	0	0	2	0	0	2
	TSCA	0	7	0	0	40	5	0	0	52
	BEAL2	0	0	0	0	2	0	0	0	2
	QUAL	0	0	0	0	0	57	0	0	57
	QURU	0	0	0	0	11	83	11	0	105
	QUVE	0	0	0	0	0	10	0	0	10
	Subtotal, R-9	373	4,157	587	0	2,233	684	457	0	8,491
	PICEA	0	0	0	0	0	285	0	0	285
10	PISI	0	0	0	0	0	25	0	0	25
	Subtotal, R-10	0	0	0	0	0	310	0	0	310
ALL		855	16,911	11,220	3,834	13,932	18,947	2,032	9	67,776
	Percent of Total	1.3	25.0	16.6	5.7	20.6	28.0	3.0	0.0	100.0

TABLE 8

SILVICULTURAL EXAMINATIONS AND PRESCRIPTIONS

		ACRES	
Region	Silvicultural Exam	Diagnosis	Prescription
	Act. 310-319	Act. 320-329	Act. 330-339
1	129,080	0	59,680
2	140,351	21	0
3	25,775	14,528	11,184
4	41,741	7,432	8,981
5	1,260	436	884
6	42,655	54,985	106,574
8	63,221	0	200,106
9	1,202	0	147,605
10	20,594	0	1,664
	·		
ALL	465,879	77,402	536,678

TABLE 9

#### **PLANTING**

# Activity Codes 430-449 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
					_
1	5,092	6,710	0	3,098	14,900
2	1,389	181	0	0	1,570
3	810	182	0	242	1,234
4	1,636	596	0	588	2,820
5	2,549	3,413	0	4,533	10,495
6	15,552	2,815	0	784	19,151
8	2,101	4,298	0	2,406	8,805
9	4,484	3,614	0	393	8,491
10	292	18	0	0	310
ALL	33,905	21,827	0	12,044	67,776

TABLE 10

#### **SEEDING**

# Activity Codes 410-429 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	0	0	0	0	0
2	0	23	0	0	23
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
8	0	1,947	0	715	2,662
9	590	555	0	0	1,145
10	400	0	0	0	400
ALL	990	2,525	0	715	4,230

TABLE 11

SITE PREPARATION FOR NATURAL REGENERATION

Activity Code 490-499 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	169	1,297	0	1,245	2,711
2	0	888	0	0	888
3	0	239	0	0	239
4	100	869	0	0	969
5	0	535	0	0	535
6	2,039	2,904	0	0	4,943
8	1,365	7,912	0	1,796	11,073
9	5,304	8,075	0	0	13,379
10	0	0	0	0	0
ALL	8,977	22,719	0	3,041	34,737

TABLE 11A

NATURAL REGENERATION WITHOUT SITE PREPARATION

### Activity Code 382 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	429	631	0	876	1,936
2	4,283	8,286	0	0	12,569
3	4	34	0	0	38
4	226	6,354	0	463	7,043
5	39	0	0	22	61
6	3,668	221	0	220	4,109
8	304	25	0	575	904
9	1,912	13,461	0	0	15,373
10	99	3,780	0	0	3,879
ALL	10,964	32,792	0	2,156	45,912

TABLE 12

SITE PREPARATION FOR PLANTING OR SEEDING

Activity Codes 470-489 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	1,171	2,970	0	2,241	6,382
2	22	23	0	0	45
3	747	0	0	0	747
4	196	48	18	0	262
5	144	2,151	92	232	2,619
6	7,582	3,077	294	237	11,190
8	1,954	4,663	0	3,882	10,499
9	2,157	1,449	0	0	3,606
10	0	0	0	0	0
					,
ALL	13,973	14,381	404	6,592	35,350

TABLE 13

RELEASE AND WEEDING

# Activity Codes 510-519 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
					_
1	628	156	0	521	1,305
2	0	760	0	29	789
3	0	169	0	0	169
4	558	1,095	0	458	2,111
5	5,326	7,191	0	7,019	19,536
6	1,437	2,973	0	3,540	7,950
8	7,557	5,653	0	5,421	18,631
9	8,089	2,551	0	0	10,640
10	0	0	0	0	0
ALL	23,595	20,548	0	16,988	61,131

TABLE 14

#### PRECOMMERCIAL THINNING

Activity Codes 520-529 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
					_
1	5,183	121	0	4,269	9,573
2	1,845	3,228	0	3,498	8,571
3	3,131	1,060	0	18,965	23,156
4	7,185	1,009	0	3,677	11,871
5	11,031	13,051	0	7,261	31,343
6	10,401	11,709	204	36,741	59,055
8	4,696	2,119	0	12,526	19,341
9	1,626	944	0	0	2,570
10	4,263	54	0	2,505	6,822
ALL	49,361	33,295	204	89,442	172,302

TABLE 15

# **PRUNING**

# Activity Codes 530-539 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	166	0	0	4,395	4,561
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	212	377	0	2,617	3,206
6	917	2,348	0	2,646	5,911
8	0	0	0	0	0
9	591	344	0	0	935
10	0	0	0	0	0
ALL	1,886	3,069	0	9,658	14,613

TABLE 16

FERTILIZING OF ESTABLISHED STANDS

Activity Codes 550-559 ACRES

Region	NFVW/RTF	CWKV	BD	Other	Total
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	3,808	0	0	3,808
8	87	0	0	0	87
9	0	0	0	0	0
10	0	0	0	0	0
ALL	87	3,808	0	0	3,895

TABLE 17

PRESCRIBED BURNING TO CONTROL UNDERSTORY SPECIES

Activity Code 541
ACRES

Region	NFVW/RTF	CWKV	BD	Other	Total
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	35	0	0	35
8	2440	3,575	0	455	6,470
9	136	12	0	0	148
10	0	0	0	0	0
•					_
ALL	2,576	3,622	0	455	6,653

TABLE 18

ANIMAL CONTROL FOR REFORESTATION

#### Activity Codes 460-469 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	3,969	1,540	0	2,251	7,760
2	0	0	0	0	0
3	237	0	0	0	237
4	1,291	2,382	0	1,025	4,698
5	1,200	2,696	0	58	3,954
6	12,286	4,729	0	0	17,015
8	0	33	0	0	33
9	268	198	0	0	466
10	0	0	0	0	0
ALL	19,251	11,578	0	3,334	34,163

TABLE 19

ANIMAL CONTROL FOR TIMBER STAND IMPROVEMENT

Activity Codes 560-569 ACRES

Region	NFVW/RTF	K-V	BD	Other	Total
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	136	136
6	0	0	0	0	0
8	0	0	0	0	0
9	1,284	789	0	0	2,073
10	0	0	0	0	0
ALL	1,284	789	0	136	2,209

TABLE 20

REGENERATION AND INTERMEDIATE HARVEST ACRES

					Selection In	nprovement		Sanitation		
	Clearcut	Prep cut	Seed cut R	emoval cut	cut	cut	Thinning	cut	Special cut	Total
Region	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
1	1,744	446	5,496	888	888	5,683	3,901	2,991	53	22,090
2	1,321	1,562	5,082	3,136	927	100	7,712	4,804	549	25,193
3	0	0	0	0	346	289	2,499	1,450	0	4,584
4	492	73	619	45	826	44	4,515	1,414	26	8,054
5	20	0	13	0	1,814	0	29,435	6,243	3,565	41,090
6	2,315	32	4,887	3,643	3,709	2,731	26,475	24,465	160	68,417
8	2,291	1,145	2,694	1,532	1,386	338	33,495	3,261	339	46,481
9	9,214	324	4,822	1,547	7,814	3,275	13,220	5,681	138	46,035
10	1,499	0	0	0	42	0	0	231	0	1,772
ALL	18,896	3,582	23,613	10,791	17,752	12,460	121,252	50,540	4,830	263,716

TABLE 20

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	<b>Total Acres</b>
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Bvrhead/Drlodge	0	0	0	0	0	61	99	0	0	160
Bitterroot	21	0	97	0	42	0	189	23	0	372
Idaho Panhandle	96	131	1,486	99	121	21	1,192	445	0	3,591
Clearwater	137	0	612	152	0	37	304	5	8	1,255
Custer	1	0	83	0	4	0	155	0	0	243
Flathead	337	0	987	0	0	295	367	1,686	0	3,672
Gallatin	30	0	0	0	0	0	0	59	1	90
Helena	442	0	164	78	0	0	30	167	0	881
Kootenai	480	41	1,214	257	118	2,594	717	237	0	5,658
Lewis and Clark	24	0	38	0	53	0	0	0	0	115
Lolo	0	238	561	212	137	2,099	282	285	6	3,820
Nez Perce	176	36	254	90	413	576	566	84	38	2,233
REGIONAL TOTAL	1,744	446	5,496	888	888	5,683	3,901	2,991	53	22,090

TABLE 20

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	Total Acres
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Bighorn	0	0	0	3	0	0	0	0	0	3
Black Hills	396	881	4,906	3,097	345	0	7,446	194	530	17,795
GM-Unc. Gunn	177	255	0	0	250	0	43	1,754	0	2,479
Med. Bow/Routt	91	90	55	36	0	0	88	94	0	454
Rio Grande	0	0	0	0	0	0	0	1,858	0	1,858
Arapaho/Roosevelt	468	0	0	0	0	0	98	0	0	566
Pike/San Isabel	0	0	0	0	0	0	0	5	0	5
San Juan	37	0	0	0	332	100	10	194	19	692
Shoshone	72	0	121	0	0	0	0	5	0	198
White River	80	336	0	0	0	0	27	700	0	1,143
REGION TOTAL	1,321	1,562	5,082	3,136	927	100	7,712	4,804	549	25,193

TABLE 20

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	Total Acres
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Apache-Sitgreaves	0	0	0	0	0	289	0	0	0	289
Carson	0	0	0	0	0	0	0	0	0	0
Cibola	0	0	0	0	0	0	111	40	0	151
Coconino	0	0	0	0	0	0	1,211	0	0	1211
Coronado	0	0	0	0	0	0	0	18	0	18
Gila	0	0	0	0	0	0	0	0	0	0
Kaibab	0	0	0	0	0	0	692	160	0	852
Lincoln	0	0	0	0	276	0	186	0	0	462
Prescott	0	0	0	0	0	0	0	505	0	505
Santa Fe	0	0	0	0	70	0	299	727	0	1096
REGIONAL TOTAL	0	0	0	0	346	289	2,499	1,450	0	4,584

TABLE 20

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut R	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	<b>Total Acres</b>
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Ashley	15	0	0	0	318	0	0	0	0	333
Boise	17	0	525	0	277	0	4,422	220	0	5,461
Bridger-Teton	0	40	0	0	0	0	0	68	26	134
Dixie	0	0	0	0	0	0	0	144	0	144
Fishlake	14	0	0	0	68	0	0	32	0	114
Manti LaSal	0	0	0	0	0	0	0	0	0	0
Payette	135	33	0	0	0	0	65	183	0	416
Salmon-Challis	31	0	50	0	0	0	0	16	0	97
Sawtooth	19	0	0	0	11	0	28	238	0	296
Caribou/Targhee	89	0	44	0	0	44	0	350	0	527
Humboldt-Toiyabe	0	0	0	0	0	0	0	46	0	46
Uinta	58	0	0	0	152	0	0	117	0	327
Wasatch-Cache	114	0	0	45	0	0	0	0	0	159
REGIONAL TOTAL	492	73	619	45	826	44	4,515	1,414	26	8,054

TABLE 20

						Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	•	Total Acres
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Angeles	0	0	0	0	0	0	0	0	0	0
Cleveland	0	0	0	0	0	0	0	0	0	0
Eldorado	0	0	0	0	0	0	3,442	4	0	3,446
Inyo	0	0	0	0	0	0	0	0	0	0
Klamath	0	0	0	0	0	0	2,050	0	0	2,050
Lassen	20	0	0	0	257	0	1,441	1,805	3,478	7,001
Six Rivers	0	0	0	0	0	0	115	396	5	516
Los Padres	0	0	0	0	0	0	0	0	0	0
Mendocino	0	0	0	0	0	0	0	0	0	0
Modoc	0	0	0	0	0	0	0	0	0	0
Plumas	0	0	0	0	0	0	273	2,756	0	3,029
San Bernardino	0	0	0	0	0	0	0	0	0	0
Sequoia	0	0	13	0	0	0	243	119	0	375
Shasta-Trinity	0	0	0	0	29	0	14,815	222	59	15,125
Sierra	0	0	0	0	0	0	13	0	0	13
Stanislaus	0	0	0	0	1,528	0	1,415	0	0	2,943
Tahoe	0	0	0	0	0	0	4,751	240	0	4,991
Lake Tahoe Basin	0	0	0	0	0	0	877	701	23	1,601
REGIONAL TOTAL	20	0	13	0	1,814	0	29,435	6,243	3,565	41,090

TABLE 20

						Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re		Cut	Cut	Thinning	Cut	•	
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Deschutes	1,528	0	956	885	481	0	4,321	1,437	0	9,608
Fremont	0	0	0	0	134	858	708	7,826	0	9,526
Gifford Pinchot	0	32	0	127	0	0	473	0	0	632
Malheur	0	0	0	0	936	0	468	5,630	0	7,034
Mtn. Baker-Snoqualmie	0	0	0	0	0	0	0	0	0	0
Mt. Hood	0	0	272	0	0	0	587	0	31	890
Ochoco	0	0	0	0	765	633	777	0	0	2,175
Okanogan	643	0	225	0	22	0	3,360	104	0	4,354
Olympic	0	0	0	0	0	0	459	0	0	459
Rogue River	0	0	61	0	0	0	225	0	0	286
Siskiyou	25	0	0	0	0	0	0	4,658	0	4,683
Siuslaw	0	0	0	0	0	0	1,302	0	0	1,302
Umatilla	0	0	149	53	539	771	177	810	21	2,520
Umpqua	0	0	0	0	0	0	196	8	0	204
Wallowa-Whitman	0	0	0	37	0	469	5,449	1,380	0	7,335
Okanogan/ Wenatchee	0	0	2,564	0	0	0	299	0	108	2,971
Willamette	119	0	0	313	438	0	1,683	547	0	3,100
Winema	0	0	0	2,209	0	0	3,955	917	0	7,081
Colville	0	0	660	19	394	0	2,036	1,148	0	4,257
REGIONAL TOTAL	2,315	32	4,887	3,643	3,709	2,731	26,475	24,465	160	68,417

TABLE 20

## REGION 8

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	<b>Total Acres</b>
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
NFS in Alabama	76	0	0	0	0	0	28	73	0	177
Daniel Boone	0	0	0	0	0	0	77	0	0	77
Chatt-Ocone	0	0	0	0	89	0	139	16	15	259
Cherokee	76	0	0	0	0	0	72	0	0	148
NFS in Florida	647	0	0	0	0	338	242	992	0	2,219
Kisatchie	370	0	65	0	534	0	3,342	22	293	4,626
NFS in Mississippi	1,085	0	567	676	0	0	6,664	15	29	9,036
George Washington/Jeff	6	752	0	0	0	0	222	44	0	1,024
Ouachita	0	0	0	0	0	0	11,060	0	0	11,060
Ozark-St. Francis	22	0	1,386	587	654	0	4,400	1,766	0	8,815
NFS in North Carolina	9	393	123	18	109	0	909	208	2	1,771
Caribbean	0	0	0	0	0	0	0	0	0	0
Francis-Marion/Sumter	0	0	119	251	0	0	3,534	125	0	4,029
NFS in Texas	0	0	434	0	0	0	2,806	0	0	3,240
REGIONAL TOTAL	2,291	1,145	2,694	1,532	1,386	338	33,495	3,261	339	46,481

