

**DOUGLAS COUNTY FOREST
COMPREHENSIVE LAND-USE PLAN 2006-2020**

**CHAPTER 5000
Monitoring**

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Table 5005.1 continued...

Timber Type	Number of Acres					Acre Change 1977-2006	Percent Change 1977-2006
	1977	1992	1998	2000	2006		
Alder	30,072	31,043	31,032	25,414	26,262	- 3,810	- 13%
Grasses and Herbaceous Veg	1,261	1,848	1,747	1,553	1,532	+ 271	+ 21%
Industrial	---	1,129	1,156	631	670	N/A	N/A
Lake, River, Stream	---	1,131	961	1,324	1,320	N/A	N/A
Lowland Brush	7,945	7,358	7,353	3,233	1,808	- 6,137	- 77%
Marsh, Bog, Emergent Veg	15,588	10,128	10,127	17,749	18,088	+ 2,500	+ 16%
Upland Brush	1,693	2,118	2,090	1,189	1,254	- 439	- 26%
Total Non-Forest Area	56,722	58,089	58,105	55,148	55,462	+ 1,260	+ 2%

5010 TIMBER MANAGEMENT

One of the primary principles of sustainable forest-management on the Douglas County Forest is economics. By applying economically sustainable management activities, particularly timber harvesting, the DCFD can derive the benefits of sustained revenue over time while maintaining the County Forest as an asset to the citizens of Douglas County.

5010.1 Timber Sales

This section monitors the historical timber sales record for the Douglas County Forest. Since the first timber sale on the Forest in 1940, annual revenues generated from the sales and subsequent harvests of timber have increased steadily. The Forest has been economically productive partly due to the increase in the stumpage price of timber over the years. Another reason for the gain in value is that forest-management over the years has resulted in an increase in both timber quality and growth rates. Managing for and increasing the amount of high-value, highly desirable species also has contributed to the increase in value. The key to this substantial revenue generation is proper, long-term management of the Forest using TSI and multiple intermediate treatments, and following these with regeneration practices that maximize site potential. Averaged over several years and across multiple decades, the economic performance of the Douglas County Forest has established itself in terms of reliability.

Table 5010.1 shows the Douglas County Forest Timber Sales Record from 1940 to 2006 based on the annual County and State Forest Timber Sale Report (36A) published by the WDNR. It is important to analyze trends in revenue and markets over many years because the timing of harvest, markets and other factors can cause any one year to be above or below average. Revenue and the volume harvested in total cords equivalent may vary from year to year but overall they have shown a continual increase since 1940. From the early 1990's to 2006, this increase became more significant as demand increased and more markets opened for more species. Harvested total cord equivalent volume from 1996 to 2006 has ranged from 66,463 to 98,723 cords and revenue generated has ranged from \$1.2 to \$2.9 million. The 11-year average for total harvested cord

equivalent volume is 83,133 cords; the average for revenue generated during this period is \$1.9 million.

Table 5010.1
Douglas County Forest Timber Sales Record 1940 to 2006

Year	Number of Sales Harvested	Acres Harvested	Harvested Saw-Timber (MBF)	Harvested Pulpwood (Cords)	Total Harvested Cords Equivalent	Total Value of Harvested Sales
1940	2	83	2.5	49	221	\$280.28
1941	12	187	1.39	547	563	\$1,193.27
1942	6	177	143.64	465	751	\$1,585.17
1943	8	162	118.77	50	833	\$2,670.42
1944	7	307	55.11	361	472	\$1,672.43
1945	10	300	18.43	1,136	1,173	\$1,621.10
1946	18	945	83.03	6,020	6,209	\$7,542.69
1947	32	1,280	83.41	7,853	8,173	\$12,416.26
1948	28	1,204	150.35	10,612	11,003	\$20,322.66
1949	27	2,554	112.58	20,409	20,883	\$33,319.38
1950	36	3,144	188.98	20,837	19,472	\$50,611.50
1951	34	1,124	106.84	5,932	6,298	\$20,016.78
1952	41	1,474	266.47	11,843	12,446	\$24,568.17
1953	40	1,273	72.11	13,656	14,020	\$29,480.61
1954	40	2,466	301.85	21,092	21,806	\$51,016.23
1955	39	1,482	214.59	7,782	8,369	\$30,371.73
1956	37	595	39.79	3,661	3,760	\$11,826.93
1957	24	476	15.24	2,665	2,665	\$8,869.19
1958	54	1,265	29.51	8,582	8,582	\$25,311.96
1959	76	2,632	172.83	14,458	14,458	\$46,790.42
1960	130	3,962	581.22	27,619	27,619	\$75,478.30
1961	52	1,267	85.87	8,627	8,627	\$23,466.82
1962	52	1,353	15.72	5,957	5,957	\$17,641.83
1963	71	1,694	24.02	9,468	9,468	\$24,084.07
1964	72	1,601	76.71	8,937	8,937	\$26,133.78
1965	105	4,303	24.55	22,571	22,571	\$53,852.01
1966	115	2,948	64.8	19,894	19,894	\$45,364.75
1967	59	1,278	32.31	10,846	10,846	\$23,183.68
1968	130	2,403	116572	28,533	18,533	\$69,973.85
1969	83	2,190	155.5	15,965	17,352	\$38,173.31
1970	80	2,043	0	14,473	14,473	\$31,769.27
1971	72	2,311	289.98	16,101	16,101	\$44,858.85
1972	46	1,550	14.4	12,898	12,898	\$38,412.04
1973	51	1,518	10.45	9,814	9,814	\$25,812.12
1974	68	2,216	5.04	17,439	17,439	\$65,441.60
1975	43	1,468	12.48	10,749	10,737	\$38,745.68
1976	43	1,486	24.87	11,155	11,144	\$54,504.31
1977	50	2,163	75.89	21,408	21,567	\$119,851.00

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Table 5010.1 continued...

Year	Number of Sales Harvested	Acres Harvested	Harvested Saw-Timber (MBF)	Harvested Pulpwood (Cords)	Total Harvested Cords Equivalent	Total Value of Harvested Sales
1978	65	3,078	125	27,418	27,668	\$136,245.00
1979	29	959	198	7,912	8,308	\$53,895.00
1980	54	2,233	173	28,717	29,063	\$117,263.00
1981	36	2,335	18	20,404	20,440	\$99,219.00
1982	59	2,811	36	33,940	34,012	\$260,659.00
1983	33	1,418	0	20,060	20,060	\$177,744.00
1984	61	1,969	7.7	28,981	28,997	\$247,042.00
1985	57	1,542	17	22,176	22,210	\$187,030.00
1986	58	2,244	169	32,340	32,678	\$203,543.00
1987	64	3,674	38	51,288	51,382	\$280,001.00
1988	71	3,489	164.83	34,287	34,671	\$159,230.00
1989	96	4,386	209	55,555	56,040	\$313,833.00
1990	97	4,991	127.86	87,173	87,466	\$310,755.00
1991	99	3,541	330	63,193	63,938	\$371,621.00
1992	74	2,894	139.21	64,005	64,329	\$388,889.00
1993	79	3,513	197.01	70,510	70,974	\$513,404.00
1994	77	3,249	198.66	75,521	75,984	\$738,274.00
1995	55	3,542	4026.34	68,205	76,884	\$760,958.00
1996	76	4,438	65.28	93,377	93,526	\$1,318,468.00
1997	77	4,070	106.21	88,967	89,225	\$1,278,641.57
1998	48	2,573	150.77	66,096	66,463	\$1,318,894.11
1999	71	3,365	241.57	86,615	87,164	\$1,845,187.23
2000	69	3,757	837.23	76,348	78,224	\$1,755,691.33
2001	70	3,802	477.71	92,759	93,880	\$1,861,928.22
2002	78	2,827	323.05	71,299	72,043	\$1,639,645.94
2003	56	2,980	222.02	71,403	71,236	\$1,913,230.31
2004	92	4,659	209.02	98,163	98,723	\$2,711,105.82
2005	74	3,903	276.97	95,245	95,882	\$2,906,078.70
2006	54	3,323	128.26	67,817	68,099	\$2,862,304.14
TOTAL	3,822	152,449	129,455.93	2,130,238	2,145,703	\$27,929,014.82

Figure 5010.1 shows the harvested acreage and total cords equivalent between 1940 and 2006. The average annual percentage change in harvested total cords equivalent during this time has been an increase of 28 percent (1,028 cords) compared to only a 19 percent increase (49 acres) in total acres harvested. The average annual change in the harvested acreage has been +/- 737 acres and the average total cords equivalent harvested has been +/- 9,007 cords.

Figure 5010.1
Harvested Acreage and Total Cords Equivalent for the
Douglas County Forest 1940 to 2006

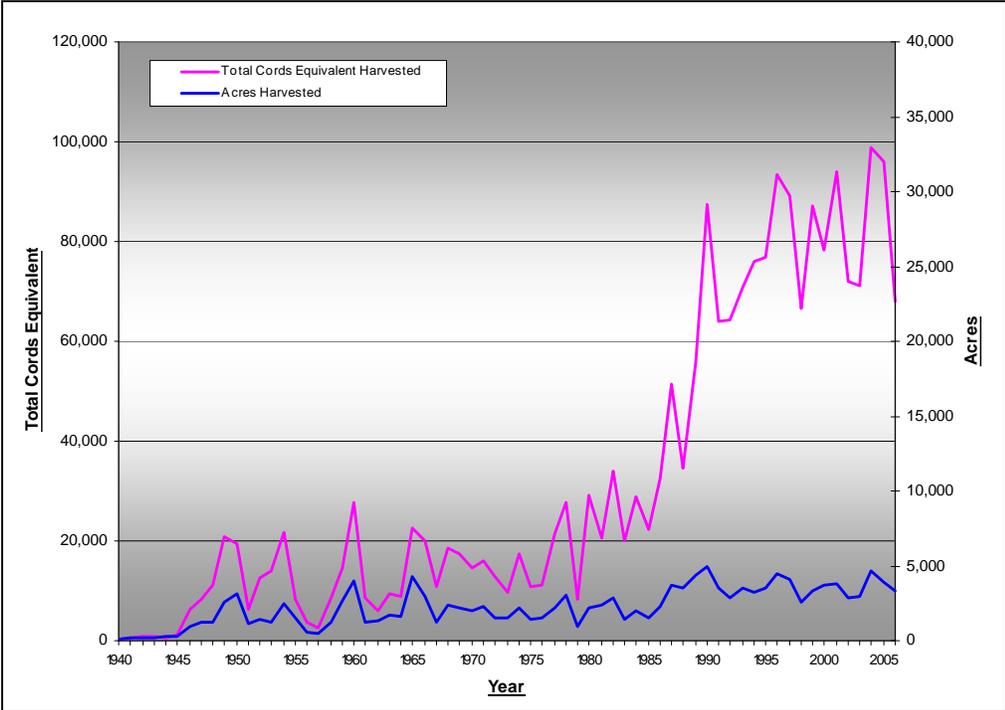


Figure 5010.2 shows the total value of harvested sales and the average purchase price per cord between 1940 and 2006. During this period, the average annual percentage change in total value of harvested sales was an increase of 34 percent (\$43,364). The annual average purchase price per cord for all offered species was an increase of 9 percent (\$0.62). The average annual change in the total value of harvested sales has been +/- \$73,933 and the average purchase price per cord has been +/- \$1.24.

Figure 5010.2
Value of Harvested Sales and the Average Purchase Price per Cord for the Douglas County Forest 1940 to 2006

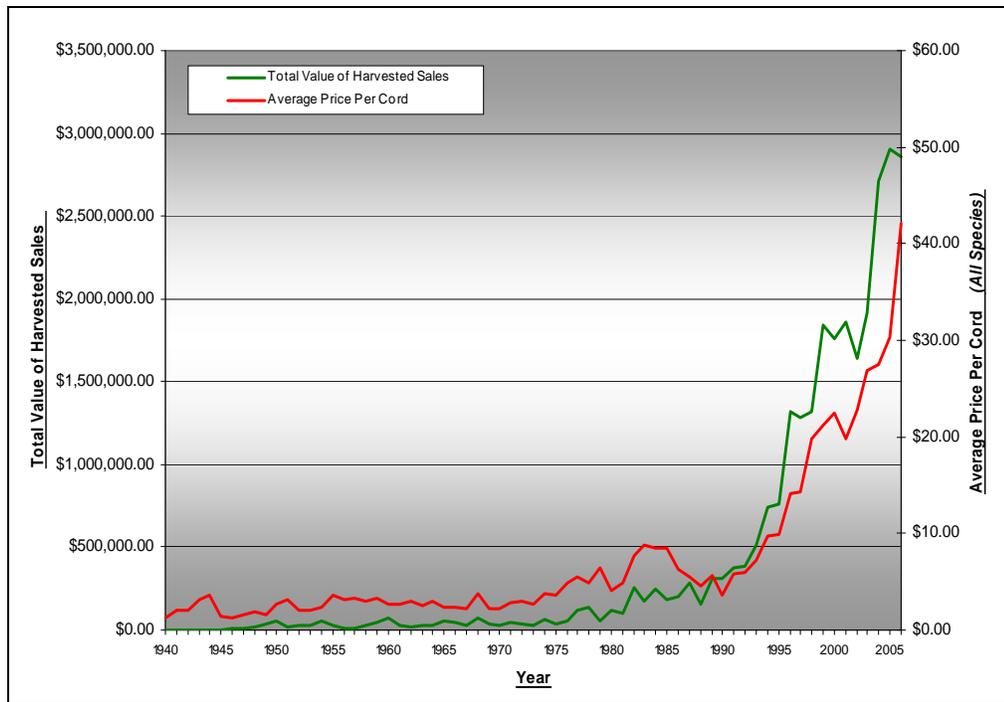
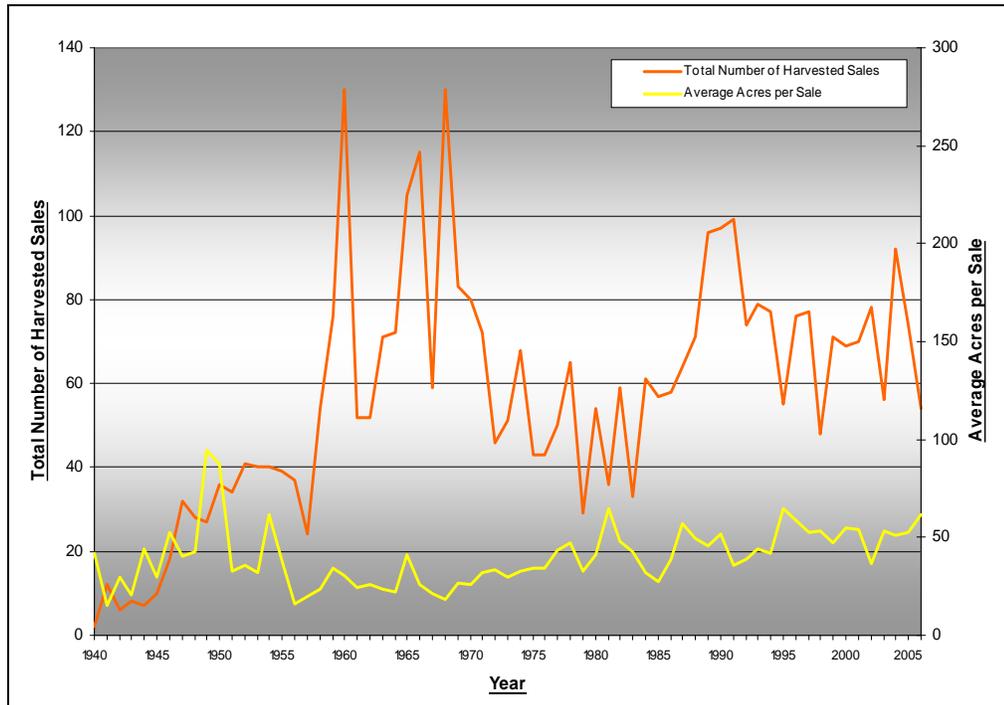