TABLE 20

					Selection	Improvement		Sanitation		
	Clearcut	Prep cut	Seed cut Re	emoval cut	Cut	Cut	Thinning	Cut	Special Cut	<b>Total Acres</b>
National Forest	110-119	120-129	130-139	140-149	150-159	210-219	220-229	230-239	240-249	110-249
Chippewa	1,189	28	108	65	9	49	1,591	416	0	3,455
Huron-Manistee	2,047	57	70	80	0	0	2,057	0	0	4,311
Mark Twain	430	25	3,468	281	3,149	627	1,373	2,634	118	12,105
Ottawa	1,081	0	0	40	2,314	681	643	1,139	0	5,898
Shawnee	0	0	0	0	0	0	0	0	0	0
Superior	2,617	0	27	41	0	65	1,169	0	0	3,919
Hiawatha	670	61	373	174	381	43	2,591	0	0	4,293
Hoosier	0	0	0	0	0	0	0	4	0	4
Chequamegon/Nicolet	936	138	144	150	824	1,810	3,365	492	0	7,859
Wayne	0				25	0	0	0	0	25
Allegheny	15	0	288	581	90	0	68	642	0	1,684
Green Mountain	0	0	0	104	0	0	0	0	0	104
Monongahela	18	0	314	0	34	0	144	0	20	530
White Mountain	211	15	30	31	988	0	219	354	0	1,848
REGIONAL TOTAL	9,214	324	4,822	1,547	7,814	3,275	13,220	5,681	138	46,035

TABLE 20

### **REGENERATION AND INTERMEDIATE HARVEST ACRES**REGION 10

Selection Improvement Sanitation Cut Special Cut Total Acres Clearcut Prep cut Seed cut Removal cut Cut Cut Thinning National Forest 110-119 120-129 130-139 140-149 150-159 210-219 220-229 230-239 240-249 110-249 Chugach 0 0 0 0 0 0 0 0 0 Tongass 1499 42 231 0 0 0 0 0 0 1,772 REGIONAL TOTAL 1499 0 0 0 42 0 0 231 0 1,772

TABLE 21

CERTIFICATION OF REFORESTATION AND TIMBER STAND IMPROVEMENT ACREAGES

	Reforestation						Timl	ber Stand Im	provement		
			Natural	Regen W/O							
			Regen W/Site	Site	Total			Pre. Comm.			
Region	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
1	16,901	162	2,171	1,900	21,134	0	1,305	9,573	0	4,561	15,439
2	437	41	1,532	12,569	14,579	0	0	2,065	0	0	2,065
3	100	0	138	38	276	0	0	1,149	0	0	1,149
4	1,936	0	1,201	7,043	10,180	0	529	8,872	0	50	9,451
5	2,737	0	0	61	2,798	0	18,035	29,589	0	975	48,599
6	8,391	0	2,114	4,109	14,614	11	910	31,278	1,289	2,014	35,502
8	8,411	727	11,338	904	21,380	0	17,020	13,625	0	0	30,645
9	6,347	1,059	15,697	15,373	38,476	0	5,736	2,453	0	452	8,641
10	53	0	0	3,879	3,932	0	0	3,525	0	0	3,525
ALL	45,313	1,989	34,191	45,876	127,369	11	43,535	102,129	1,289	8,052	155,016

TABLE 22

PLANTATION SURVIVAL CHECKS

Survival checks made after 2003 Growing Season

		First Year Survival		Third Year Survival	
	SPECIES	Acres	Survival	Acres	Survival
REGION	(Species Code)	Sampled	Percent	Sampled	Percent
•					_
1	Douglas-fir (PSME)	696	77%	475	76%
	Englemann spruce (PIEN)	392	91%	182	75%
	Lodgepole pine (PICO)	400	82%	196	82%
	Ponderosa pine (PIPO)	1,244	71%	920	66%
	Western larch (LAOC)	986	68%	762	66%
	Western white pine (PIMO3)	657	82%	521	74%
	Subtotal, R-1	4,375	76%	3,056	70%
2	Lodgepole pine (PICO)	210	84%	189	63%
	Englemann spruce (PIEN)	84	87%	92	67%
	Ponderosa pine (PIPO)	394	69%	168	22%
	Douglas-fir (PSME)	23	79%	0	0%
	Subtotal, R-2	711	38%	449	40%
3	Ponderosa pine (PIPO)	155	58%	38	38%
	Subtotal, R-3	155	58%	38	38%
4	Douglas-fir (PSME)	943	50%	771	60%
	Englemann spruce (PIEN)	557	86%	1,208	66%
	Lodgepole pine (PICO)	1,040	83%	675	61%
	Whitebark pine (PIAL)	0	0%	10	70%
	Ponderosa pine (PIPO)	1,937	56%	3,442	66%
	Western larch (LAOC)	38	98%	138	58%
	Subtotal, R-4	4,515	65%	6,244	64%

TABLE 22

PLANTATION SURVIVAL CHECKS

Survival checks made after 2003 Growing Season

		First Year Survival		Third Year Survival	
	SPECIES	Acres	Survival	Acres	Survival
REGION	(Species Code)	Sampled	Percent	Sampled	Percent
5	Ponderosa pine (PIPO)	3,661	64%	9,020	69%
	Douglas-fir (PSME)	411	59%	3,641	56%
	Jeffrey pine (PIJE)	834	77%	3,422	62%
	Sugar pine (PILA)	428	48%	3,565	48%
	Incense-cedar (LIDE)	0	0%	2,833	31%
	White fir (ABCO)	73	35%	1,804	51%
	California red fir (ABMA)	82	41%	992	41%
	Giant sequoia (SEGI2)	0	0%	72	38%
	Lodgepole pine (PICO)	0	0%	87	70%
	Coulter pine (PICO3)	42	59%	0	0%
	Bigcone Douglas-fir (PSMA)	6	0%	0	0%
	Pinyon pine (PIMO2)	0	0%	5	0%
	Shasta red fir (ABMAS)	0	0%	52	32%
	Subtotal, R-5	5,537	64%	25,493	57%
6	Douglas-fir (PSME)	17	83%	17	89%
	Ponderosa pine (PIPO)	2,057	89%	2,010	73%
	Lodgepole pine (PICO)	0	0%	111	94%
	Western white pine (PIMO3)	85	0%	76	1%
	Spruces (all species)	19	51%	1	75%
	Western larch (LAOC)	605	50%	124	58%
	Subtotal, R-6	2,783	78%	2,339	71%

TABLE 22

PLANTATION SURVIVAL CHECKS

Survival checks made after 2003 Growing Season

		First Year Survival		Third Year Survival	
	SPECIES	Acres	Survival	Acres	Survival
REGION	(Species Code)	Sampled	Percent	Sampled	Percent
8	Shortleaf pine (PIEC2)	6,189	55%	2,705	34%
	Slash pine (PIEL)	67	74%	27	72%
	Longleaf pine (PIPA2)	3,429	59%	4,949	55%
	Pitch pine (PIRI)	0	0%	13	88%
	Eastern white pine (PIST)	53	86%	141	78%
	Loblolly pine (PITA)	959	77%	1,233	83%
	Black cherry (PRSE2)	0	0%	57	72%
	White oak (QUAL)	1	100%	13	57%
	Black oak (QUVE)	1	100%	0	0%
	Northern red oak (QURU)	211	70%	179	79%
	Subtotal, R-8	10,910	59%	9,317	54%
9	Pad pina (PIPE)	1,816	86%	1,669	74%
Э	Red pine (PIRE)	-	91%	·	83%
	Jack pine (PIBA2)	2,353		1,547	80%
	Eastern white pine (PIST)	2,186	74% 0%	2,419	80% 82%
	Shortleaf pine (PIEC2)	0		231	
	Virginia pine (PIVI2)	35	71%	22	55%
	White spruce (PIGL)	312	84%	376	75%
	Northern red oak (QURU)	353	83%	693	79%
	White oak (QUAL)	0	0%	42	71%
	Eastern hemlock (TSCA)	0	0%	117	72%
	Tamarack (LALA)	39	90%	20	100%
	Black cherry (PRSE2)	0	0%	45	28%
	Baldcypress (TAD12)	400	82%	808	72%
	Subtotal, R-9	7,494	84%	7,989	71%

TABLE 22

#### **PLANTATION SURVIVAL CHECKS**

Survival checks made after 2003 Growing Season

		First Year Survival		Third Year Survival	
	SPECIES	Acres	Survival	Acres	Survival
REGION	(Species Code)	Sampled	Percent	Sampled	Percent
					_
10	Alaska yellow cedar (CHNO)	32	59%	38	84%
	Sitka spruce (PISI)	45	99%	63	88%
	Western red cedar (THPL)	0	0%	37	91%
	White spruce (PIGL)	245	83%	199	87%
	Subtotal, R-10	322	83%	337	87%
ALL	National Total	36,802	69%	55,262	60%

Table 1 - Reforestation needs as of October 1, 2004 by State, national forest, and cubic foot productivity class 1/

State, Co	ommonwealth, or Territory 2/		Acres by site	productivity clas	ss 3/	Total	
	National Forest	0-49	50-84	85-119	120+	Acres	
Alabama				•			
	NFs in Alabama (subtotal)	245	2,028	5,249	93	7,615	
Alaska	, , ,	•	•	•	•	·	
	Chugach	0	1,621	0	0	1,621	
	Tongass	197	416	2,974	7,068	10,655	
	Subtotal	197	2,037	2,974	7,068	12,276	
Arkansas	•	•	•				
	Ouachita	162	0	11,044	1,072	12,278	
	Ozark-St. Francis	993	12,731	3	193	13,920	
	Subtotal	1,155	12,731	11,047	1,265	26,198	
Arizona	•	,	•				
	Apache-Sitgreaves	12,704	30,950	197	0	43,851	
	Coconino	3,739	3,003	0	0	6,742	
	Coronado	8	0	0	0	8	
	Kaibab	3,224	1,175	4	0	4,403	
	Prescott	89	84	0	0	173	
	Tonto	1,688	187	0	0	1,875	
	Subtotal	21,452	35,399	201	0	57,052	
California	•	,				•	
	Angeles	284	769	315	7	1,375	
	Cleveland	0	87	0	0	87	
	Eldorado	0	0	60	287	347	
	Humlt/Toiyabe	0	0	0	0	0	
	Inyo	0	0	0	0	0	
	Klamath	238	1,116	554	576	2,484	
	Lake Tahoe Basin	0	12	1,222	562	1,796	
	Lassen	111	3,821	831	577	5,340	
	Los Padres	0	0	15	0	15	
	Mendocino	0	908	154	608	1,670	
	Modoc	0	17,050	2,416	66	19,532	
	Plumas	0	280	2,854	1,387	4,521	
	Rogue River	0	39	0	0	39	
	San Bernardino	346	2,389	1,429	0	4,164	
	Sequoia	52	180	825	1,061	2,118	
	Shasta/Trinity	0	729	194	321	1,244	
	Sierra	0	72	789	1,313	2,174	
	Siskiyou	0	0	0	0	0	
	Six Rivers	0	0	6	311	317	
	Stanislaus	764	7,636	14,495	4,070	26,965	
	Tahoe	81	329	2,092	2,026	4,528	
	Subtotal	1,876	35,417	28,251	13,172	78,716	
Colorado	•	•	•	•			
	Arapaho and Roosevelt	9,050	438	0	0	9,488	
	Grand Mesa, Uncompangre, and	7,081	1,763	147	0	8,991	
	Gunnison	•		1		•	
	Manti-La Sal	0	0	0	0	0	
		Ü	ŭ	J	v	U	

Table 1 - Reforestation needs as of October 1, 2004 by State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/	Acres by site productivity class 3/			Total	
National Forest	0-49	50-84	85-119	120+	Acres
Medicine Bow and Routt	1,852	1,493	231	0	3,576
Pike and San Isabel	1,507	304	0	0	1,811
Rio Grande	1,188	385	151	0	1,724
San Juan	1,940	1,289	199	0	3,428
White River	676	130	97	8	911
Subtotal	23,294	5,802	825	8	29,929
Florida				•	
NFs in Florida (subtotal)	153	0	56	403	612
Georgia	_				
Chattahoochee/Oconee	0	208	8,307	1,642	10,157
Subtotal	0	208	8,307	1,642	10,157
Idaho					
Boise	3,866	16,756	2,115	298	23,035
Caribou/Targhee	90	840	53	0	983
Caribou/Targhee	447	708	0	0	1,155
Clearwater	1,124	280	553	986	2,943
Idaho Panhandle	2,836	1,578	2,069	944	7,427
Kootenai	0	0	0	0	0
Nez Perce	971	448	1,208	516	3,143
Payette	23	410	130	0	563
Salmon/Challis	782	25	0	0	807
Salmon/Challis	2,149	1,736	0	0	3,885
Sawtooth	213	239	69	0	521
Subtotal	12,501	23,020	6,197	2,744	44,462
Illinois					
Shawnee (subtotal)	0	0	0	400	400
Indiana					
Hoosier (subtotal)	0	738	78	110	926
Kentucky					
Daniel Boone (subtotal)	0	56,811	63,902	233	120,946
Louisiana					
Kisatchie (subtotal)	0	58	184	217	459
Maine					
White Mountain (subtotal)	126	110	68	24	328
Michigan					
Hiawatha	4,185	3,501	951	23	8,660
Huron-Manistee	4,661	2,328	177	0	7,166
Huron-Manistee	596	1,261	56	0	1,913
Ottawa	1,831	7,737	2,950	226	12,744
Subtotal	11,273	14,827	4,134	249	30,483
Minnesota					
Chippewa	213	399	513	36	1,161
Superior	2,878	2,231	2,000	603	7,712
Subtotal	3,091	2,630	2,513	639	8,873
Mississippi					
NFs in Mississippi (subtotal)	72	111	509	522	1,214

Table 1 - Reforestation needs as of October 1, 2004 by State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Acres by site	productivity clas	ss 3/	Total
National Forest	0-49	50-84	85-119	120+	Acres
Missouri					
Mark Twain (subtotal)	1,771	17,455	37	17	19,280
Montana	•	•	•		
Beaverhead & Deerlodge	1,272	217	51	0	1,540
Bitterroot	10,589	9,545	3,984	694	24,812
Custer	18,383	809	0	0	19,192
Flathead	2,586	960	2,815	1,554	7,915
Gallatin	649	289	0	0	938
Helena	1,502	422	207	0	2,131
Kootenai	2,453	2,731	1,233	446	6,863
Lewis and Clark	753	291	15	0	1,059
Lolo	9,394	2,667	1,687	477	14,225
Subtotal	47,581	17,931	9,992	3,171	78,675
Nebraska					
Nebraska (subtotal)	0	0	0	0	0
Nevada					
Humboldt/Toiyabe	0	0	0	0	0
Humboldt/Toiyabe	358	52	0	0	410
Inyo	0	0	0	0	0
Lake Tahoe Basin	0	0	2	555	557
Subtotal	358	52	2	555	967
New Hampshire					
White Mountain (subtotal)	1,837	5,885	3,109	1,195	12,026
New Mexico					
Carson	2,485	706	30	0	3,221
Cibola	40	100	0	0	140
Gila	1,288	803	62	0	2,153
Lincoln	13,146	9,888	109	0	23,143
Santa Fe	22,239	5,472	15	0	27,726
Subtotal	39,198	16,969	216	0	56,383
New York					
Green Mountain (subtotal)	2	0	11	8	21
North Carolina					
NFs in North Carolina (subtotal)	470	1,866	429	204	2,969
Ohio				II.	
Wayne (subtotal)	188	166	770	1,139	2,263
Oklahoma			ī		
Ouachita (subtotal)	221	240	973	284	1,718
Oregon				1	
Deschutes	33,239	36,558	11,119	19	80,935
Fremont	37,894	12,010	1,010	0	50,914
Klamath	0	0	12	19	31
Malheur	5,131	1,516	0	0	6,647
Mt. Hood	0	511	20	0	531
Ochoco	1,534	3,451	70	0	5,055
Rogue River	0	298	568	0	866