Figure 5010.3 shows the total number of harvested sales and the average acres harvested per sale between 1940 and 2006. During this period, the average annual percentage change in total number of harvested sales was an increase of 17 percent (1 sale). The annual average acreage per sale was an increase of 7 percent (0.30 acres). The average annual change in total number of harvested sales has been +/-16 sales and the annual average acreage per sale has been +/-10 acres.

Figure 5010.3
Number of Harvested Sales and Average Acreage per Sale for the Douglas County Forest 1940 to 2006



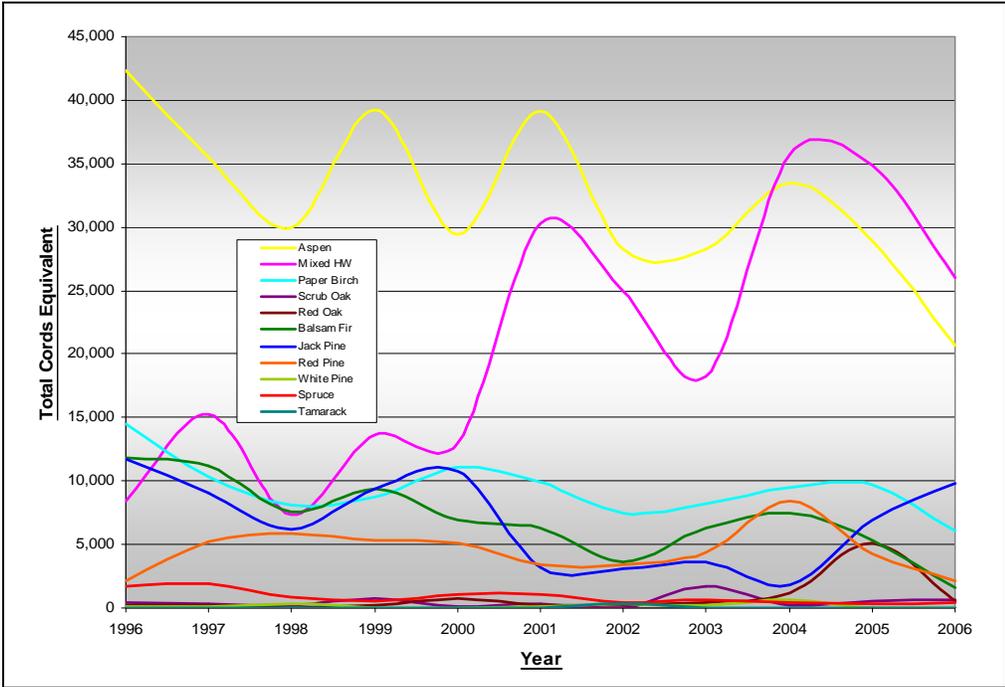
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Table 5010.2 and Figure 5010.4 show the total volume harvested from the Douglas County Forest by species from 1996 to 2006. This data are based on the annual report on Public Forest Timber Harvest Data published by the WDNR.

Table 5010.2
Total Volume Harvested from the
Douglas County Forest by Species 1996 to 2006
Volumes reported as total cords equivalent

Species	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aspen	42,376	35,539	29,979	39,216	29,425	39,164	28,219	28,277	33,445	28,899	20,717
Mixed HW	8,447	15,269	7,326	13,690	12,977	30,235	24,991	18,237	35,771	34,914	26,038
Paper Birch	14,502	10,290	8,158	8,788	11,113	9,892	7,489	8,204	9,459	9,674	6,076
Scrub Oak	402	314	220	701	75	299	42	1,725	175	525	611
Red Oak	248	264	17	184	796	245	199	397	1,120	5,068	577
Balsam Fir	11,881	11,181	7,600	9,402	6,893	6,295	3,621	6,280	7,452	5,353	1,588
Jack Pine	11,678	9,106	6,160	9,369	10,743	3,201	3,087	3,587	1,826	6,900	9,853
Red Pine	2,155	5,239	5,825	5,281	5,077	3,408	3,364	4,363	8,400	4,225	2,176
White Pine	127	88	361	6	45	58	310	203	615	21	0
Spruce	1,703	1,925	817	528	1,079	1,055	428	653	395	304	464
Tamarack	7	11	0	0	0	29	293	0	0	0	0
TOTAL	93,526	89,225	66,463	87,164	78,224	93,880	72,043	71,927	98,658	95,882	68,099

Figure 5010.4
Total Volume Harvested from the Douglas County Forest by Species 1996 to 2006
Volumes reported as total cords equivalent



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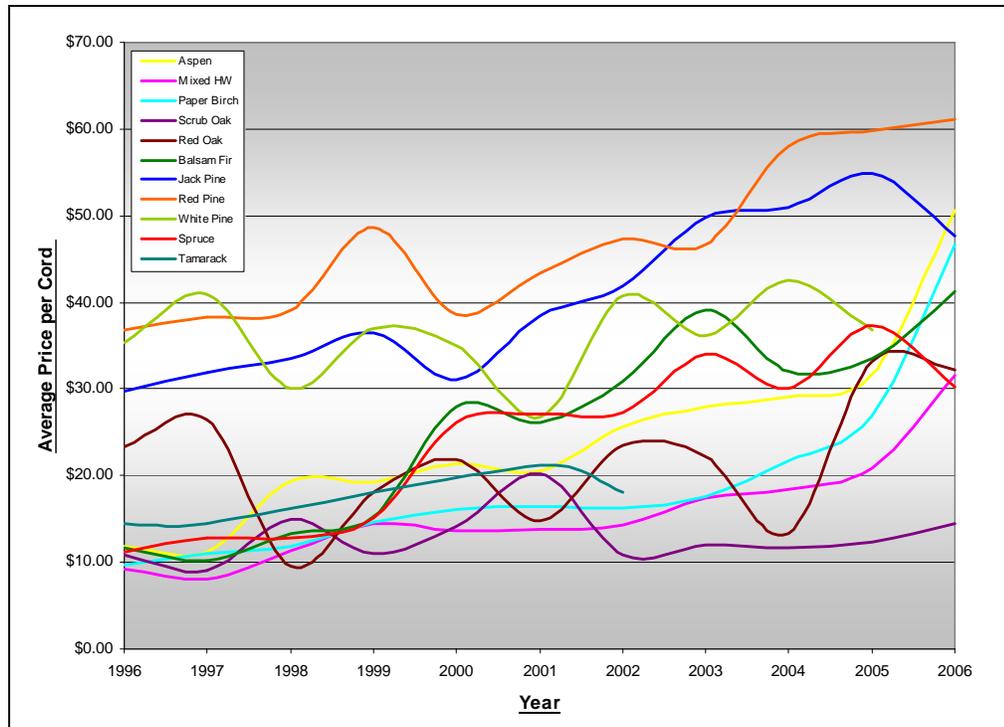
Table 5010.3 shows the total value of volume harvested from the Douglas County Forest by species from 1996 to 2006. The data are based on the annual report on Public Forest Timber Harvest Data report published by the WDNR.

**Table 5010.3
Total Value of Volume Harvested from the
Douglas County Forest by Species 1996 to 2006**

Species	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aspen	\$501,839	\$398,860	\$579,697	\$755,963	\$629,078	\$805,687	\$724,291	\$787,599	\$975,306	\$918,136	\$1,048,236
Mixed HW	\$78,028	\$122,120	\$82,784	\$197,824	\$177,358	\$417,234	\$358,017	\$318,495	\$656,128	\$731,396	\$820,667
Paper Birch	\$141,037	\$113,782	\$96,077	\$129,137	\$179,292	\$163,074	\$122,363	\$144,324	\$205,091	\$260,060	\$283,375
Scrub Oak	\$4,380	\$2,862	\$3,273	\$7,745	\$1,061	\$6,066	\$455	\$20,674	\$2,032	\$6,474	\$8,863
Red Oak	\$5,775	\$6,996	\$165	\$3,314	\$17,387	\$3,637	\$4,693	\$8,788	\$14,907	\$167,790	\$18,608
Balsam Fir	\$137,931	\$114,088	\$101,395	\$143,460	\$192,563	\$164,152	\$111,635	\$245,262	\$238,974	\$179,149	\$65,617
Jack Pine	\$346,552	\$290,579	\$206,474	\$342,250	\$333,169	\$123,226	\$129,330	\$178,522	\$92,854	\$378,300	\$469,924
Red Pine	\$79,413	\$200,944	\$227,644	\$257,256	\$195,947	\$148,038	\$159,318	\$203,262	\$486,792	\$252,677	\$132,965
White Pine	\$4,484	\$3,599	\$10,854	\$213	\$1,580	\$1,540	\$12,628	\$7,333	\$26,147	\$764	
Spruce	\$19,042	\$24,655	\$10,531	\$8,026	\$28,256	\$28,669	\$11,643	\$22,238	\$11,847	\$11,333	\$14,048
Tamarack	\$98	\$155				\$605	\$5,272				
TOTAL	\$1.3M	\$1.2M	\$1.3M	\$1.8M	\$1.7M	\$1.8M	\$1.6M	\$1.9M	\$2.7M	\$2.9M	\$2.8M

Figure 5010.5 shows the annual average price per cord equivalent per species for all harvested sales from 1996 to 2006.

Figure 5010.5
Annual Average Price per Cord Harvested from the
Douglas County Forest by Species 1996 to 2006



5010.1.1 Aspen

The harvested total cord equivalent volume for aspen from 1996 to 2006 has ranged from 20,717 to 42,376 cords per year and the per-cord equivalent price has ranged from \$11.22 to \$50.60. The 1996 to 2006 average of total harvested cord equivalent volume for aspen is 32,296 cords per year and the per-cord equivalent price is \$24.43.

5010.1.2 Mixed Hardwood

The harvested total cord equivalent volume for Mixed HW from 1996 to 2006 has ranged from 7,326 to 35,771 cords per year and the per-cord equivalent price has ranged from \$8.00 to \$31.52. The 1996 to 2006 average of total harvested cord equivalent volume for Mixed HW is 20,718 cords per year and the per-cord equivalent price is \$15.73.

5010.1.3 Paper Birch

The harvested total cord equivalent volume for paper birch from 1996 to 2006 has ranged from 6,076 to 14,502 cords per year and the per-cord equivalent price has ranged from \$9.73 to \$46.64. The 1996 to 2006 average of total harvested cord equivalent volume for paper birch is 9,422 cords per year and the per-cord equivalent price is \$19.00.

5010.1.4 Scrub Oak

The harvested total cord equivalent volume for scrub oak from 1996 to 2006 has ranged from 42 to 1,725 cords per year and the per-cord equivalent price has ranged from \$9.10 to \$20.27. The 1996 to 2006 average of total harvested cord equivalent volume for scrub oak is 463 cords per year and the per-cord equivalent price is \$12.86.

5010.1.5 Red Oak

The harvested total cord equivalent volume for red oak from 1996 to 2006 has ranged from 17 to 5,068 cords per year and the per-cord equivalent price has from \$9.47 to \$33.11. The 1996 to 2006 average of total harvested cord equivalent volume for northern red oak is 829 cords per year and the per-cord equivalent price is \$21.67.

5010.1.6 Balsam Fir

The harvested total cord equivalent volume for balsam fir from 1996 to 2006 has ranged from 1,588 to 11,881 cords per year and the per-cord equivalent price has ranged from \$10.20 to \$41.33. The 1996 to 2006 average of total harvested cord equivalent volume for balsam fir is 7,049 cords per year and the per-cord equivalent price is \$25.56.

5010.1.7 Jack Pine

The harvested total cord equivalent volume for jack pine from 1996 to 2006 has ranged from 1,826 to 11,678 cords per year and the per-cord equivalent price has ranged from \$29.68 to \$54.83. The 1996 to 2006 average of total harvested cord equivalent volume for jack pine is 6,865 cords per year and the per-cord equivalent price is \$40.56.

5010.1.8 Red Pine

The harvested total cord equivalent volume for red pine from 1996 to 2006 has ranged from 2,155 to 8,400 cords per year and the per-cord equivalent price has ranged from \$36.84 to \$61.10. The 1996 to 2006 average of total harvested cord equivalent volume for red pine is 4,501 cords per year and the per-cord equivalent price is \$47.08.

5010.1.9 White Pine

The harvested total cord equivalent volume for white pine over from 1996 to 2006 has ranged from none to 615 cords per year and the per-cord equivalent price has ranged from \$26.77 to \$42.52. The 1996 to 2006 average of total harvested cord equivalent volume for white pine is 167 cords per year and the per-cord equivalent price is \$36.12.

5010.1.10 Spruce

The harvested total cord equivalent volume for spruce (both white and black) from 1996 to 2006 has ranged from 304 to 1,925 cords per year and the per-cord equivalent price has ranged from \$11.18 to \$37.25. The 1996 to 2006 average of total harvested cord equivalent volume for spruce is 850 cords per year and the per-cord equivalent price is \$24.02.