Table 1 - Reforestation needs as of October 1, 2004 by State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/	Acres by site productivity class 3/				Total
National Forest	0-49	50-84	85-119	120+	Acres
Siskiyou	57	317	3,204	982	4,560
Siuslaw	0	0	0	20	20
Umatilla	555	1,000	0	33	1,588
Umpqua	68	93	7,490	130	7,781
Wallowa-Whitman	465	5,608	72	30	6,175
Willamette	48	203	184	2,764	3,199
Winema	168	452	1,256	0	1,876
Subtotal	79,159	62,017	25,005	3,997	170,178
Pennsylvania	_	_	_	_	
Allegheny (subtotal)	364	3,217	2,088	696	6,365
Puerto Rico	_	_	_	_	
Caribbean (subtotal)	0	0	41	118	159
South Carolina	•	•	•		
Francis Marion and	0	0	0	0	0
Sumter (subtotal)	0	0	0	0	0
South Dakota	_	_	_	_	
Black Hills (subtotal)	30,616	5,104	15	0	35,735
Custer	6	0	0	0	6
Subtotal	30,622	5,104	15	0	35,741
Tennessee					
Cherokee (subtotal)	5	2	668	2,705	3,380
Texas	_	_	_	_	
NFs in Texas (subtotal)	0	7	230	136	373
Utah					
Ashley	3,372	0	0	0	3,372
Dixie	6,361	1,306	36	0	7,703
Fishlake	0	439	0	0	439
Manti-La Sal	26	1,332	0	0	1,358
Utah Uinta	51	216	13	0	280
Wasatch-Cache	1,311	278	134	0	1,723
Subtotal	11,121	3,571	183	0	14,875
Vermont					
Green Mountain (subtotal)	11	1,003	349	107	1,470
Virginia					
Geo Wash & Jeff	580	1,081	18	363	2,042
Geo Wash & Jeff	465	2,396	422	225	3,508
Subtotal	1,045	3,477	440	588	5,550
Washington					
Colville	655	2,644	2,320	149	5,768
Gifford Pinchot	0	93	125	82	300
Idaho Panhandle	217	4	204	14	439
Mt. Baker-Snoqualmie	0	163	200	147	510
Okanogan	3,336	19	995	0	4,350
Olympic	0	0	0	0	0
Umatilla	1,527	436	219	383	2,565

Table 1 - Reforestation needs as of October 1, 2004 by State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Acres by site	productivity clas	ss 3/	Total
National Forest	0-49	50-84	85-119	120+	Acres
Okanogan-Wenatchee	25	10,539	151	3,246	13,961
Subtotal	5,760	13,898	4,214	4,021	27,893
West Virginia					
Geo Wash & Jeff	167	133	10	149	459
Geo Wash & Jeff	0	0	0	0	0
Monongahela	38	108	421	277	844
Subtotal	205	241	431	426	1,303
Wisconsin					
Chequamegon/Nicolet	1,171	1,658	1,042	169	4,040
Chequamegon/Nicolet	467	1,567	584	279	2,897
Subtotal	1,638	3,225	1,626	448	6,937
Wyoming			_		
Bighorn	1,389	89	0	0	1,478
Black Hills	9,464	5,454	0	0	14,918
Bridger-Teton	0	31	1,635	0	1,666
Caribou/Targhee	0	0	0	0	0
Medicine Bow and Routt	2,559	301	0	0	2,860
Shoshone	160	575	4	0	739
Wasatch-Cache	513	0	0	0	513
Subtotal	14,085	6,450	1,639	0	22,174
Total	311,076	354,703	186,963	48,604	901,346

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/			productivity class 3		
Territory 2/					
R-1 National Forest	0-49	50-84	85-119	120+	Total Acres
Idaho					
Clearwater	1,124	280	553	986	2,943
Idaho Panhandle	2,836	1,578	2,069	944	7,427
Kootenai	0	0	0	0	0
Nez Perce	971	448	1,208	516	3,143
Subtotal	4,931	2,306	3,830	2,446	13,513
Montana					
Beaverhead & Deerlodge	1,272	217	51	0	1,540
Bitterroot	10,589	9,545	3,984	694	24,812
Custer	18,383	809	0	0	19,192
Flathead	2,586	960	2,815	1,554	7,915
Gallatin	649	289	0	0	938
Helena	1,502	422	207	0	2,131
Kootenai	2,453	2,731	1,233	446	6,863
Lewis and Clark	753	291	15	0	1,059
Lolo	9,394	2,667	1,687	477	14,225
Subtotal	47,581	17,931	9,992	3,171	78,675
South Dakota	_				
Custer (Subtotal)	6	0	0	0	6
Washington	_	_			
Idaho Panhandle (Subtotal)	217	4	204	14	439
Total	52,735	20,241	14,026	5,631	92,633

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Territo	Commonwealth, or or 2/		Acros by sito	productivity class 3	) I	
R-2	National Forest	0-49	Total Acres			
Colorado		0-47	50-84	85-119	120+	TOTAL ACIES
Coloraut	Arapaho and Roosevelt	9,050	438	0	0	9,488
	Grand Mesa, Uncompahgre, and Gunnison	7,081	1,763	147	0	8,991
			·	0		0,77
	Manti-La Sal	1.052	1 403		0	
	Medicine Bow and Routt	1,852	1,493	231	0	3,576
	Pike and San Isabel	1,507	304	0	0	1,811
	Rio Grande	1,188	385	151	0	1,724
	San Juan	1,940	1,289	199	0	3,428
	White River	676	130	97	8	911
	Subtotal	23,294	5,802	825	8	29,929
South Da	akota					
	Black Hills (subtotal)	30,616	5,104	15	0	35,735
Wyomin	g	•		•		
	Bighorn	1,389	89	0	0	1,478
	Black Hills	9,464	5,454	0	0	14,918
	Medicine Bow and Routt	2,559	301	0	0	2,860
	Shoshone	160	575	4	0	739
	Subtotal	13,572	6,419	4	0	19,995
	Total	67,482	17,325	844	8	85,659

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

	Commonwealth, or					
Territo	ory <i>21</i>		Acres by site	productivity class	s 3/	
R-3	National Forest	0-49	50-84	85-119	120+	<b>Total Acres</b>
Arizona						
	Apache-Sitgreaves	12,704	30,950	197	0	43,851
	Coconino	3,739	3,003	0	0	6,742
	Coronado	8	0	0	0	8
	Kaibab	3,224	1,175	4	0	4,403
	Prescott	89	84	0	0	173
	Tonto	1,688	187	0	0	1,875
	Subtotal	21,452	35,399	201	0	57,052
New Me	xico					
	Carson	2,485	706	30	0	3,221
	Cibola	40	100	0	0	140
	Gila	1,288	803	62	0	2,153
	Lincoln	13,146	9,888	109	0	23,143
	Santa Fe	22,239	5,472	15	0	27,726
	Subtotal	39,198	16,969	216	0	56,383
	Total	60,650	52,368	417	0	113,435

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, C Territor	Commonwealth, or ry 2/		Acres by site p	productivity class 3	S/	
R-4	National Forest	0-49	50-84	85-119	120+	<b>Total Acres</b>
California						
	Humlt/Toiyabe (Subtotal)	0	0	0	0	0
Colorado						
	Manti-La Sal (Subtotal)	0	0	0	0	0
Idaho						
	Boise	3,866	16,756	2,115	298	23,035
	Caribou/Targhee	90	840	53	0	983
	Caribou/Targhee	447	708	0	0	1,155
	Payette	23	410	130	0	563
	Salmon/Challis	782	25	0	0	807
	Salmon/Challis	2,149	1,736	0	0	3,885
	Sawtooth	213	239	69	0	521
	Subtotal	7,570	20,714	2,367	298	30,949
Nevada						
	Humboldt/Toiyabe	0	0	0	0	0
	Humboldt/Toiyabe	358	52	0	0	410
	Subtotal	358	52	0	0	410
Utah						
	Ashley	3,372	0	0	0	3,372
	Dixie	6,361	1,306	36	0	7,703
	Fishlake	0	439	0	0	439
	Ashley	3,372	0	0	0	3,372
	Dixie	6,361	1,306	36	0	7,703
	Fishlake	0	439	0	0	439
	Manti-La Sal	26	1,332	0	0	1,358
	Uinta	51	216	13	0	280
	Wasatch-Cache	1,311	278	134	0	1,723
	Subtotal	11,121	3,571	183	0	14,875
Wyoming						
	Bridger-Teton	0	31	1,635	0	1,666
	Caribou/Targhee	0	0	0	0	0
	Wasatch-Cache	513	0	0	0	513
	Subtotal	513	31	1,635	0	2,179

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/						
				productivity class 3		
R-5	National Forest	0-49	50-84	85-119	120+	Total Acres
Californi	ia					
	Angeles	284	769	315	7	1,375
	Cleveland	0	87	0	0	87
	Eldorado	0	0	60	287	347
	Inyo	0	0	0	0	0
	Klamath	238	1,116	554	576	2,484
	Lake Tahoe Basin	0	12	1,222	562	1,796
	Lassen	111	3,821	831	577	5,340
	Los Padres	0	0	15	0	15
	Mendocino	0	908	154	608	1,670
	Modoc	0	17,050	2,416	66	19,532
	Plumas	0	280	2,854	1,387	4,521
	San Bernardino	346	2,389	1,429	0	4,164
	Sequoia	52	180	825	1,061	2,118
	Shasta/Trinity	0	729	194	321	1,244
	Sierra	0	72	789	1,313	2,174
	Six Rivers	0	0	6	311	317
	Stanislaus	764	7,636	14,495	4,070	26,965
	Tahoe	81	329	2,092	2,026	4,528
	Subtotal	1,876	35,378	28,251	13,172	78,677
Oregon						
-	Klamath (Subtotal)	0	0	12	19	31
Nevada						
	Inyo	0	0	0	0	0
	Lake Tahoe Basin	0	0	2	555	557
	Subtotal	0	0	2	555	557
	Total	1,876	35,378	28,265	13,746	79,265

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Territo	Commonwealth, or ory 2/		3/			
R-6	National Forest	0-49	50-84	85-119	120+	Total Acres
California	a					
	Rogue River	0	39	0	0	39
	Siskiyou	0	0	0	0	0
	Subtotal	0	39	0	0	39
Oregon						
	Deschutes	33,239	36,558	11,119	19	80,935
	Fremont	37,894	12,010	1,010	0	50,914
	Malheur	5,131	1,516	0	0	6,647
	Mt. Hood	0	511	20	0	531
	Ochoco	1,534	3,451	70	0	5,055
	Rogue River	0	298	568	0	866
	Siskiyou	57	317	3,204	982	4,560
	Siuslaw	0	0	0	20	20
	Umatilla	555	1,000	0	33	1,588
	Umpqua	68	93	7,490	130	7,781
	Wallowa-Whitman	465	5,608	72	30	6,175
	Willamette	48	203	184	2,764	3,199
	Winema	168	452	1,256	0	1,876
	Subtotal	79,159	62,017	24,993	3,978	170,147
Washing	yton					
	Colville	655	2,644	2,320	149	5,768
	Gifford Pinchot	0	93	125	82	300
	Mt. Baker-Snoqualmie	0	163	200	147	510
	Okanogan	3,336	19	995	0	4,350
	Olympic	0	0	0	0	0
	Umatilla	1,527	436	219	383	2,565
	Okanogan-Wenatchee	25	10,539	151	3,246	13,961
	Subtotal	5,543	13,894	4,010	4,007	27,454
	Total	84,702	75,950	29,003	7,985	197,640

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/			Acres by site p	productivity class 3	I	
R-8	National Forest	0-49	50-84	85-119	120+	Total Acres
Alabama						
	NFs in Alabama (subtotal)	245	2,028	5,249	93	7,615
Arkansas	S					
	Ouachita	162	0	11,044	1,072	12,278
	Ozark-St. Francis	993	12,731	3	193	13,920
	Subtotal	1,155	12,731	11,047	1,265	26,198
Florida						
	NFs in Florida (subtotal)	153	0	56	403	612
Georgia						
	Chattahoochee/Oconee	0	208	8,307	1,642	10,157
	Subtotal	0	208	8,307	1,642	10,157
Kentucky	1					
	Daniel Boone (subtotal)	0	56,811	63,902	233	120,946
Louisiana	3					
	Kisatchie (subtotal)	0	58	184	217	459
Mississip	pi					
	NFs in Mississippi (subtotal)	72	111	509	522	1,214
North Ca	rolina					
	NFs in North Carolina (subto	470	1,866	429	204	2,969
Oklahom	a					
	Ouachita (subtotal)	221	240	973	284	1,718
Puerto R						
	Caribbean (subtotal)	0	0	41	118	159
South Ca	arolina					
	Francis Marion and	0	0	0	0	0
	Sumter (subtotal)	0	0	0	0	0
Tennesse	ee					
	Cherokee (subtotal)	5	2	668	2,705	3,380
Texas		•		•		
	NFs in Texas (subtotal)	0	7	230	136	373
Virginia	· · · · ·	•	•	•		
	Geo Wash & Jeff	580	1,081	18	363	2,042
	Geo Wash & Jeff	465	2,396	422	225	3,508

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, 0 Territo	Commonwealth, or ry 2/		Acres by site p	productivity class 3	ı/	
R-9	National Forest	0-49	50-84	85-119	120+	Total Acres
Illinois						
	Shawnee (subtotal)	0	0	0	400	400
Indiana						
	Hoosier (subtotal)	0	738	78	110	926
Maine						
	White Mountain (subtotal)	126	110	68	24	328
Michigan	1					
	Hiawatha	4,185	3,501	951	23	8,660
	Huron-Manistee	4,661	2,328	177	0	7,166
	Huron-Manistee	596	1,261	56	0	1,913
	Ottawa	1,831	7,737	2,950	226	12,744
	Subtotal	11,273	14,827	4,134	249	30,483
Minnesot	ta					
	Chippewa	213	399	513	36	1,161
	Superior	2,878	2,231	2,000	603	7,712
	Subtotal	3,091	2,630	2,513	639	8,873
Missouri	<u> </u>	•	•	•		
	Mark Twain (subtotal)	1,771	17,455	37	17	19,280
New Har	mpshire	•	•	•		
	White Mountain (subtotal)	1,837	5,885	3,109	1,195	12,026
New Yor		•		•		·
	Green Mountain (subtotal)	2	0	11	8	21
Ohio	· · · · · ·	•	•	•		
	Wayne (subtotal)	188	166	770	1,139	2,263
Pennsylv		•	•	•		·
1	Allegheny (subtotal)	364	3,217	2,088	696	6,365
Vermont		•				·
-	Green Mountain (subtotal)	11	1,003	349	107	1,470
West Virg		I.	,	* * *		,
,	Monongahela (subtotal)	38	108	421	277	844
Wisconsi	<u> </u>			· .		
	Chequamegon/Nicolet	1,171	1,658	1,042	169	4,040
	Chequamegon/Nicolet	467	1,567	584	279	2,897

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 1a - Reforestation needs as of October 1, 2004 by Region, State, national forest, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/						
R-10	National Forest	0-49	50-84	85-119	120+	Total Acres
Alaska						
	Chugach	0	1,621	0	0	1,621
	Tongass	197	416	2,974	7,068	10,655
	Subtotal	197	2,037	2,974	7,068	12,276
	Total	197	2,037	2,974	7,068	12,276

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 2 - Reforestation needs as of October 1, 2004, by Region, and cubic foot productivity class 1/

		Acres by site p	oroductivity class 2	2/	
Region	0-49	50-84	85-119	120+	Total Acres
Northern	52,735	20,241	14,026	5,631	92,633
Rocky Mountain	67,482	17,325	844	8	85,659
Southwestern	60,650	52,368	417	0	113,435
Intermountain	19,562	24,368	4,185	298	48,413
Pacific Southwest	1,876	35,378	28,265	13,746	79,265
Pacific Northwest	84,702	75,950	29,003	7,985	197,640
Southern	3,533	77,672	92,045	8,559	181,809
Eastern	20,339	49,364	15,204	5,309	90,216
Alaska	197	2,037	2,974	7,068	12,276
TOTAL	311,076	354,703	186,963	48,604	901,346

<sup>1/</sup> Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec 4(d)1.

<sup>2/</sup> Unlisted States had no reforestation needs as of October 1, 2004.

<sup>3/</sup> Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Cubic fo	ot productivi	ty classes 3	1	Release	Thinning	Fertilization	Pruning
National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Alaska					0	0			
Chugach	0	13	374	0	387	13	374	0	0
Tongass	1,412	711	2,519	11,734	16,376	0	15,950	0	426
Subtotal	1,412	724	2,893	11,734	16,763	13	16,324	0	426
Alabama									
NFs in Alabama (subtotal)	592	3,191	496	126	4,405	3,265	1,140	0	0
Arkansas									
Ouachita	27	213	5,804	453	6,497	1,341	5,156	0	0
Ozark-St. Francis	385	4,122	374	101	4,982	489	4,493		0
Subtotal	412	4,335	6,178	554	11,479	1,830	9,649	0	0
Arizona									
Apache-Sitgreaves	16,762	3,286	112	0	20,160	144	20,016	0	0
Coconino	13,741	1,872	0	0	15,613	1,560	14,053	0	0
Coronado	355	444	24	0	823	0	823	0	0
Kaibab	35,242	13,993	1,003	0	50,238	0	50,238		
Prescott	56	0	0	0	56	56	0		
Tonto	5,191	1,668	31	0	6,890	6,073	817	0	
Subtotal	71,347	21,263	1,170	0	93,780	7,833	85,947	0	0
California	·	•			·				
Humboldt/Toiyabe	417	787	80	90	1,374	0	1,374	0	0
Angeles	418	1,170	566	0	2,154	1,172	393		589
Cleveland	0	687	0	0	687	422	181	0	84
Eldorado	0	99	577	1,177	1,853	817	415	0	621
Humboldt/Toiyabe	417	787	80	90	1,374	0	1,374		
Inyo	6	1,002	0	0	1,008	0	1,008		
Klamath	992	15,192	15,631	8,843	40,658	13,164	27,449		
Lake Tahoe Basin	800	1,542	3,619	559	6,520	3,259	3,261	0	
Lassen	3,046	17,991	12,706	952	34,695	3,124	31,571	0	
Los Padres	0	233	30	0	263	167	71	0	
Mendocino	0	13,266	8,675	23,705	45,646	19,875	22,717	2,898	
Modoc	52	9,915	4,569	499	15,035	7,800	6,493	727	15
Plumas	8	2,606	11,619	9,448	23,681	5,261	18,414	0	
San Bernardino	246	2,526	92	66	2,930	1,195	1,700		35
Sequoia	156	1,399	5,459	9,325	16,339	5,685	9,691	672	291
Shasta/Trinity	201	5,456	9,159	7,108	21,924	5,546	13,970		
Sierra	0	441	4,656	8,613	13,710	6,427	7,269		
Six Rivers	0	0	532	834	1,366	849	517	0	0
Stanislaus	45	2,677	24,508	3,907	31,137	21,216	9,921	0	0
Tahoe	5,338	10,451	14,423	18,629	48,841	20,931	27,174	622	114

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Comr	monwealth, or Territory 2/		Cubic for	ot productivit	y classes 3	I	Release	Thinning	Fertilization	Pruning
	National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Ca. (Cont.)	Rogue River	0	0	0	0	0	0	0	0	0
, ,	Siskiyou	0	0	1,534	0	1,534	680	655	199	0
	Subtotal	11,725	87,440	118,435	93,755	311,355	117,590	184,244	5,160	4,361
Colorado		·	·	·		,	,	•	·	
	Arapaho and Roosevelt	5,710	162	0	0	5,872	1,358	4,514	0	0
	Grand Mesa/									
	Uncompahgre/Gunnison	3,883	617	0	0	4,500	1,227	3,273	0	0
Colorado	Manti-La Sal	10	24	0	0	34	0		0	0
	Medicine Bow and Routt	8,141	1,682	50	0	9,873	2,866	7,007	0	0
	Pike and San Isabel	1,283	295	0	0	1,578	1,226	352	0	0
	Rio Grande	379	208	0	0	587	413	174	0	0
	San Juan	45	49	0	0	94	0	94	0	0
	White River	190	1,397	354	0	1,941	1,538	403	0	0
	Subtotal	19,641	4,434	404	0	24,479	8,628	15,851	0	0
Florida		·	·			,		•		
	NFs in Florida (subtotal)	788	167	422	41	1,418	191	167	1,060	0
Georgia										
	Chatta-Oconee (subtotal)	0	337	4,548	2,878	7,763	2,112	4,551	1,100	0
Idaho	·									
	Boise	2,068	8,759	1,779	157	12,763	855	11,908	0	0
	Clearwater	1,857	788	1,348	3,789	7,782	461	4,831	0	2,490
	Idaho Panhandle	46,148	10,176	51,957	43,705	151,986	3,549	105,131	1,689	41,617
	Kootenai	12	0	7	35	54	0	54	0	0
	Nez Perce	786	775	4,659	3,844	10,064	429	9,635	0	0
	Payette	0	183	90	0	273	0		0	0
	Salmon/Challis	4,006	0	0	0	4,006	2,008	1,998	0	0
	Salmon/Challis	2,927	411	0	0	3,338	0	3,338	0	0
	Sawtooth	34	93	0	0	127	0	127	0	0
	Caribou/Targhee	0	230	0	0	230	52	178	0	0
	Caribou/Targhee	103	332	0	0	435	26	409	0	_
	Subtotal	57,941	21,747	59,840	51,530	191,058	7,380	137,882	1,689	44,107
Illinois										
	Shawnee (subtotal	0	50	453	0	503	450	0	0	53
Indiana										
	Hoosier (subtotal)	0	450	150	0	600	600	0	0	0
Kentucky										
	Daniel Boone (subtotal)	0	0	18,352	54	18,406	639	17,735	0	32

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Comr	monwealth, or Territory 2/		Cubic for	ot productivi	ty classes 3	I	Release	Thinning	Fertilization	Pruning
	National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Louisiana										
	Kisatchie (subtotal)	0	1,100	411	3,479	4,990	2,821	2,169	0	0
Maine	, , ,									
	White Mountain (subtotal)	6	36	15	13	70	11	59	0	0
Michigan										
	Hiawatha	1,097	4,314	3,102	38	8,551	3,090	611	0	4,850
	Huron-Manistee	1,201	1,732	233	0	3,166	723	2,443	0	0
	Huron-Manistee	0	162	46	0	208	0	149	0	59
	Ottawa	132	327	648	12	1,119	1,119	0	0	0
	Subtotal	2,430	6,535	4,029	50	13,044	4,932	3,203	0	4,909
Minnesota										
	Chippewa	574	6,971	3,149	96	10,790	735	0	0	10,055
	Superior	3,029	2,583	1,899	411	7,922	6,619	71	0	1,232
	Subtotal	3,603	9,554	5,048	507	18,712	7,354	71	0	11,287
Mississippi										
	NFs in Mississippi (subtotal)	88	333	6,485	2,025	8,931	7,975	956	0	0
Missouri										
	Mark Twain (subtotal)	0	7,247	434	206	7,887	579	7,233	0	75
Montana										
	Beaverhead & Deerlodge	20,430	12,386	841	116	33,773	65	33,708	0	0
	Bitterroot	4,298	8,438	3,977	538	17,251	2,324	14,927	0	0
	Custer	3,266	269	56	0	3,591	971	2,620	0	0
	Flathead	14,795	9,669	30,815	6,078	61,357	401	59,808	0	1,148
	Gallatin	1,517	5,310	0	0	6,827	274	6,553	0	0
	Helena	784	537	252	70	1,643	36	1,576	31	0
	Idaho Panhandle	12	0	220	357	589	0	587	0	2
	Kootenai	6,150	50,340	54,617	1,000	112,107	30	109,309	0	2,768
	Lewis and Clark	4,708	1,568	697	6	6,979	32	6,947	0	0
	Lolo	10,282	23,762	11,558	2,213	47,815	341	47,467	0	7
	Subtotal	66,242	112,279	103,033	10,378	291,932	4,474	283,502	31	3,925
Nebraska										
	Nebraska (subtotal)	0	0	0	0	0	0	0	0	0
Nevada										
	Humboldt/Toiyabe	0	0	0	0	0	0		0	0
	Humboldt/Toiyabe	2	73	0	0	75	0	75	0	0
	Inyo	0	0	0	0	0	0	0	0	0
	Lake Tahoe Basin	0	0	0	195	195	0			
	Subtotal	2	73	0	195	270	0	270	0	0

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Cubic fo	ot productivi	ty classes 3	I	Release	Thinning	Fertilization	Pruning
National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
New Hampshire									
White Mountain (subtotal)	182	333	86	9	610	354	256	0	0
New Mexico									
Carson	4,850	1,733	99	0	6,682	796	5,886	0	0
Cibola	601	0	0	0	601	0	601	0	0
Gila	2,884	536	0	0	3,420	0	3,420	0	0
Lincoln	1,859	2,437	251	68	4,615	1,084	3,531	0	0
Santa Fe	8,823	648	0	0	9,471	489	8,982	0	0
Subtotal	19,017	5,354	350	68	24,789	2,369	22,420	0	0
New York									
Green Mountain (subtotal)	0	3	653	0	656	57	599	0	0
North Carolina			ĺ						
NFs in North Carolina (subtota	432	2,215	1,001	3,024	6,672	4,469	1,686	517	0
Ohio									
Wayne (subtotal)	26	490	697	2,598	3,811	1,181	1,292	0	1,338
Oklahoma									
Ouachita (subtotal)	0	382	1,100	688	2,170	1,109	1,061	0	0
Oregon									
Deschutes	57,580	29,257	1,553	911	89,301	7,200	76,944	89	5,068
Fremont-Winema	32,201	26,159	11	0	58,371	1,921	56,450	0	0
Klamath	12	187	302	418	919	345	574	0	0
Malheur	1,383	1,044	0	0	2,427	564	1,863	0	0
Mt. Hood	0	10,482	6,855	485	17,822	0	10,931	6,691	200
Ochoco	21,994	14,684	12	0	36,690	568	35,772	0	350
Rogue River	0	4,831	17,246	881	22,958	1,760	15,254	0	5,944
Siskiyou	0	559	17,454	2,697	20,710	2,836	4,105		7,642
Siuslaw	0	0	0	27,662	27,662	75	27,470	0	117
Umatilla	4,701	9,359	4,834	392	19,286	664	18,563	0	59
Umpqua	0	6,488	17,467	4,083	28,038	766	23,517	0	3,755
Wallowa-Whitman	11,858	70,095	3,611	0	85,564	8,025	76,593	0	0.0
Willamette	81	6,261	65,890	88,744	160,976	9,798	26,967	86,876	37,335
Winema	18,123	6,526	5,550	0	30,199	937	28,992	0	270
Subtotal	147,933	185,932	140,785	126,273	600,923	35,459	403,995	99,783	61,686
Pennsylvania									
Allegheny (subtotal)	114	1,055	1,730	895	3,794	3,794	0	0	0
Puerto Rico									
Caribbean (subtotal)	0	300	798	0	1,098	498	600	0	0
South Carolina		-		·					
Francis Marion & Sumter (su	0	0	0	0	0	0	0	0	0

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Cubic for	ot productivi	ty classes 3	1	Release	Thinning	Fertilization	Pruning
National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
South Dakota									
Black Hills (subtotal)	2,890	226	0	0	3,116	7	3,109	0	0
Tennessee									
Cherokee (subtotal)	11	670	101	1,478	2,260	1,407	853	0	0
Texas									
NFs in Texas (subtotal)	0	694	1,694	2,173	4,561	4,361	200	0	0
Utah									
Ashley	337	0	0	0	337	0	337	0	0
Dixie	1,484	36	0	0	1,520	5	1,515	0	0
Fishlake	150	1,297	0	0	1,447	1,214	233	0	0
Manti-La Sal	50	256	0	0	306	9	122	0	175
Uinta	0	5	5	0	10	10	0	0	0
Wasatch-Cache	131	0	0	0	131	0	131	0	0
Subtotal	2,152	1,594	5	0	3,751	1,238	2,338	0	175
Vermont									
Green Mountain (subtotal)	667	771	165	0	1,603	332	1,269	0	2
Virginia									
Geo Wash & Jeff	107	1,267	48	818	2,240	1,199	1,041	0	0
Geo Wash & Jeff	88	8,250	954	1,183	10,475	1,975	8,377	0	
Subtotal	195	9,517	1,002	2,001	12,715	3,174	9,418	0	123
Washington									
Colville	487	4,490	7,277	1,530	13,784	2,023	11,280		481
Gifford Pinchot	0	25,313	37,509	12,115	74,937	136	60,222	11,265	3,314
Idaho Panhandle	1,093	433	6,167	2,694	10,387	161	9,472		754
Mt. Baker-Snoqualmie	0	18	1,968	1,602	3,588	162	1,644		294
Okanogan	34,733	4,721	769	0	40,223	3,564	35,563		1,096
Olympic	0	0	13,627	2,765	16,392	0	16,317	0	
Umatilla	1,706	4,138	215	299	6,358	100	5,904	0	354
Wenatchee	1,072	246,464	14,980	18,298	280,814	4,063	199,668		
Subtotal	39,091	285,577	82,512	39,303	446,483	10,209	340,070	18,668	77,536
West Virginia									
Geo Wash & Jeff	202	735	0	136	1,073	1,050	23		
Geo Wash & Jeff	0	0	0	160	160	0	160		
Monongahela	41	343	210	169	763	233	530	0	0
Subtotal	243	1,078	210	465	1,996	1,283	713	0	0
Wisconsin									
Chequamegon/Nicolet	155	842	674	122	1,793	1,789	0		
Chequamegon/Nicolet	120	361	214	0	695	695	0		0
Subtotal	275	1,203	888	122	2,488	2,484	0	0	4

Table 3- Timber stand improvement needs as of October 1, 2004 by State, and cubic foot productivity class 1/

State, Commonwealth, or Territory 2/		Cubic fo	ot productiv	ity classes 3	I	Release	Thinning	Fertilization	Pruning
National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Wyoming									
Bighorn	9,260	362	0	0	9,622	2,683	6,939	0	0
Black Hills	688	322	0	0	1,010	0	1,010	0	0
Bridger-Teton	0	36	492	0	528	0	528	0	0
Caribou/Targhee	43	224	0	0	267	0	267	0	0
Medicine Bow and Routt	6,866	162	13	0	7,041	432	6,609	0	0
Shoshone	3,278	384	0	0	3,662	208	3,454	0	0
Wasatch-Cache	174	0	0	0	174	0	174	0	0
Subtotal	20,309	1,490	505	0	22,304	3,323	18,981	0	0
	469,766	780,179	567,078	356,622	2,173,645	255,785	1,579,813	128,008	210,039

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 4 - Timber stand improvement needs as of October 1, 2004, by Region, cubic foot productivity class, and type of treatment 1/

Region		Cubic foot	productivity cl	2000 21		Release	Thinning	Fertilization	Pruning
Region	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Northern (R-1)	116,138	124,451	167,171	64,445	472,205	9,074	412,625	1,720	48,786
Rocky Mountain (R-2)	42,613	5,866	417	0	48,896	11,958	36,938	0	0
Southwestern (R-3)	90,364	26,617	1,520	68	118,569	10,202	108,367	0	0
Intermountain (R-4)	11,936	12,746	2,446	247	27,375	4,179	23,021	0	175
Pacific Southwest (R-5)	11,320	86,840	117,123	94,278	309,561	117,255	182,984	4,961	4,361
Pacific Northwest (R-6)	185,919	470,889	218,362	162,464	1,037,634	45,842	734,674	118,650	138,468
Southern (R-8)	2,525	14,459	41,586	16,816	75,386	31,727	40,950	2,677	32
Eastern (R-9)	7,539	37,587	15,560	6,570	67,256	25,535	23,930	0	17,791
Alaska (R-10)	1,412	724	2,893	11,734	16,763	13	16,324	0	426
TOTAL	469,766	780,179	567,078	356,622	2,173,645	255,785	1,579,813	128,008	210,039

<sup>1/</sup> Data source is Ref. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec. 4d(1).