5010.1.11 Tamarack

The harvested total cord equivalent volume for tamarack from 1996 to 2006 has ranged from none to 293 cords per year and the per-cord equivalent price has ranged from \$14.50 to \$21.19. The 1996 to 2006 average of total harvested cord equivalent volume for tamarack is 31 cords per year and the per-cord equivalent price is \$17.05.

5010.2 Reforestation

This section monitors the DCFD's long standing commitment to the establishment of trees throughout the Forest where it is possible to do so from a site and feasibility perspective. Tree planting has been significant since 1938, as more than 23,000 total acres have been planted over the past 69 years. Table 5010.4 shows the total annual acreage planted on the Douglas County Forest by species from 1938 to 2006. Many of these planting initiatives involved varying methods of site-preparation treatments. Table 5010.5 shows the total annual acreage by site-preparation treatment from 1995 to 2006 (data prior to 1995 was unavailable). These figures do not reflect the significant site-preparation treatments for natural regeneration that occur on an on-going basis throughout the Forest. Over the past 11 years, these treatments could easily account for another 200 to 400 acres of site preparation annually, according to DCFD estimates. Over the next 15 years, the DCFD will continue to enhance reforestation efforts so long as resource-protection and land-use objectives are met.

**Table 5010.4
Planting Acreage on the Douglas County Forest by Species 1938 to 2006**

Year	Red Pine (acres)	Jack Pine (acres)	White Pine (acres)	White Spruce (acres)	Total Acreage
1938	---	120	---	40	160
1939	51	318	---	---	369
1940	287	132	---	---	419
1941	96	474	49	50	669
1942	57	741	118	83	999
1943	46	181	---	---	227
1944	---	58	---	---	58
1945	---	---	---	---	---
1946	---	---	---	---	---
1947	51	249	3	---	303
1948	38	450	---	9	497
1949	28	921	---	35	984
1950	198	596	---	6	800
1951	462	622	---	---	1,084
1952	313	276	---	---	589
1953	---	52	---	---	52
1954	20	88	---	---	108
1955	154	---	---	---	154
1956	140	---	---	---	140
1957	125	---	---	---	125
1958	132	---	---	---	132
1959	78	---	---	---	78
1960	90	---	---	---	90
1961	106	---	---	---	106
1962	92	---	---	---	92
1963	93	---	---	---	93
1964	226	---	---	---	226
1965	94	---	---	---	94
1966	77	---	---	---	77
1967	270	---	---	---	270
1968	179	---	---	1	180
1969	217	---	---	---	217
1970	247	---	---	---	247
1971	230	---	---	---	230
1972	315	---	---	---	315
1973	267	---	---	---	267
1974	195	---	---	---	195
1975	183	---	---	---	183
1976	125	---	---	---	125
1977	201	30	---	---	231
1978	266	---	---	---	266
1979	340	---	---	---	340

Table 5010.4 continued...

Year	Red Pine (acres)	Jack Pine (acres)	White Pine (acres)	White Spruce (acres)	Total Acreage
1980	212	---	---	---	212
1981	170	40	---	---	210
1982	207	48	---	---	255
1983	235	169	---	---	404
1984	337	97	---	---	434
1985	405	125	---	---	530
1986	510	75	15	---	600
1987	401	95	12	---	508
1988	300	---	9	---	309
1989	354	127	10	---	491
1990	185	---	---	---	185
1991	403	---	20	---	423
1992	339	70	20	---	429
1993	452	117	87	---	656
1994	254	360	38	---	652
1995	339	261	51	5	656
1996	345	181	74	---	600
1997	62	204	18	6	290
1998	223	141	6	6	376
1999	367	149	19	12	547
2000	240	153	11	---	404
2001	236	250	11	---	497
2002	---	115	6	---	121
2003	---	507	62	1	570
2004	111	397	50	---	558
2005	5	247	10	97	359
2006	40	156	---	28	224
TOTAL	12,821	9,392	699	379	23,291

Figure 5010.6
Planting Acreage on the Douglas County Forest by Species 1938 to 2006

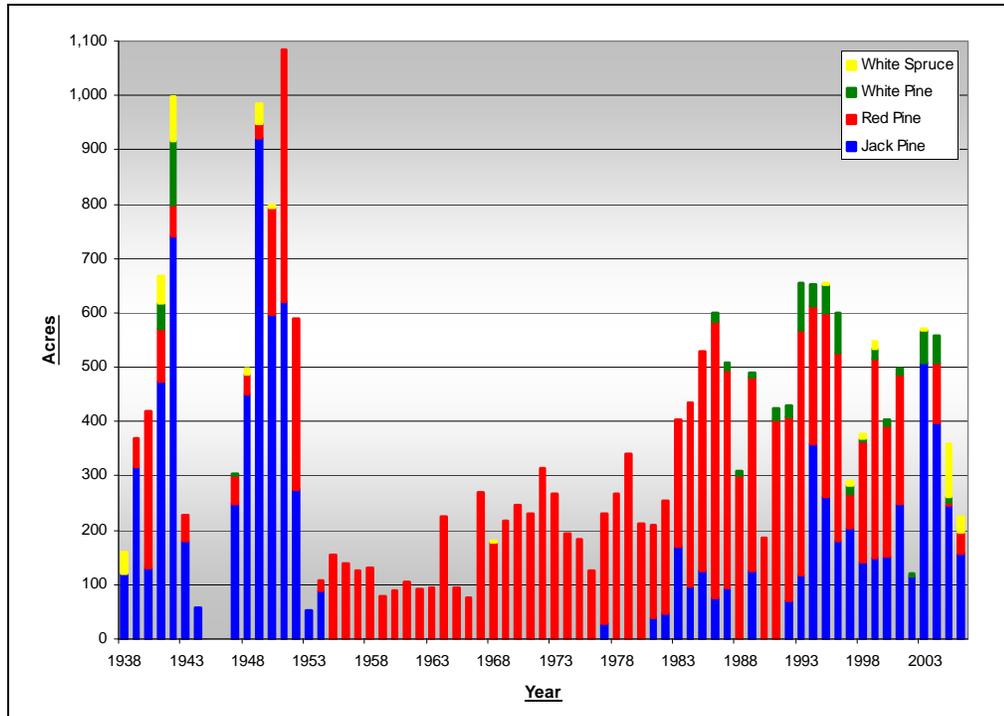
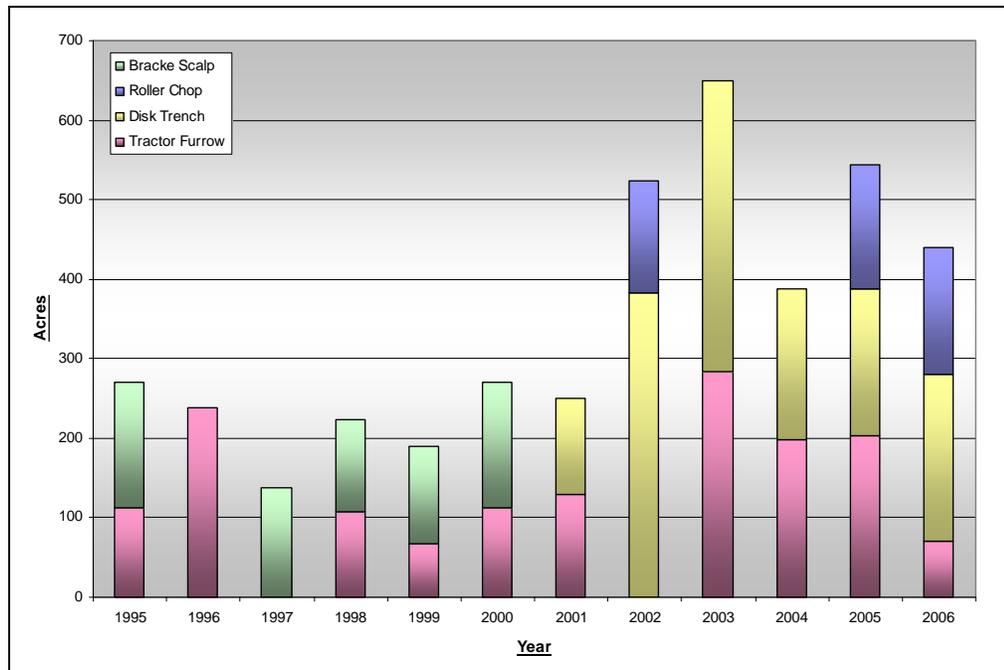