<sup>2/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand

	<u> </u>				1			1	
State, Commonwealth, or Territory 2/		Cubio fo	ot productivit	nu alaccac 2/		Dalassa	Thinning	Fortilization	December of
R-1 National Forest	0-49	50-84	ot productivit 85-119	120+	Total acres	Release	Thinning	Fertilization	Pruning
	0-49	30-64	00-119	120+	TOTAL ACTES	subtotal	subtotal	subtotal	subtotal
Idaho	4.057	700	4.040	0.700	7.700	404	4.004	-	0.400
Clearwater	1,857	788	1,348	3,789	7,782	461	4,831	0	2,490
Idaho Panhandle	46,148	10,176	51,957	43,705	151,986	3,549	105,131	1,689	41,617
Kootenai	12	0	7	35	54	0	54	0	0
Nez Perce	786	775	4,659	3,844	10,064	429	9,635	0	0
Subtotal	48,803	11,739	57,971	51,373	169,886	4,439	119,651	1,689	44,107
Montana									
Beaverhead & Deerlodge	20,430	12,386	841	116	33,773	65	33,708	0	0
Bitterroot	4,298	8,438	3,977	538	17,251	2,324	14,927	0	0
Custer	3,266	269	56	0	3,591	971	2,620	0	0
Flathead	14,795	9,669	30,815	6,078	61,357	401	59,808	0	1,148
Gallatin	1,517	5,310	0	0	6,827	274	6,553	0	0
Helena	784	537	252	70	1,643	36	1,576	31	0
Idaho Panhandle	12	0	220	357	589	0	587	0	2
Kootenai	6,150	50,340	54,617	1,000	112,107	30	109,309	0	2,768
Lewis and Clark	4,708	1,568	697	6	6,979	32	6,947	0	0
Lolo	10,282	23,762	11,558	2,213	47,815	341	47,467	0	7
Subtotal	66,242	112,279	103,033	10,378	291,932	4,474	283,502	31	3,925
South Dakota	·	·	·	-			·		·
Custer (subtotal)	0	0	0	0	0	0	0	0	0
Washington									
Idaho Panhandle	1,093	433	6,167	2,694	10,387	161	9,472	0	754
Subtotal	1,093	433	6,167	2,694	10,387	161	9,472	0	754
Total	116,138	124,451	167,171	64,445	472,205	9,074	412,625	1,720	48,786

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

State, Co	ommonwealth, or Territory 2/		Cubic fo	ot productivity	y classes 3/		Release	Thinning	Fertilization	Pruning
R-2	National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Colorado										
	Arapaho and Roosevelt	5,710	162	0	0	5,872	1,358	4,514	0	0
	Grand Mesa/									
	Uncompahgre/Gunnison	3,883	617	0	0	4,500	1,227	3,273	0	0
	Medicine Bow and Routt	8,141	1,682	50	0	9,873	2,866	7,007	0	0
	Pike and San Isabel	1,283	295	0	0	1,578	1,226	352	0	0
	Rio Grande	379	208	0	0	587	413	174	0	0
	San Juan	45	49	0	0	94	0	94	0	0
	White River	190	1,397	354	0	1,941	1,538	403	0	0
	Subtotal	19,631	4,410	404	0	24,445	8,628	15,817	0	0
South Da	ıkota									
	Black Hills (subtotal)	2,890	226	0	0	3,116	7	3,109	0	0
Wyoming	1									
	Bighorn	9,260	362	0	0	9,622	2,683	6,939	0	0
	Black Hills	688	322	0	0	1,010	0	1,010	0	0
	Medicine Bow and Routt	6,866	162	13	0	7,041	432	6,609	0	0
	Shoshone	3,278	384	0	0	3,662	208	3,454	0	0
	Subtotal	20,092	1,230	13	0	21,335	3,323	18,012	0	0
	Total	42,613	5,866	417	0	48,896	11,958	36,938	0	0

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 4a - Timber stand improvement needs as of October 1, 2004, by Region and National Forest, cubic foot productivity class, and type of treatment 1/

Tubic ia Timbol Stalia Improvement necus us	,					,	<u> </u>		
State, Commonwealth, or Territory 2/		Cubic fo	ot productivi	ty classes 3/		Release	Thinning	Fertilization	Pruning
R-3 National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Arizona									
Apache-Sitgreaves	16,762	3,286	112	0	20,160	144	20,016	0	0
Coconino	13,741	1,872	0	0	15,613	1,560	14,053	0	0
Coronado	355	444	24	0	823	0	823	0	0
Kaibab	35,242	13,993	1,003	0	50,238	0	50,238	0	0
Prescott	56	0	0	0	56	56	0	0	0
Tonto	5,191	1,668	31	0	6,890	6,073	817	0	0
Subtotal	71,347	21,263	1,170	0	93,780	7,833	85,947	0	0
New Mexico									
Carson	4,850	1,733	99	0	6,682	796	5,886	0	0
Cibola	601	0	0	0	601	0	601	0	0
Gila	2,884	536	0	0	3,420	0	3,420	0	0
Lincoln	1,859	2,437	251	68	4,615	1,084	3,531	0	0
Santa Fe	8,823	648	0	0	9,471	489	8,982	0	0
Subtotal	19,017	5,354	350	68	24,789	2,369	22,420	0	0
Total	90,364	26,617	1,520	68	118,569	10,202	108,367	0	0

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1). 2/ Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 4a - Timber stand improvement needs as of October 1, 2004, by Region and National Forest, cubic foot productivity class, and type of treatment 1/

Table 4a - Timber stand improvement needs as of October 1, 2004, by Region and National Polest, cubic foot productivity class, and type of freatment if								ı	
State, Commonwealth, or Territory 2/		Cubic fo	ot productivit	y classes 3/		Release	Thinning	Fertilization	Pruning
R-4 National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
California									
Humboldt/Toiyabe	417	787	80	90	1,374	0	1,374	0	0
Colorado									
Manti-La Sal	10	24	0	0	34	0	34	0	0
Subtotal	10	24	0	0	34	0	34	0	0
Idaho									
Boise	2,068	8,759	1,779	157	12,763	855	11,908	0	0
Caribou/Targhee	0	230	0	0	230	52	178	0	0
Caribou/Targhee	103	332	0	0	435	26	409	0	0
Payette	0	183	90	0	273	0	273	0	0
Salmon/Challis	4,006	0	0	0	4,006	2,008	1,998	0	
Salmon/Challis	2,927	411	0	0	3,338	0	3,338	0	0
Sawtooth	34	93	0	0	127	0	127	0	0
Subtotal	9,138	10,008	1,869	157	21,172	2,941	18,231	0	0
Nevada									
Humboldt/Toiyabe	0	0	0	0	0	0	0		0
Humboldt/Toiyabe	2	73	0	0	75	0	75	0	0
Subtotal	2	73	0	0	75	0	75	0	0
Utah									
Ashley	337	0	0	0	337	0	337	0	0
Dixie	1,484	36	0	0	1,520	5	1,515	0	0
Fishlake	150	1,297	0	0	1,447	1,214	233	0	_
Manti-La Sal	50	256	0	0	306	9	122	0	175
Uinta	0	5	5	0	10	10	0	0	0
Wasatch-Cache	131	0	0	0	131	0	131	0	
Subtotal	2,152	1,594	5	0	3,751	1,238	2,338	0	175
Wyoming									
Bridger-Teton	0	36	492	0	528	0	528		0
Caribou/Targhee	43	224	0	0	267	0	267	0	0
Wasatch-Cache	174	0	0	0	174	0	174	0	0
Subtotal	217	260	492	0	969	0	969	0	
Total	11,936	12,746	2,446	247	27,375	4,179	23,021	0	175

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1). 2/ Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

04-4-	O		Outstan	64			D 1	T		ь .
	Commonwealth, or Territory 2/ National Forest	0-49	50-84	foot productivi 85-119	120+	Total acres	Release	Thinning	Fertilization	Pruning
R-5 Californ		0-49	50-64	60-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Callion	***	440	4.470	500		0.454	4.470	000		500
	Angeles	418	1,170	566	0	2,154	1,172	393		589
	Cleveland	0	687	0	0	687	422	181		84
	Eldorado	0	99	577	1,177	1,853	817	415		621
	Inyo	6	1,002	0	0	1,008	0	1,008		0
	Klamath	992	15,192	15,631	8,843	40,658	13,164	27,449		9
	Lake Tahoe Basin	800	1,542	3,619	559	6,520	3,259	3,261	0	0
	Lassen	3,046	17,991	12,706	952	34,695	3,124	31,571	0	0
	Los Padres	0	233	30	0	263	167	71		25
	Mendocino	0	13,266	8,675	23,705	45,646	19,875	22,717		156
	Modoc	52	9,915	4,569	499	15,035	7,800	6,493	727	15
	Plumas	8	2,606	11,619	9,448	23,681	5,261	18,414	0	6
	San Bernardino	246	2,526	92	66	2,930	1,195	1,700	0	35
	Sequoia	156	1,399	5,459	9,325	16,339	5,685	9,691	672	291
	Shasta/Trinity	201	5,456	9,159	7,108	21,924	5,546	13,970	6	2,402
	Sierra	0	441	4,656	8,613	13,710	6,427	7,269	0	14
	Six Rivers	0	0	532	834	1,366	849	517	0	0
	Stanislaus	45	2,677	24,508	3,907	31,137	21,216	9,921	0	0
	Tahoe	5,338	10,451	14,423	18,629	48,841	20,931	27,174	622	114
	Subtotal	11,308	86,653	116,821	93,665	308,447	116,910	182,215	4,961	4,361
Nevada	1									
	Inyo	0	0	0	0	0	0	0	0	0
	Lake Tahoe Basin	0	0	0	195	195	0	195	0	0
	Subtotal	0	0	0	195	195	0	195	0	0
Oregon				_			_			
	Klamath	12	187	302	418	919	345	574	0	0
	Subtotal	12	187	302	418	919	345	574	0	0
	Total	11,320	86,840	117,123	94,278	309,561	117,255	182,984	4,961	4,361

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1). 2/ Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

State,	Commonwealth, or Territory 2/			foot productivi	ty classes 3/		Release	Thinning	Fertilization	Pruning
R-6	National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Californ	nia									
	Rogue River	0	0	0	0	0	0	0	0	0
	Siskiyou	0	0	1,534	0	1,534	680	655	199	0
	Subtotal	0	0	1,534	0	1,534	680	655	199	0
Oregor	ı									
	Deschutes	57,580	29,257	1,553	911	89,301	7,200	76,944	89	5,068
	Fremont-Winema	32,201	26,159	11	0	58,371	1,921	56,450	0	0
	Malheur	1,383	1,044	0	0	2,427	564	1,863	0	0
	Mt. Hood	0	10,482	6,855	485	17,822	0	10,931	6,691	200
	Ochoco	21,994	14,684	12	0	36,690	568	35,772	0	350
	Rogue River	0	4,831	17,246	881	22,958	1,760	15,254	0	5,944
	Siskiyou	0	559	17,454	2,697	20,710	2,836	4,105	6,127	7,642
	Siuslaw	0	0	0	27,662	27,662	75	27,470	0	117
	Umatilla	4,701	9,359	4,834	392	19,286	664	18,563	0	59
	Umpqua	0	6,488	17,467	4,083	28,038	766	23,517	0	3,755
	Wallowa-Whitman	11,858	70,095	3,611	0	85,564	8,025	76,593	0	946
	Willamette	81	6,261	65,890	88,744	160,976	9,798	26,967	86,876	37,335
	Winema	18,123	6,526	5,550	0	30,199	937	28,992	0	270
	Subtotal	147,921	185,745	140,483	125,855	600,004	35,114	403,421	99,783	61,686
Washir	igton									
	Colville	487	4,490	7,277	1,530	13,784	2,023	11,280	0	481
	Gifford Pinchot	0	25,313	37,509	12,115	74,937	136	60,222	11,265	3,314
	Mt. Baker-Snoqualmie	0	18	1,968	1,602	3,588	162	1,644	1,488	294
	Okanogan	34,733	4,721	769	0	40,223	3,564	35,563	0	1,096
	Olympic	0	0	13,627	2,765	16,392	0	16,317	0	75
	Umatilla	1,706	4,138	215	299	6,358	100	5,904	0	354
	Wenatchee	1,072	246,464	14,980	18,298	280,814	4,063	199,668	5,915	71,168
	Subtotal	37,998	285,144	76,345	36,609	436,096	10,048	330,598	18,668	76,782
	Total	185,919	470,889	218,362	162,464	1,037,634	45,842	734,674	118,650	138,468

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

State, Commonwealth, or Territory 2/		Cubic for	ot productivity	classes 3/		Release	Thinning	Fertilization	
R-8 National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	Pruning subtotal
Alabama			Î						j
NFs in Alabama (subtotal)	592	3,191	496	126	4,405	3,265	1,140	C	0
Arkansas									
Ouachita	27	213	5,804	453	6,497	1,341	5,156	C	0
Ozark-St. Francis	385	4,122	374	101	4,982	489	4,493	C	0
Subtotal	412	4,335	6,178	554	11,479	1,830	9,649	C	0
Florida									
NFs in Florida (subtotal)	788	167	422	41	1,418	191	167	1,060	0
Georgia									
Chattahoochee-Oconee (subtotal)	0	337	4,548	2,878	7,763	2,112	4,551	1,100	0
Kentucky									
Daniel Boone (subtotal)	0	0	18,352	54	18,406	639	17,735	C	32
Louisiana									
Kisatchie (subtotal)	0	1,100	411	3,479	4,990	2,821	2,169	C	0
Mississippi									
NFs in Mississippi (subtotal)	88	333	6,485	2,025	8,931	7,975	956	C	0
North Carolina									
NFs in North Carolina (subtotal)	432	2,215	1,001	3,024	6,672	4,469	1,686	517	0
Oklahoma									
Ouachita (subtotal)	0	382	1,100	688	2,170	1,109	1,061	C	0
Puerto Rico									
Caribbean (subtotal)	0	300	798	0	1,098	498	600	C	0
South Carolina						_			
Francis Marion and Sumter (subto	0	0	0	0	0	0	0	C	0
Tennessee		070	101	4 470	0.000	4 40=	0.50		
Cherokee (subtotal)	11	670	101	1,478	2,260	1,407	853	C	0
Texas		20.4	4 00 4	0.470	4.504	4.004	222		
NFs in Texas (subtotal)	0	694	1,694	2,173	4,561	4,361	200	C	0
West Virginia	000	705		400	4.070	4.050	20		
Geo Wash & Jeff	202	735	0	136	1,073	1,050	23	C	_
Geo Wash & Jeff	0	725	0	160		0	160 183	C	_
Subtotal	202	735	0	296	1,233	1,050		2.677	
Total	2,525	14,459	41,586	16,816	75,386	31,727	40,950	2,677	32

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

State Co	ommonwealth, or Territory 2/		Cubic fo	ot productivit	v classos 2/		Release			
R-9	National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	Thinning cubtotal	Fertilization subtotal	Druping cubtotal
Illinois	National Forest	0-47	30-64	03-117	120+	Total acres	Sublotai	Thirling Subtotal	rerunzation Subtotal	Pruning Subtotal
IIIIIIOIS	Shawnee (subtotal	0	50	453	0	503	450	0	0	53
	Snawnee (Subtotal	0	50	400	U	503	450	0	0	53
Indiana										
	Hoosier (subtotal)	0	450	150	0	600	600	0	C	0
Maine										
	White Mountain (subtotal)	6	36	15	13	70	11	59	0	0
Michigan										
Willoringan	Hiawatha	1,097	4,314	3,102	38	8,551	3,090	611	0	4,850
	Huron-Manistee	1,201	1,732	233	0		723	2.443	0	,
	Huron-Manistee	0	162	46	0	-,	0	, -	0	
	Ottawa	132	327	648	12		1,119		0	
	Subtotal	2,430	6,535	4,029	50		4,932	3,203	0	
Minnesota		2,100	0,000	1,020	- 00	10,011	1,002	0,200		1,000
	Chippewa	574	6,971	3,149	96	10,790	735	0	C	10,055
	Superior	3,029	2,583	1.899	411	7,922	6,619	71	0	1,232
	Subtotal	3,603	9,554	5,048	507	18,712	7,354		C	
Missouri			,	,		,	,			,
	Mark Twain (subtotal)	0	7,247	434	206	7,887	579	7,233	0	75
New Ham	pshire									
	White Mountain (subtotal)	182	333	86	9	610	354	256	0	0
New York	(									
	Green Mountain (subtotal)	0	3	653	0	656	57	599	0	0
Ohio										
	Wayne (subtotal)	26	490	697	2,598	3,811	1,181	1,292	C	1,338
Pennsylva	ania									
	Allegheny (subtotal)	114	1,055	1,730	895	3,794	3,794	0	0	0
Vermont										
	Green Mountain (subtotal)	667	771	165	0	1,603	332	1,269	C	2
Virginia						0				
	Geo Wash & Jeff	107	1,267	48	818	2,240	1,199	1,041	0	
	Geo Wash & Jeff	88	8,250	954	1,183		1,975	8,377	C	
	Subtotal	195	9,517	1,002	2,001	12,715	3,174	9,418	0	123
West Virg	inia									
	Monongahela	41	343	210	169	763	233	530	0	0
	Subtotal	41	343	210	169	763	233	530	0	0

Table 4a - Timber stand improvement needs as of October 1, 2004, by Region and National Forest, cubic foot productivity class, and type of treatment 1/

State, Commonwealth, or Territory 2/		Cubic fo	ot productivi	ty classes 3/		Release			
R-9 National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
Wisconsin									
Chequamegon/Nicolet	155	842	674	122	1,793	1,789	0	0	4
Chequamegon/Nicolet	120	361	214	0	695	695	0	0	0
Subtotal	275	1,203	888	122	2,488	2,484	0	0	4
	7,539	37,587	15,560	6,570	67,256	25,535	23,930	0	17,791

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 4a - Timber stand improvement needs as of October 1, 2004, by Region and National Forest, cubic foot productivity class, and type of treatment 1/

State, Commonwealth, or Territory 2/		Cubic fo	ot productivi	ty classes 3/		Release	Thinning	Fertilization	Pruning
R-10 National Forest	0-49	50-84	85-119	120+	Total acres	subtotal	subtotal	subtotal	subtotal
Alaska					0	0			
Chugach	0	13	374	0	387	13	374	0	0
Tongass	1,412	711	2,519	11,734	16,376	0	15,950	0	426
Subtotal	1,412	724	2,893	11,734	16,763	13	16,324	0	426
Total	1,412	724	2,893	11,734	16,763	13	16,324	0	426

<sup>1/</sup> Data source is Refor. & TSI Needs Report (2400-K) Table 2. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

<sup>2/</sup> Unlisted States had no TSI needs as of October 1, 2004.

<sup>3/</sup> Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforest	ation			-	Timber Stand	Improvement		
State, Commonwealth, or Territory 2/	National Forest	Planted	Seeded	Natural Regen With Site Preparation	Natural Regen Without Site Preparation	Total Reforestation	Cleaning	Release	Pre. Comm. Thinning	Fertilization	Pruning	Total TSI
				•	•							
Alaska	Observable	0	0					0	0	0	0	0
	Chugach	0	0				-	0	0	0	0	0
	Tongass Total	53 53	0		,		0	_	3,525	0	0	3,525
Alabama	Iotai	53	0	0	3,879	3,932	0	U	3,525	U	U	3,525
Alabama	NFS in Alabama (Total)	955	0	0	361	1,316	0	1,003	0	0	0	1,003
Arkansas	IVI O III Alabama (Total)	333	O	0	301	1,510		1,000	O	O	U	1,000
rinariodo	Ouachita	1,431	0	5,359	0	6,790	0	6,323	4,438	0	0	10,761
	Ozark-St. Francis	741	0			,	0	,	1,481	0	0	3,410
	Total	2,172	0		0		0		5,919	0	0	14,171
Arizona	. 0.0	_,	·	0,2	· ·	. 0,000		0,202	0,0.0	· ·	ŭ	,
	Apache-Sitgreaves	0	0	0	0	0	0	0	1,149	0	0	1,149
	Coconino	0	0	0	0	0	0	0	0	0	0	0
	Coronado	0	0	0	0	0	0	0	0	0	0	0
	Kaibab	0	0	0	0	0	0	0	0	0	0	0
	Prescott	0	0	0	0	0	0	0	0	0	0	0
	Tonto	100	0	138	0	238	0	0	0	0	0	0
	Total	100	0	138	0	238	0	0	1,149	0	0	1,149
California												
	Humboldt/Toiyabe	0	0	0	0	0	0	0	0	0	0	0
	Angeles	0	0	0	0	0	0	0	0	0	0	0
	Cleveland	0	0	0	0	0	0	0	0	0	0	0
	Eldorado	0	0	0	0	0	0	1,401	849	0	224	2,474
	Inyo	0	0	0	0	0	0	0	500	0	0	500
	Klamath	100	0	0	12		0	3,354	5,632	0	0	8,986
	Lassen	1,207	0	0	0	1,207	0	835	2,745	0	0	3,580
	Los Padres	0	0	0	0	0	0	65	5	0	368	438
	Mendocino	465	0	0	0	465	0	814	809	0	0	1,623
	Modoc	0	0	0	0	0	0	401	2,421	0	0	2,822
	Six Rivers	0	0	0	0	0	0	558	266	0	0	824
	Plumas	0	0	0	0	0	0	334	3,340	0	16	3,690
	San Bernardino	0	0	0	0	0	0	0	0	0	0	0
	Sequoia	0	0	0	0	0	0	1,325	899	0	56	2,280
	Shasta/Trinity	949	0	0	0	949	0	2,334	3,524	0	311	6,169
	Sierra	0	0	0	-		0	2,042	1,660	0	0	3,702
	Stanislaus	0	0	0			0	1,161	899	0	0	2,060
	Tahoe	0	0	0	22	22	0	3,411	3,960	0	0	7,371

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforest	ation				Timber Stand	I Improvement		
State, Commonwealth, or Territory 2/	National Forest	Planted	Seeded	Natural Regen With Site Preparation	Natural Regen Without Site Preparation	Total Reforestation	Cleaning	Release	Pre. Comm. Thinning	Fertilization	Prunina	Total TSI
				•			Ĭ					
	Lake Tahoe Basin	0	0					0		0	0	1,751
	Siskiyou	0	0	0				0		0	0	0
	Rogue River Total	0 2,721	0	0		-		0 18,035		0	0 975	0 48,270
		2,721	Ü	V	0	2,702		10,000	20,200	· ·	010	40,270
Colorado	Grand Mesa, Uncompahgre, and											
	Gunnison	0	41	1,243	620	1,904	. 0	0	0	0	0	0
	Medicine Bow and Routt	60	0			•		0			0	0
	Rio Grande	0	0					0		_	0	0
	Arapaho and Roosevelt	0	0	-		_	_	0	_	-	0	146
	Pike and San Isabel	0	0					0			0	0
	San Juan	123	0				_	0	-	0	0	341
	White River	0	0	-				0		-	0	0
	Manti-La Sal	0	0	Ö			_	0	-	0	0	0
	Total	183	41	1,473			_	0	_	0	0	487
Florida	NFS in Florida (Total)	1,014	654	0	(	1,668	0	0	0	0	0	0
Georgia	Chattahoochee/Oconee											
Ü	(Total)	0	0	0	500	500	0	0	128	0	0	128
Idaho	Idaho Panhandle	2,348	0		3			528	,	0	2,554	5,222
	Clearwater	955	0	0				14	0	0	1,027	1,041
	Kootenai	0	0	-	(		_	0	-	0	0	9
	Nez Perce	1,173	0	-				0		0	0	767
	Boise	0	0	0	- , -	,		362	-, -	0	0	3,499
	Payette	1,200	0			,		0	,	0	0	2,134
	Salmon-Challis	0	0	-		-	_	0	0	0	0	0
	Salmon-Challis	213	0					0		0	0	582
	Sawtooth	102	0	120		_		0	_	0	0	0
	Caribou/Targhee	30	0				_	0	-	0	0	0
	Caribou/Targhee Total	155 6,176	0					0 904		0	0 2.591	737
Illinois	iotai	0,176	U	363	5,067	11,606		904	9,506	U	3,581	13,991
11111015	Shawnee (Total)	638	0	0	(	638	0	0	0	0	0	0

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforesta	ation			-	Timber Stand	I Improvemen	t	
State, Commonwealth, or Territory 2/	National Forest	Planted	hahaa2	Natural Regen With Site Preparation	Natural Regen Without Site Preparation	Total Reforestation	Cleaning	Ralassa	Pre. Comm.	Fertilization	Pruning	Total TSI
Torritory Zi	National Forcot	1 lantea	Occucu	reparation	Troparation	recordation	Oleaning	rtoloado	rimming	1 Ortinzation	rrannig	10101 101
Indiana												
V antuolo (	Hoosier (Total)	0	0	0	0	0	0	0	0	0	0	0
Kentucky	Daniel Boone (Total)	0	0	395	0	395	0	0	405	0	0	405
Louisiana	Daniel Boone (Total)	Ü	Ŭ	000	Č	000		Ŭ	100	· ·	Ŭ	100
	Kisatchie (Total)	851	0	0	0	851	0	1,705	1,746	0	0	3,451
Maine	\Mhita Mauntain (Tatal)	0	0	0	0	0	0	0	0	0	0	0
Michigan	White Mountain (Total)	0	0	0	0	0	0	0	0	U	U	0
Monigan	Huron-Manistee	108	0	0	28	136	0	0	0	0	0	0
	Huron-Manistee	122	0	817	40	979	0	28	0	0	0	28
	Ottawa	645	0	867	6,755		0	0	0	0	0	0
	Hiawatha	1,049	705	2,083	1,253	5,090	0	1,723	0	0	387	2,110
	Total	1,924	705	3,767	8,076	14,472	0	1,751	0	0	387	2,138
Minnesota												
	Chippewa	918	151	2,981	435		0	715	0		40	755
	Superior	1,367	144	0	2,668		0	2,158	0	0	25	2,183
	Total	2,285	295	2,981	3,103	8,664	0	2,873	0	0	65	2,938
Missouri												
	Mark Twain	220	0	3,508	293	4,021	0	93	2,453	0	0	2,546
Mississippi	NEO: M	0.045	70	0.15		0.000		4 000	4 0 40	•		<b>5.07.</b> 4
Martara	NFS in Mississippi	2,815	73	315	0	3,203	0	1,832	4,042	0	0	5,874
Montana	Beaverhead & Deerlodge	70	0	377	218	665	0	0	0	0	0	0
	Beaverhead & Deerlodge	718	0	318	302		0	0	117	0	0	117
	Bitterroot	305	0	0	752	,	0	147	534	0	49	730
	Idaho Panhandle	0	0	0	732	•	0	0	0	0	0	0
	Custer	12	0	0	0		-	0	0	0	0	0
	Flathead	4,002	162	155	140			0	0	0	0	0
	Gallatin	333	0	5	36	,	0	56	0	0	0	56
	Helena	49	0	18	28		0	0	0	0	0	0
	Kootenai	3,019	0	100	49		0	0	3,064	0	775	3,839
	Lewis and Clark	511	0	498	11	1,020	0	0	0,557	0	0	0
	Lolo	3,381	0	549	371	,	0	560	2,942	0	0	3,502
	Total	12,400	162		1,907	,	0	763	6,657	0	824	8,244
North Carolina		•		,								
	NFS in North Carolina	143	0	177	0	320	0	263	0	0	0	263

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforesta	ation				Timber Star	nd Improvemen	t	
State, Commonwealth, or Territory 2/	National Forest	Planted	Seeded		Natural Regen Without Site Preparation	Total Reforestation	Cleaning	Release	Pre. Comm. Thinning	Fertilization	Pruning	Total TSI
1	NFS in North Carolina	207	0	608	0	815	0	1,745		0 0	0	1,745
	Total	350	0		0					0 0		2,008
New Hampshire												
	White Mountain (Total)	0	0	435	1,266	1,701	0	55		0 0	0	55
New Mexico			_	_				_		_		
	Carson	0	0		38			0		0 0	0	0
	Cibola	0	0		0	-	_	0		0 0	0	0
	Gila	0	0		0		0	0		0 0	0	0
	Lincoln	0	0	_	0	-	0	0		0 0	0	0
,	Santa Fe	0	0		0		0	0		0 0	0	0
	Total	0	0	0	38	38	0	0		0 0	0	0
Nevada			_			_	_	_				_
	Humboldt/Toiyabe	0	0		0		_	0		0 0	0	0
	Inyo	0	0		0		0	0		0 0	0	0
ļ	Lake Tahoe Basin	0	0		0		0	0			0	167
	Total	0	0	0	0	0	0	0	16	7 0	0	167
New York												
	Green Mountain (Total)	0	0	0	0	0	0	0		0 0	0	0
Ohio												
	Wayne (Total)	79	0	0	0	0	0	211		0 0	0	211
Oklahoma												
	Ouachita (Total)	0	0	0	0	0	0	0		0 0	0	0
Oregon												
	Klamath	16	0	_	0		-	0	-		0	162
	Deschutes	2,046	0	1,771	154	3,971	0	0		0 0	0	0
F	Fremont-Winema	0	0	0	0	0	0	0	11,39	6 0	0	11,396
ſ	Malheur	0	0	0	0	0	0	0	80	3 0	0	803
ſ	Mt. Hood	0	0	0	0	0	0	0	1,83	7 0	0	1,837
(	Ochoco	1,311	0	0	503	1,814	0	0		0 0	0	0
F	Rogue River	0	0	0	0	0	0	0		0 0	0	0
(	Siskiyou	0	0	0	0	0	0	117	3	2 0	32	181
(	Siuslaw	741	0	0	0	741	0	0		0 0	0	0
l	Umatilla	189	0	0	440	629	0	0		0 0	0	0
	Umpqua	0	0	0	0	0	0	0		0 0	0	0
1	Wallowa-Whitman	1,670	0	304	935	2,909	4	0	85		0	863
,	Willamette	985	0	0	0	985	0	166	6,52	4 1,289	1,353	9,332
1	vvillarriette	900	U	U	U	900	U	100	0,52	4 1,209	1,303	3,332

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforest	ation			7	Γimber Stand	Improvement	i	
				Natural	Natural							
State,				Regen With	Regen				Pre.			
Commonwealth, or				Site	Without Site	Total			Comm.			
Territory 2/	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
	Total	6,958	0	2,075	2,032	11,065	4	283	25,675	1,289	1,385	28,636
Pennsylvania	Allegheny (Total)	0	0	402	43	445	0	0	0	0	0	0
Puerto Rico	/ mognerry ( rotal)	Ü	O	402	70	110		Ü	v	· ·	Ü	Ū
0 11 0 11	Caribbean (Total)	0	0	0	0	0	0	0	0	0	0	0
South Carolina	Francis Marion (Total)	130	0	439	0	569	0	206	0	0	0	206
South Dakota	, ,	100	O	400	·	000		200	v	· ·	Ü	200
	Custer	0	0	0		-	0	0	0	0	0	0
	Black Hills	0	0		8,196	,		0	846	0	0	846
	Total	0	0	0	8,196	8,196	0	0	846	0	0	846
Tennessee		_	_	_	_	_	_		_	_		
_	Cherokee (Total)	0	0	0	0	0	0	842	0	0	0	842
Texas			_				_			_		
L IC-L	NFS in Texas (Total)	112	0	85	18	215	0	166	505	0	0	671
Utah	Achley	0	^	0	1,069	1.000	_	0	770	0	0	770
	Ashley Dixie	0 144	0		1,069	,	0	0	773 1,509	0	0	773 1,509
	Fishlake	0	0		148		0	0	1,509	0	0	1,509
	Manti-La Sal	0	0	_	0	-	0	167	0	0	50	217
	Uinta	0	0		0	_	0	0	0	0	0	0
	Wasatch-Cache	0	0		788		0		0	0	0	0
	Total	144	0	-	2,005		0		2,282	0	50	2,499
Virginia	10.01		Ŭ	021	2,000	2,010		101	2,202	Ü	00	2, 100
	Geo Wash & Jefferson	0	0	882	0	882	0	820	155	0	0	975
	Geo Wash & Jefferson	12	0		25		0	45	609	0	0	654
	Total	12	0	1,041	25		0	865	764	0	0	1,629
Vermont				,		•						•
	Green Mountain (Total)	12	0	259	49	320	0	0	0	0	0	0
Washington												
	Idaho Panhandle	25	0	0	0	25	0	0	0	0	156	156
	Gifford Pinchot	239	0	0	0	239	0	63	1,316	0	275	1,654
	Mt. Baker-Snoqualmie	40	0	0	0	40	0	0	0	0	0	0
	Okanogan ·	541	0	39	24	604	0	564	1,512	0	237	2,313
	Olympic	0	0	0	0	0	0	0	1,800	0	0	1,800
	Umatilla	0	0	0	1,196	1,196	0	0	511	0	0	511
	Okanogan-Wenatchee	489	0	0	794	1,283	7	0	117	0	117	241

Table 5 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by State and national forests 1/

				Reforesta	ation			٦	Γimber Stand	Improvement	İ	
				Natural	Natural							
State,				Regen With	Regen				Pre.			
Commonwealth, or				Site	Without Site	Total			Comm.			
Territory 2/	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
	Colville	140	0	0	63	203	0	0	509	0	0	509
	Total	1,474	0	39	2,077	3,590	7	627	5,765	0	785	7,184
Wisconsin												
	Chequamegon/Nicolet	908	59	2,119	2,301	5,387	0	366	0	0	0	366
	Chequamegon/Nicolet	281	0	1,881	242	2,404	0	330	0	0	0	330
	Total	1,189	59	4,000	2,543	7,791	0	696	0	0	0	696
West Virginia												
	Geo Wash & Jefferson	0	0	67	0	67	0	141	116	0	0	257
	Monongahela	0	0	345	0	345	0	57	0	0	0	57
	Total	0	0	412	0	412	0	198	116	0	0	314
Wyoming												
	Bighorn	133	0	0	232	365	0	0	0	0	0	0
	Black Hills	0	0	0	2,098	2,098	0	0	0	0	0	0
	Medicine Bow and Routt	9	0	59	85	153	0	0	732	0	0	732
	Shoshone	112	0	0	109	221	0	0	0	0	0	0
	Bridger-Teton	68	0	168	0	236	0	0	0	0	0	0
	Caribou/Targhee	24	0	0	0	24	0	0	0	0	0	0
	Wasatch-Cache	0	0	0	0	0	0	0	0	0	0	0
	Total	346	0	227	2,524	3,097	0	0	732	0	0	732
	Grand Total	45,313	1,989	34,191	45,912	127,405	11	43,535	102,129	1,289	8,052	155,016

<sup>1/</sup> Data source is Reforestation and TSI Needs Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec. 4d(1).