Table 5010.5
Site-Preparation Acreage on the Douglas County Forest by Method 1995 to 2006

Year	Tractor Furrow (acres)	Disk Trench (acres)	Roller Chop (acres)	Bracke Scalp (acres)	Total Acreage
1995	113	---	---	158	271
1996	238	---	---	---	238
1997	---	---	---	138	138
1998	108	---	---	116	224
1999	67	---	---	122	189
2000	113	---	---	158	271
2001	130	120	---	---	250
2002	---	383	141	---	524
2003	284	366	---	---	650
2004	198	190	---	---	388
2005	203	184	157	---	544
2006	70	211	158	---	439
TOTAL	1,524	1,454	456	692	4,126

Figure 5010.7
Site-Preparation Acreage on the Douglas County Forest by Method 1995 to 2006



5010.3 Timber Stand Improvement

This section monitors the timber stand improvement (TSI) record for the Douglas County Forest. TSI includes a variety of intermediate treatments that begin after regeneration is established and are implemented as needed throughout the rotation of the stand. These treatments are performed to improve stand composition, structure, growth, quality and health.

Table 5010.6
Timber Stand Improvement Acreage on the Douglas County Forest by Method 1938 to 2006

Year	Release (acres)	Prune (acres)	Herbicide (acres)	Prescribed Burn ^(a) (acres)	Total Acreage
Prior to 1957	348	---	---	---	348
1957	43	---	---	---	43
1958	243	---	---	---	243
1959	125	---	---	---	125
1960	26	---	---	---	26
1961	18	---	---	---	18
1962	80	---	---	---	80
1963	151	---	---	---	151
1964	208	---	375	---	583
1965	160	---	---	---	160

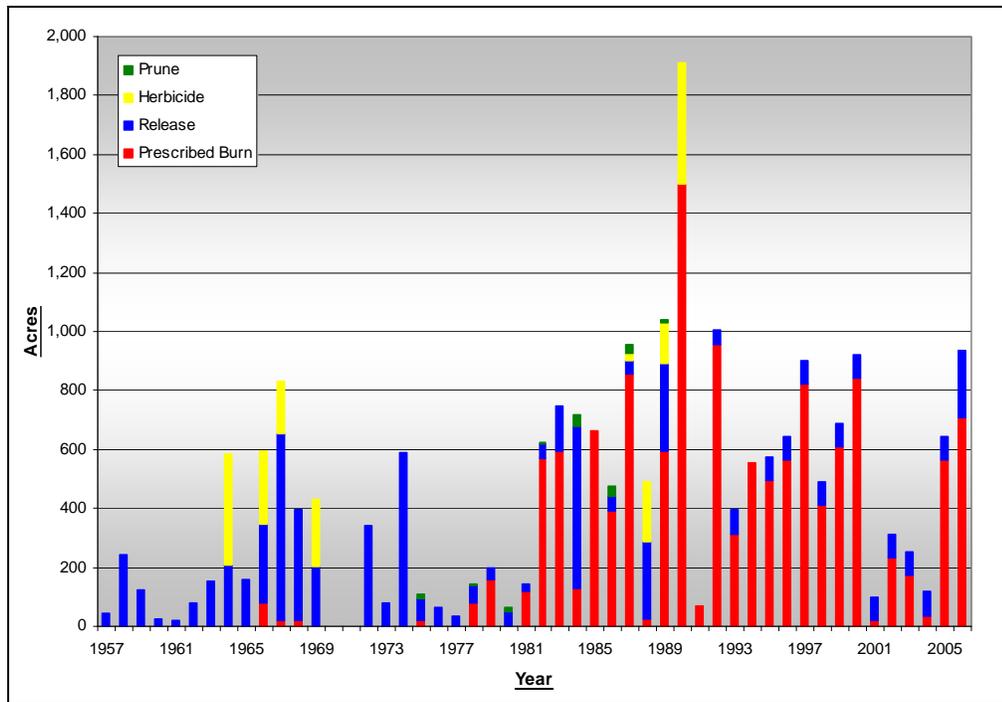
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Table 5010.6 continued...

Year	Release (acres)	Prune (acres)	Herbicide (acres)	Prescribed Burn ^(a) (acres)	Total Acreage
1966	269	---	247	80	596
1967	633	---	179	19	831
1968	379	---	---	18	397
1969	204	---	229	---	433
1970	---	---	---	---	---
1971	---	---	---	---	---
1972	344	---	---	---	344
1973	80	---	---	---	80
1974	590	---	---	---	590
1975	78	12	---	18	108
1976	63	---	---	---	63
1977	33	---	---	---	33
1978	60	3	---	80	143
1979	40	---	---	160	200
1980	50	13	---	---	63
1981	26	---	---	120	146
1982	50	5	---	571	626
1983	150	---	---	596	746
1984	550	40	---	130	720
1985	---	---	---	665	665
1986	49	33	---	391	473
1987	45	30	25	857	957
1988	264	---	200	25	489
1989	297	10	141	594	1,042
1990	---	---	410	1,501	1,911
1991	---	---	---	70	70
1992	50	---	---	954	1,004
1993	80	---	---	314	394
1994	---	---	---	555	555
1995	80	---	---	495	575
1996	80	---	---	565	645
1997	80	---	---	820	900
1998	80	---	---	410	490
1999	80	---	---	610	690
2000	80	---	---	841	921
2001	80	---	---	18	98
2002	79	---	---	232	311
2003	82	---	---	171	253
2004	84	---	---	33	117
2005	80	---	---	564	644
2006	227	---	---	710	937
TOTAL	6,898	146	1,806	13,187	22,037

(a) Historical records differentiating between silvicultural objectives and other goals of prescribed burn treatments are unavailable. The figures in Table 5010.6 represent total acres regardless of burn project objectives.

Figure 5010.8
Timber Stand Improvement Acreage on the Douglas County Forest by Method 1938 to 2006



5015 RECREATION MANAGEMENT

The primary goal of forest recreation management on the Douglas County Forest is to select, develop, operate and maintain recreation areas to provide a variety of quality outdoor experiences. Outdoor recreational pursuits on the Forest are continually changing. Social structure, affluence, mobility, leisure time, and a multitude of new recreation equipment have influenced these changes. Because of the size of the Forest, there are unique opportunities for dispersed, low-density outdoor recreation. As with managing natural resources, DCFD strives to achieve the proper balance between providing recreational opportunities and preserving and protecting the Forest.