<sup>2/</sup> Unlisted States did not certify any reforestation or TSI acreage during fiscal year 2004/.

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O W/Site Site Total Pre. Comm. Thinning Fertilization Region State National Forest Planted Seeded Preparation Preparation Reforestation Cleaning Release Prunina Total TSI Idaho Idaho Panhandle 2,348 2,502 2,140 2,554 5,222 Clearwater 1,027 1,041 Kootenai Nez Perce 1,173 1,199 Total 4,476 4,656 2,916 3,581 7,039 Montana Bvrhead/Drlodge Bvrhead/Drlodge 1,338 Bitterroot 1,057 Idaho Panhandle Custer Flathead 4,002 4,459 Gallatin Helena 3,019 3,168 3,839 Kootenai 3,064 1,020 Lewis and Clark 3,381 4,301 2,942 3,502 Total 12,400 2,020 1,907 8,244 16,489 6,657 South Dakota Custer Total Washington Idaho Panhandle Total 15,439 21,170 9,573 Regional Total 16,901 2,171 1,936 1,305 4,561

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O W/Site Site Total Pre. Comm. Seeded Preparation Preparation Reforestation Region State National Forest Planted Cleaning Release Thinning Fertilization Prunina Total TSI Colorado GM-Unc. Gunn 1,243 1,904 Med. Bow/Routt Rio Grande Arapaho/Roosevelt Pike/San Isabel San Juan White River Total 1,473 1,849 3,546 South Dakota Black Hills 8,196 8,196 Total 8,196 8,196 Wyoming Bighorn Black Hills 2,098 2,098 Med. Bow/Routt Shoshone Total 2,524 2,837 2,065 1,532 14,579 2,065 Regional Total 12,569

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

					Natural	Natural						
					Regen	Regen W/O						
					W/Site	Site	Total			Pre. Comm.		
Region	State	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Total TSI
3	Arizona											
		Apache-Sitgreaves	0	0	0	0	0	0	0	1,149	0	1,149
		Coconino	0	0	0	0	0	0	0	0	0	0
		Kaibab	0	0	0	0	0	0	0	0	0	0
		Prescott	0	0	0	0	0	0	0	0	0	0
		Tonto	100	0	138	0	238	0	0	0	0	0
	To	otal	100	0	138	0	238	0	0	1,149	0	1,149
	New Mexico											
		Carson	0	0	0	38	38	0	0	0	0	0
		Cibola	0	0	0	0	0	0	0	0	0	0
		Gila	0	0	0	0	0	0	0	0	0	0
		Lincoln	0	0	0	0	0	0	0	0	0	0
		Santa Fe	0	0	0	0	0	0	0	0	0	0
	To	otal	0	0	0	38	38	0	0	0	0	0
	Regional To	otal	100	0	138	38	276	0	0	1,149	0	1,149

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O

						Regen W/O							
					W/Site	Site	Total			Pre. Comm.			
Region	State	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
4	California												
		Humboldt/Toiyabe	0	0	0	0	0	0	0	0	0	0	0
	T-4	,	0	0	0	0	0	0	0	0	0	0	0
	Tota	31	0	0	0	0	0	0	0	0	0	0	0
	Colorado												
	Colorado	Manti LaSal	0	0	0	0	0	0	0	0	0	0	0
	Tota		0	0	0	0	0	0	0	0	0	0	0
	100	21	U	U	U	U	U	U	U	U	U	U	U
	Idaho												
		Boise	0	0		5,012	5,012	0	362	3,137	0	0	3,499
		Payette	1,200	0	82	0	1,282	0	0	2,134	0	0	2,134
		Salmon-Challis	0	0	0	0	0	0	0	0	0	0	0
		Salmon-Challis	213	0	0	26	239	0	0	582	0	0	582
		Sawtooth	102	0	0	0	102	0	0	0	0	0	0
		Caribou-Targhee	30	0	130	0	160	0	0	0	0	0	0
		Caribou-Targhee	155	0	0	0	155	0	0	737	0	0	737
	Tota	al	1,700	0	212	5,038	6,950	0	362	6,590	0	0	6,952
	Nevada												
	ivevaua	Humboldt-Toiyabe	0	0	0	0	0	0	0	0	0	0	0
	Tota		0	0	0	0	0	0	0	0	0	0	0
	Utah												
		Ashley	0	0	0	1,069	1,069	0	0	773	0	0	773
		Dixie	144	0	510	148	802	0	0	1,509	0	0	1,509
		Fishlake	0	0	0	0	0	0	0	0	0	0	0
		Manti La Sal	0	0	0	0	0	0	167	0	0	50	217
		Uinta	0	0	311	0	311	0	0	0	0	0	0
		Wasatch-Cache	0	0	0	788	788	0	0	0	0	0	0
	Tota	al	144	0	821	2,005	2,970	0	167	2,282	0	50	2,499
	Wyoming	Bridger-Teton	68	0	168	0	236	0	0	0	0	0	0
	, 5111119	Caribou-Targhee	24	0	0	0	24	0	0	0	0	0	0
		Wasatch-Cache	0	0	0	0	0	0	0	0	0	0	0
	Tota		92	0	168	0	260	0	0	0	0	0	0
	regional Tota	al	1,936	0	1,201	7,043	10,180	0	529	8,872	0	50	9,451

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O

State   National Forest   Planted   Seede   Preparation   Reforestation   Cleaning   Release   Thinning   Fertilization   Pruning							Regen W/O							
Sequence						W/Site	Site	Total						T TO.
Angeles 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Ininning	Fertilization	Pruning	Total TSI
Cleveland   O	5	California												
Eldorado			3											0
Inyo				0		0		0	0	-	-	0	-	0
Klamath         100         0         0         12         112         0         3,354         5,632         0         0           Lassen         1,207         0         0         0         1,207         0         835         2,745         0         0           Los Padres         0         0         0         0         0         0         65         5         0         368           Mendocino         465         0         0         0         0         465         0         814         809         0         0           Modoc         0         0         0         0         0         0         465         0         814         809         0         0           Six Rivers         0         0         0         0         0         0         558         266         0         0           Plumas         0         0         0         0         0         0         0         58         266         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0				-										2,474
Lassen														500
Los Padres   O			Klamath		0	0			0			0	0	8,986
Mendocino   465   0   0   0   465   0   814   809   0   0   0     Modoc   0   0   0   0   0   0   0   401   2,421   0   0   0     Six Rivers   0   0   0   0   0   0   558   266   0   0     Plumas   0   0   0   0   0   0   334   3,340   0   16     San Bernardino   0   0   0   0   0   0   0   0   0				1,207		0		1,207	0		2,745	0		3,580
Modoc					0	0	0	-	0			0	368	438
Six Rivers   0   0   0   0   0   0   0   558   266   0   0			Mendocino	465	0	0	0	465	0			0	0	1,623
Plumas   0   0   0   0   0   0   334   3,340   0   16     San Bernardino   0   0   0   0   0   0   0   0   0				0	0	0	0	0	0			0	0	2,822
San Bernardino   O   O   O   O   O   O   O   O   O				0	0	0	0	0	0			0	0	824
Sequoia   0   0   0   0   0   0   0   1,325   899   0   56				0	0	0	0	0	0	334	3,340	0	16	3,690
Shasta-trinity   949   0   0   0   949   0   2,334   3,524   0   311     Sierra			San Bernardino	0	0	0	0	0	0	0	0	0	0	0
Sierra   0   0   0   0   0   0   2,042   1,660   0   0   0   0   0   0   0   0   0					0	0	0	-	0			0		2,280
Stanislaus         0         0         0         27         27         0         1,161         899         0         0           Tahoe         0         0         0         0         22         22         0         3,411         3,960         0         0           Lake Tahoe Basin         0         0         0         0         0         0         0         1,751         0         0           Nevada           Inyo         0			Shasta-trinity	949	0	0	0	949	0	2,334	3,524	0	311	6,169
Tahoe         0         0         0         22         22         0         3,411         3,960         0         0         0           Lake Tahoe Basin         0         0         0         0         0         0         0         1,751         0         0           Total         2,721         0         0         61         2,782         0         18,035         29,260         0         975           Nevada           Inyo         0			Sierra	0	0	0	0	0	0	2,042	1,660	0	0	3,702
Lake Tahoe Basin         0         0         0         0         0         0         1,751         0         0           Total         2,721         0         0         61         2,782         0         18,035         29,260         0         975           Nevada           Inyo         0<			Stanislaus	0	0	0	27	27	0	1,161	899	0	0	2,060
Total         2,721         0         0         61         2,782         0         18,035         29,260         0         975           Nevada           Inyo         0<			Tahoe	0	0	0	22	22	0	3,411	3,960	0	0	7,371
Nevada           Inyo         0			Lake Tahoe Basin		0	0			0	0	1,751	0		1,751
Inyo		Tot	al	2,721	0	0	61	2,782	0	18,035	29,260	0	975	48,270
Lake Tahoe Basin         0         0         0         0         0         0         167         0         0           Total         0         0         0         0         0         0         0         167         0         0           Oregon         Klamath         16         0         0         0         16         0         0         162         0         0           Total         16         0         0         0         16         0         0         162         0         0		Nevada												
Total         0         0         0         0         0         0         167         0         0           Oregon         Klamath         16         0         0         0         16         0         0         162         0         0           Total         16         0         0         0         16         0         0         162         0         0			Inyo	0	0	0	0	0	0	0	0	0	0	0
Oregon         Klamath         16         0         0         0         16         0         0         162         0         0           Total         16         0         0         0         16         0         0         162         0         0			Lake Tahoe Basin	0	0	0	0	0	0	0	167	0	0	167
Klamath         16         0         0         0         16         0         0         162         0         0           Total         16         0         0         0         16         0         0         162         0         0		Tot	al	0	0	0	0	0	0	0	167	0	0	167
Klamath         16         0         0         0         16         0         0         162         0         0           Total         16         0         0         0         16         0         0         162         0         0		Oregon												
Total 16 0 0 0 16 0 0 162 0 0		0.090	Klamath	16	0	0	0	16	0	0	162	0	0	162
		Tot												162
2,12. 2 2 2 1 10,000 27,007 0 770		Total		2,737	0	0	61	2,798	0	18,035	29,589	0	975	48,599

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O W/Site Site Total Pre. Comm. Thinning Fertilization Region State National Forest Planted Seeded Preparation Preparation Reforestation Cleaning Release Prunina Total TSI California Siskiyou Rogue River Total Oregon 2,046 1,771 3,971 Deschutes Fremont-Winema 11,396 11,396 Malheur Mt., Hood 1.837 1,837 Ochoco 1.311 1.814 Rogue River Siskiyou Siuslaw Umatilla Umpqua Wallowa-Whitman 1,670 2,909 Willamette 1,289 1,353 9,332 6,524 Winema 4.062 4,062 Total 6.942 2,075 2.032 11.049 25.513 1,289 1.385 28,474 Washington Gifford Pinchot 1,316 1,654 Mtn. Baker-Snoqualmie Okanogan 1,512 2,313 Olympic 1,800 1,800 Umatilla 1,196 1,196 Okanogan/ Wenatche 1,283 Colville 3,565 Total 1,449 2,077 5,765 7,028 2,114 31,278 35,502 Regional Total 14,614 1,289 2,014

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O W/Site Site

				W/Site	Site	Total			Pre. Comm.			
State	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
Alabama												
	NFS in Alabama	955	0	0	361	1,316	0	1,003	0	0	0	1,003
То	tal	955	0	0	361	1,316	0	1,003	0	0	0	1,003
Arkansas												
	Ouachita	1,431	0	5,359	0	6,790	0	6,323	4,438	0	0	10,761
	Ozark-St. Francis	741	0	2,852	0	3,593	0	1,929	1,481	0	0	3,410
To	tal	2,172	0	8,211	0	10,383	0	8,252	5,919	0	0	14,171
Florida												
	NFS in Florida	1,014	654	0	0	1,668	0	0	0	0	0	0
To	tal	1,014	654	0	0	1,668	0	0	0	0	0	0
Georgia		0	0	0	500	500	0	0	128	0	0	128
	Chattaochee-Ocone	0	0	0	500	500	0	0	128	0	0	128
То	tal											
Kentucky												
	Daniel Boone	0	0	395	0	395	0	0	405	0	0	405 405
To	tal	0	0	395	0	395	0	0	405	0	0	405
Louisiana												
	Kitsachie	851	0	0	0	851	0	1,705	1,746	0	0	3,451
To	tal	851	0	0	0	851	0	1,705	1,746	0	0	3,451
Mississippi												
	NFS in Mississippi	2,815	73	315	0	3,203	0	1,832	4,042	0	0	5,874
То	tal	2,815	73	315	0	3,203	0	1,832	4,042	0	0	5,874
North Carolina												
	NFS in North Carolina	143	0	177	0	320	0	263	0	0	0	263
	NFS in North Carolina	207	0	608	0	815	0	1,745	0	0	0	1,745
То	tal	350	0	785	0	1,135	0	2,008	0	0	0	2,008
Oklahoma												
ORIGITOTTO	Ouachita	0	0	0	0	0	0	0	0	0	0	0
To	tol	0	0	0	0	0	0	0	0	0	0	0

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O

					W/Site	Site	Total			Pre. Comm.			
Region	State	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
8 (cont)	Puerto Rico												
		Caribbean	0	0	0	0	0	0	0	0	0	0	0
	To	tal	0	0	0	0	0	0	0	0	0	0	0
	South Carolina												
		Francis-Marion	130	0	439	0	569	0	206	0	0	0	206
	To	tal	130	0	439	0	569	0	206	0	0	0	206
	Tennessee												
		Cherokee	0	0	0	0	0	0	842	0	0	0	842 842
	To	tal	0	0	0	0	0	0	842	0	0	0	842
	Texas	NFS in Texas	112	0	85	18	215	0	166	505	0	0	671
	To	tal	112	0	85	18	215	0	166	505	0	0	671
	Virginia												
	3	George Washington/Jeff	0	0	882	0	882	0	820	155	0	0	975
		George Washington/Jeff	12	0	159	25	196	0	45	609	0	0	654
	Total West Virginia Total	tal	12	0	1,041	25	1,078	0	865	764	0	0	1,629
		George Washington/Jeff	0	0	67	0	67	0	141	116	0	0	257
		tal	0	0	67	0	67	0	141	116	0	0	257
		REGIONAL TOTAL	8,411	727	11,338	904	21,380	0	17,020	13,625	0	0	30,645

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O W/Site Site

				W/Site	Site	Total			Pre. Comm.			
State	National Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
Illinois												
	Shawnee	638	0	0	0	638	0	0	0	0	0	0
To	otal	638	0	0	0	638	0	0	0	0	0	0
Indiana												
malana	Hoosier	0	0	0	0	0	0	0	0	0	0	0
To		0	0	0	0	0	0	0	0	0	0	0
Maine												
Mairio	White Mountain	0	0	0	0	0	0	0	0	0	0	0
To	otal	0	0	0	0	0	0	0	0	0	0	0
Michigan												
3	Huron Manistee	230	0	817	68	1,115	0	28	0	0	0	28
	Ottawa	645	0	867	6,755	8,267	0	0	0	0	0	0
	Hiawatha	1,049	705	2,083	1,253	5,090	0	1,723	0	0	387	2,110 2,138
Te	otal	1,924	705	3,767	8,076	14,472	0	1,751	0	0	387	2,138
Minnesota												
	Chippewa	918	151	2,981	435	4,485	0	715	0	0	40	755
	Superior	1,367	144	0	2,668	4,179	0	2,158	0	0	25	2,183
Te	otal	2,285	295	2,981	3,103	8,664	0	2,873	0	0	65	2,938
Missouri												
	Mark Twain	220	0	3,508	293	4,021	0	93	2,453	0	0	2,546
Te	otal	220	0	3,508	293	4,021	0	93	2,453	0	0	2,546
New Hampshire												
	White Mountain	0	0	435	1,266	1,701	0	55	0	0	0	55 55
To	otal	0	0	435	1,266	1,701	0	55	0	0	0	55
New York												
	Green Mountain	0	0	0	0	0	0	0	0	0	0	0
Te	otal	0	0	0	0	0	0	0	0	0	0	0
=	Illinois  Indiana  Tri Maine  Michigan  Tri Minnesota  Tri Missouri  Tri New Hampshire  Tri New York	Illinois Shawnee Total Indiana Hoosier Total Maine White Mountain Total Michigan Huron Manistee Ottawa Hiawatha Total Minnesota Chippewa Superior Total Missouri Mark Twain Total New Hampshire White Mountain Total New York	Illinois	Illinois	State   National Forest   Planted   Seeded   Preparation	State   National Forest   Planted   Seeded   Preparation   Preparation	State   National Forest   Planted   Seeded   Preparation   Preparation   Reforestation	State   National Forest   Planted   Seeded   Preparation   Preparation   Reforestation   Cleaning	State   National Forest   Planted   Seeded   Preparation   Preparation   Reforestation   Cleaning   Release	State   National Forest   Planted   Seeded   Preparation   Preparation   Reforestation   Cleaning   Release   Thinning	National Forest   Planted   Seeded   Preparation   Reforestation   Cleaning   Release   Thinning   Retilization	State   National Forest   Planted   Seeded   Preparation   Preparation   Reference   Ref

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

Natural Natural Regen Regen W/O

W/Site Pre. Comm. Site Total Seeded Preparation Preparation Reforestation Thinning Fertilization National Forest Total TSI Region Planted Cleaning Release Pruning Ohio Total Pennsylvania 445 Allegheny 445 Total Vermont Green Mountain 259 49 320 320 Total 259 Wisconsin Chequamegon/Nicolet 908 59 2,119 2,301 5,387 366 Chequamegon/Nicolet 281 1,881 242 2,404 330 330 Total 1,189 4,000 2,543 West Virginia Monongahela 345 345 Total 345 Regional Total 6,347 1,059 15,697 15,373 38,476 5,736 2,453 452 8,641 0 0

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

Table 6 - Reforestation and timber stand improvement acreages certified as satisfactory stocked - by region, State and national forest 1/

					Natural	Natural							
					Regen	Regen W/O							
		National			W/Site	Site	Total		1	Pre. Comm.			
Region	State	Forest	Planted	Seeded	Preparation	Preparation	Reforestation	Cleaning	Release	Thinning	Fertilization	Pruning	Total TSI
10	Alaska												
		Chugach	0	0	0	0	0	0	0	0	0	0	0
		Tongass	53	0	0	3,879	3,932	0	0	3,525	0	0	3,525
	Regional Tot	tal	53	0	0	3.879	3.932	0	0	3.525	0	0	3.525

<sup>1/</sup> Data source is Annual Reforestation and TSI Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Sec 4(d)(1).

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#### **Genetic Resources Accomplishments**

The Northern Region (R-1) continues its genetics and tree improvement work with larch, Douglas-fir, lodgepole, ponderosa, Whitebark, and western white pine. During FY 2004, the Region established four new plantations on 41 acres to evaluate the genetic work in forest health traits of ponderosa pine Idaho mid and Montana low breeding zone, bringing the total genetic test area to 1.106 acres.

The region continues their active seed orchard management to meet both operational and restoration needs in larch, ponderosa, and western white pine. There is a total of 130 acres dedicated as seed orchards, with 2.5 new acres established in FY 2004. Clone bank establishment and maintenance also occurred in these three species, along with Douglas-fir and lodgepole pine, with 7 new acres established in FY 2004, with a total of 51 acres overall. Tenyear plans were drafted for all tree improvement management areas.

R-1 continues to make strides in the genetic restoration program for Whitebark pine. Nine new plus tree cone collections were made bringing the 51% of the target goal accomplished thus far. The 11 O-seed source study was completed in September and promising areas showing resistance to blister rust have been identified along with refining seed transfer guidelines for Whitebark pine. Approximately 27 grams of acciospores were collected for continued rust resistance screening. During 2004, cone crop yields were moderate across the northern region. In addition to Whitebark pine, there were 57 new western white and two ponderosa pine plus tree cone collections made, bringing the regional total 16,300 trees.

The Intermountain (R-4) and Northern Region continue to work cooperatively in activities associated with the maintenance of five Ponderosa pine seed orchards and five clone banks at Salmon River Seed Orchard on the Nez Perce NF. Plus tree identification and cone collections in Whitebark pine were made on the Boise, Humboldt-Toiyabe and Payette NF's in cooperation with the Northern Region, for the joint development of blister rust resistance and genetic restoration of this five-needle pine. Two genetic service visits were conducted on the Salmon-Challis and Dixie NF's in FY 2004.

When the five clone banks are fully established, there will be 1,176 unique genotypes, with 150 duplicated in the seed orchards. In summary, no new clones were established and no new acreage was cleared in the seed orchards or clone banks.

The Pacific Southwest Region (R-5) continues its work with Sugar pine and other five-needle pines blister rust resistance. Cooperation continues with State and Private Forestry (S&PF), and forest industry partners in the collection of scion wood for grafting from 50 Major Gene Resistant (MGR) wild-stand parent trees in the Central Zone (Sierra Nevada). The Region established and protected 238 ramets representing 70 clones of rust resistant sugar pine on 2.46 acres at the Foresthill Genetics Center orchard (Tahoe NF). In addition, 122 ramets were established and protected representing 48 clones of rust resistant sugar pine at the Badger Hill Breeding Arboretum (Eldorado NF).

Collections of scion material for clone bank and seed orchard establishment from 56 Sugar pine rust resistant selected trees and 31 other trees for North Zone MGR orchards were made. In addition, recollections were made as needed to support orchard needs, including nine new

#### ANNUAL REFORESTATION AND TIMBER STAND ACCOMPLISHMENT REPORT FY 2004 Appendix C

collections for the Chico production sugar pine orchard and eight collections for field grafting at Sierra Pacific Industry's sugar pine orchard.

R-5 continues its technical support and personnel to mark ponderosa pine evaluation plantations (7) for thinning into a seedling seed orchard on the Plumas, Sierra, and Sequoia National Forests.

In addition, technical support and personnel was provided to mark a sugar pine evaluation plantation for thinning into a genetic conservation plantation. Regional specialists cooperated with other Federal and State scientists and administrators, and members of the public investigating the detection of a (currently believed) air-bourn inoculation by pitch canker (*Fusarium circinatum*) at the Badger Hill Arboretum.

R-5 converted 19 acres of previously established Evaluation Plantations in the Mendocino NF into Seed Production Areas. Work was conducted at the Ash Creek Orchard Procone Trial to stimulate floral production on 11 yr old ponderosa pine grafts from superior trees by injecting Procone<sup>TM</sup> a flowering hormone into 67 grafts.

The regions' continues its efforts to develop Sugar Pine/Five-needle Pines Rust Resistance and for that purpose sugar pine, foxtail pines and whitebark pines in the southern and central Sierra, and ten limber pines in one southern California national forest were identified rust-resistant candidate trees and cones were collected from these trees for seedling rust screening, in addition cone collections from 112 candidates were made from private industry lands.

A three-year study was developed in cooperation with State and Private Forestry (S&PF) to assess the impact of white pine blister rust on five species of white pine in California. In addition, to the study cone, collections were made from 1,600 sugar, 100 limber pines, field surveys were conducted, and blister rust monitor plots were established in southern California.

Blister rust resistance screening continued at the Placerville Nursery. During 2004, 552 seedling families from new sugar pine candidate trees and identified trees with major gene resistance (MGR) were screened at the nursery. In addition, additional screening was done to 243 seedling families from rust-susceptible sugar pines and identified 473 MGR seedlings, due to MGR-pollen, from 195 of those parent trees at the Placerville Nursery. R-5 completed the final inoculation of ponderosa pine seedlings with dwarf mistletoe seeds to evaluate seed lots with different expected resistance levels. A progeny test plantation was established to evaluate dwarf mistletoe resistant Jeffrey pine parent trees on the Lake Tahoe Basin Management Unit. Work was done in cooperation with at North Sierra Tree Improvement

Association. Forest Service provided support in controlled-pollination, seed collection and extraction, seed lot preparation, data design, management, and analysis for a 2nd generation ponderosa progeny evaluation program. Seedlings from 303 pedigreed families and 23 control lots were grown at the Chico Genetic Resources Conservation Center nursery. Data from these and future plantings will be shared with the Forest Service.

R-5 regional office, forest specialists, and member of the California Department of Forestry combined efforts in performing new controlled crosses and collected seed from earlier crosses among wild-stand Monterey pines. This effort is geared to obtain a better understanding of the inheritance of pitch canker resistance in Monterey pine.

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R-5 geneticists and partners performed 51 controlled crosses between grafted Douglas-fir clones of superior growth performance in two orchards for 2nd generation genetic testing in cooperation with state and forest industry partners.

The Pacific Northwest Region (R-6) continues to maintain 271 seed orchards and clone banks. On the westside of the region, these seed orchards have been thinned to contain the best parents and families based on evaluation plantation data. On the eastside, ponderosa pine and western larch seed orchards will produce badly needed seed for reforestation following wildfires.

The Region's western white pine and sugar pine seed orchards are producing seed resistant to white pine blister rust (*Cronartium ribicola*). The seed orchard and clone bank for Port Orford Cedar at the Dorena Genetic Resource Center is providing seed resistant to *Phytophthora* lateralis root rot for both the USFS and the BlM in southwest Oregon.

The Southern Region (R-8) continues its effort to plant northern red and white oak demonstration areas in an effort to exhibit seedling quality characteristics, planting methods, site preparation techniques and animal damage protection for southern upland hardwoods in artificial regeneration settings. These sites are in cooperation with the Southern Research Station's Institute of Tree Root Biology and the Georgia Forestry Commission. No new clones, families, or acres established or superior tree selections occurred in FY 2004.

The Eastern Region (R-9) is adapting its program to reflect the goals listed in the Strategic Plan for Genetic Resource Management. This includes maintaining genetically diverse seed orchards and evaluating the opportunities for the Genetics Resources Program to address problems created by exotic diseases, including white pine blister rust, butternut canker and chestnut blight.

There is great demand for seed from the Region's rust resistant white pine seed orchard. This orchard was established before the value of genetic diversity was widely recognized and relatively little is known about its origin. Foliage samples from this orchard and clones of known origin in the Region's clone bank were sent to National Forest Genetic Electrophoresis laboratory for DNA analysis.

Much of R-9 disease work has focused on reviving blister rust screening. A number of tests were initiated to develop screening techniques including ones to determine the best age for test seedlings, how to overcome water quality problems, and which inoculation techniques to use. Designing a blister rust screening and breeding program for eastern white pine requires some basic information on inheritance of resistance that is lacking for this species. Seed from controlled crosses between known blister rust resistant and susceptible parents was planted for an inoculation test that will address these questions. Controlled crosses were made between select trees from the Superior NF and known resistant and susceptible parents to further address these questions and to start an operational blister rust screening program.

A test was established to determine the efficacy of direct seeding of jack pine. Direct seeding is very popular in the lake States, but it consumes large quantities of seed and there is little evidence that it works under operational conditions. Results will be available in 3 years.

The region collected 1,100 bushels of shortleaf pine cones from the seed orchard located in Region 8 for use in the Mark Twain NF in Missouri. In addition, 52 bushels of black spruce and 30 bushels of jack pine were collected from the Oconto River Seed Orchard. These are to be used for reforestation projects in forest in Minnesota.

### TREE SPECIES SYMBOLS Hardwoods

Forest Survey Code	USDA-NRCS PLANTS Symbol	Common Name
0.47	10010	0
317	ACSA2	Silver maple
318	ACSA3	Sugar maple
351	ALRU2	Red alder
371	BEAL2	Silver maple
400	CARYA	Hickory
541	FRAM2	White ash
544	FRPE	Green ash
601	JUCI	Butternut
602	JUNI	Black walnut
621	LITU	Tulip tree/Yellow poplar
651	MAAC	Cucumber tree
740	POPUL	Poplar
762	PRSE2	Black cherry
800	QUERC	Oak
802	QUAL	White oak
805	QUCH2	Canyon live oak
812	QUFA	Southern red oak
823	QUMA2	Bur oak
825	QUBI	Swamp chestnut oak
827	QUNI	Water oak
828	QUNU	Nuttal oak
830	QUPA2	Pin oak
832	QUPR2	Chestnut oak
833	QURU	Northern red oak
000	20110	Red sand verbena (forb)
		rtod sand verbena (101b)

### TREE SPECIES SYMBOLS Conifers

Forest	USDA-NR	Forest	USDA-NRCS		
Survey	PLANTS		Survey	PLANTS	
Code	Symbol	Common Name	Code	Symbol	Common Name
12	ABBA	Balsam fir	110	PIEC2	Shortleaf pine
15	ABCO	White fir	111	PIEL	Slash pine
268	ABLA	Subalpine fir	116	PIJE	Jeffrey pine
20	ABMA	California red fir	117	PILA	Sugar pine
21	ABMAS	Shasta red fir	119	PIMO3	Western white pine
22	ABPR	Noble fir	121	PIPA2	Longleaf pine
41	CHLA	Port Orford-cedar	122	PIPO	Ponderosa pine
42	CHNO	Alaska yellow-cedar	125	PIRE	Red pine
68	THOC2	Northern white cedar	129	PIST	Eastern white pine
71	LALA	Tamarack	131	PITA	Loblolly pine
73	LAOC	Western larch	132	PIVI2	Virginia pine
N/A	LAOCW 1/	Western larch	202	PSME	Douglas-fir
81	LIDE	Incense-cedar	N/A	PSMEE 2/	Douglas-fir
101	PIAL	Whitebark pine	N/A	PSMEW 3/	Douglas-fir
90	PICEA	Spruce	212	SEG12	Giant sequoia
91	PIMA	Black spruce	221	TADI2	Baldcypress
93	PIEN	Englemann spruce	N/A	THOC2	Arborvitae
94	PIGL	White spruce	242	THPL	Western red cedar
95	PIAB	Norway spruce	261	TSCA	Eastern hemlock
98	PISI	Sitka spruce	263	TSHE	Western hemlock
105	PIBA2	Jack pine	264	TSME	Mountian hemlock
108	PICO	Lodgepole pine			
N/A	PIAT2	Pinus xattenuradiata			

<sup>1/</sup> Western larch west of the Cascade Mountain

<sup>2/</sup> Douglas-fir east of the Cascade Mountain

<sup>3/</sup> Douglas - fir west of the Cascade Mountain