5015.1 Recreational Trails

This section monitors the recreational trail mileage record for the Douglas County Forest. The Forest offers an extensive network of snowmobile, ATV, and cross-country ski trails that afford recreationists an opportunity to pursue a variety of motorized and non-motorized activities. In addition, the Forest offers hundreds of miles of general forest access roads scattered throughout (see Chapter 700).

The total mileage of the summer ATV trail and the snowmobile and winter ATV trail networks vary from year to year but both have increased since 1996. Total mileage from 1996 to 2006 has ranged

from 37.4 to 82.4 miles for the summer ATV trail network and from 221.1 to 300 miles for the snowmobile and winter ATV trail network.

**Table 5015.1
Mileage of Funded Recreational Trail Networks on the
Douglas County Forest 1996 to 2006**

Year	Summer ATV Trails (miles)	Snowmobile and Winter ATV Trails (miles)
1996	37.4	221.1
1997	37.4	221.1
1998	57.4	297.8
1999	57.4	295.8
2000	47.6	295.8
2001	74.6	300.0
2002	82.4	300.0
2003	82.4	300.0
2004	82.4	300.0
2005	82.4	300.0
2006	82.4	300.0

**Figure 5015.1
Funded Recreational Trail Mileage on the
Douglas County Forest by Season of Designated Use 1996 to 2006**

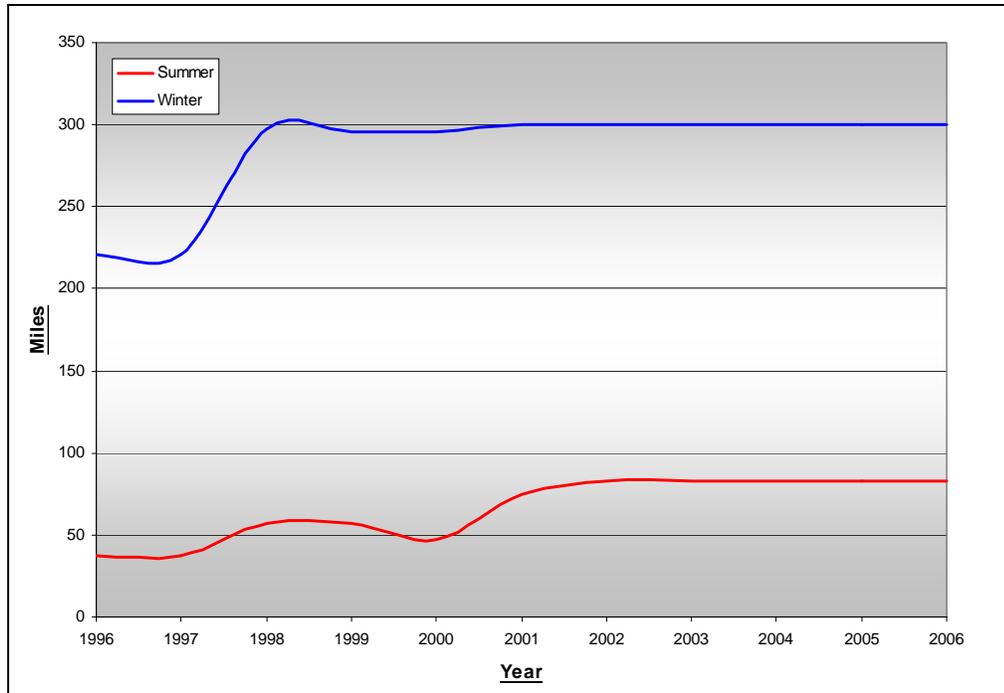


Table 5015.2
Mileage of Cross-Country Ski-Trails on the
Douglas County Forest 1996 to 2006

Year	Cross-Country Ski-Trails (miles)
1996	10.3
1997	10.3
1998	10.3
1999	10.3
2000	10.3
2001	10.3
2002	10.3
2003	10.3
2004	10.3
2005	10.3
2006	10.3

5015.2 Recreational Camping

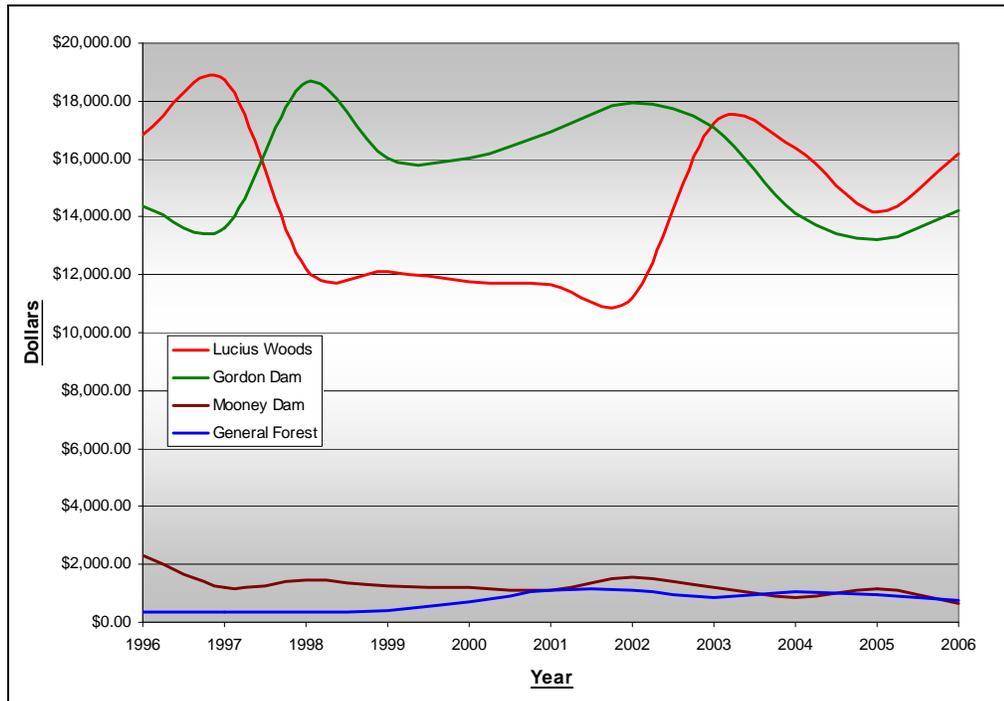
This section monitors the revenues received from recreational camping that occurs on the Douglas County Forest. County parks offer developed campsites with electric power and facilities during the summer months. Picnicking, hiking, backpacking, fishing, boating, swimming, and canoeing are popular activities among campers. Autumn is the most popular season for camping of a more rustic nature and coincides with the fall hunting seasons. Hunting enthusiasts enjoy the fall colors while actively pursuing many species of big and small game throughout the Forest.

Revenues generated by individual parks and from general forest camping varies from year to year but total annual revenue has remained consistent. Total revenue from 1996 to 2006 has ranged from \$29,497 to \$36,348.67 with an average of \$32,070.22. The annual revenue average from 1996 to 2006 for Lucius Woods was \$14,408.02, for Gordon Dam it was \$15,658.17, for Mooney Dam it was \$1,276.76 and for general forest camping it was \$727.27.

**Table 5015.3
Douglas County Forest Camping Revenues 1996 to 2006**

Year	Designated Park Camping			General Forest Camping	
	Lucius Woods	Gordon Dam	Mooney Dam	Number of Permits Sold	Revenue
1996	\$16,831.30	\$14,378.07	\$2,329.35	37	\$370.00
1997	\$18,726.12	\$13,594.06	\$1,216.00	35	\$350.00
1998	\$12,227.03	\$18,666.91	\$1,473.00	37	\$370.00
1999	\$12,120.00	\$16,049.22	\$1,239.00	39	\$390.00
2000	\$11,753.00	\$16,038.74	\$1,230.00	69	\$690.00
2001	\$11,664.00	\$16,955.00	\$1,103.00	110	\$1,100.00
2002	\$11,194.05	\$17,943.00	\$1,576.00	110	\$1,100.00
2003	\$17,231.57	\$17,065.10	\$1,192.00	86	\$860.00
2004	\$16,395.12	\$14,125.75	\$864.00	106	\$1,060.00
2005	\$14,164.00	\$13,207.00	\$1,166.00	96	\$960.00
2006	\$16,182.00	\$14,217.00	\$656.00	75	\$750.00
TOTAL	\$158,488.19	\$172,239.85	\$14,044.35	800	\$8,000.00

**Figure 5015.2
Designated Park and General Forest Camping Revenues for the
Douglas County Forest 1996 to 2006**



5020 ACCESS MANAGEMENT

Access to the Douglas County Forest remains one of the most challenging and controversial issues faced by the DCFD. Some users seek peace and solitude that the Forest provides while others enjoy more physical activities. There are those who prefer traditional forms of recreation such as sight-seeing, hiking, biking, horseback riding, and cross-country skiing; others find the Forest ideal for riding motorized vehicles such as ATV and snowmobiles. The Access Management Plan (Chapter 700) focuses on access within the Douglas County Forest.

5020.1 County Forest Roads

This section monitors the historical County Forest Road system mileage for the Douglas County Forest.

Table 5020.1
Mileage of the County Forest Road System on the Douglas County Forest 1996 to 2006
N/A – data unavailable

Year	Total Mileage	Total Road Aid Amount Received
1996	N/A	\$30,006.00
1997	N/A	\$30,006.00
1998	N/A	\$36,697.92
1999	N/A	\$36,697.92
2000	116.14	\$39,023.04
2001	101.07	\$33,959.52
2002	99.82	\$33,539.52
2003	99.46	\$33,418.56
2004	93.21	\$30,972.48
2005	94.70	\$30,972.48
2006	95.65	\$31,573.92

5025 LAND ADJUSTMENT

The DCFD’s land adjustment program emphasizes the acquisition of desirable lands based on considerations connected with possible development, timber management, recreation opportunity, resource values, and management efficiency and effectiveness. Land acquisition and entry into County forest land or Special-Use land are key components in protecting unique resources, eliminating conflicting uses, and improving overall management efficiency on the Forest.

Table 5025.1 and Figure 5025.1 shows annual land adjustments on the Douglas County Forest from 1934 to 2006. The data are based on the annual report on Forest Tax Unit Wisconsin County Forest Acres (No. 11) published by the WDNR.

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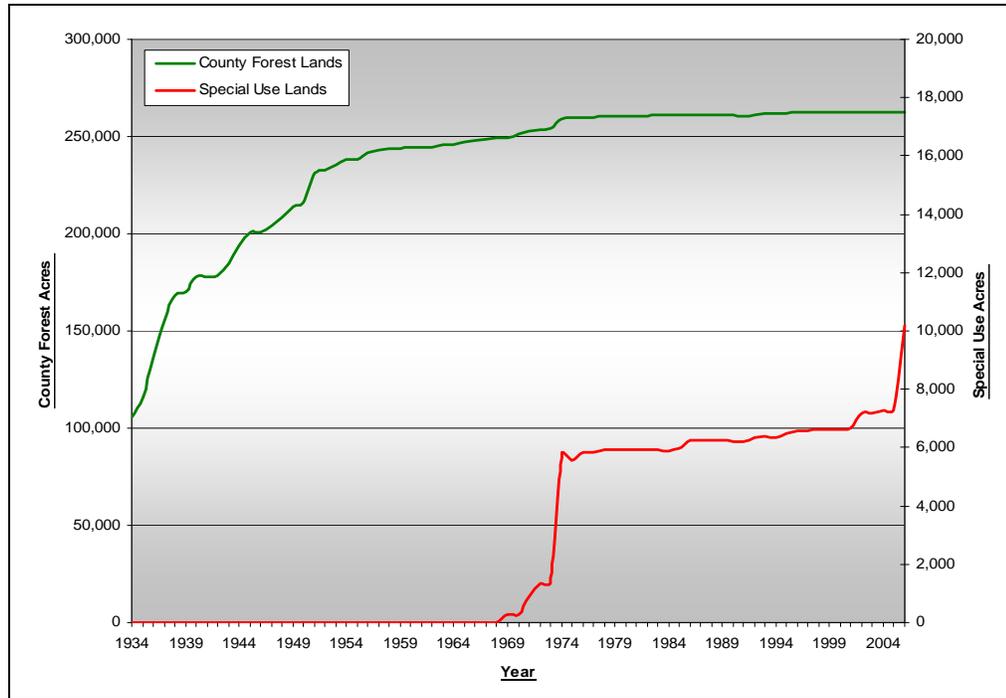
**Table 5025.1
Douglas County Forest Land Adjustment Record 1934 to 2006**

Year	County Forest Lands	Special Use Lands	Total Acres
1934	105,607.39	---	105,607.39
1935	116,012.36	---	116,012.36
1936	136,294.64	---	136,294.64
1937	155,900.14	---	155,900.14
1938	168,262.11	---	168,262.11
1939	170,339.65	---	170,339.65
1940	178,084.65	---	178,084.65
1941	178,084.65	---	178,084.65
1942	178,484.65	---	178,484.65
1943	184,699.12	---	184,699.12
1944	193,907.10	---	193,907.10
1945	200,543.33	---	200,543.33
1946	200,543.33	---	200,543.33
1947	204,001.17	---	204,001.17
1948	208,388.18	---	208,388.18
1949	213,983.75	---	213,983.75
1950	215,987.04	---	215,987.04
1951	230,924.43	---	230,924.43
1952	232,551.05	---	232,551.05
1953	235,173.78	---	235,173.78
1954	237,891.64	---	237,891.64
1955	238,170.70	---	238,170.70
1956	241,890.82	---	241,890.82
1957	243,269.67	---	243,269.67
1958	243,429.67	---	243,429.67
1959	243,522.16	---	243,522.16
1960	244,447.09	---	244,447.09
1961	244,447.09	---	244,447.09
1962	244,687.09	---	244,687.09
1963	245,907.56	---	245,907.56
1964	245,947.56	---	245,947.56
1965	247,534.06	---	247,534.06
1966	248,255.95	---	248,255.95
1967	248,735.95	---	248,735.95
1968	249,415.95	---	249,415.95
1969	249,575.95	264.42	249,840.37
1970	251,476.09	264.42	251,740.51
1971	253,105.05	870.72	253,975.77
1972	253,471.05	1,335.44	254,806.49
1973	253,872.48	1,335.44	255,207.92
1974	259,144.95	5,802.42	264,947.37
1975	259,583.95	5,562.42	265,146.37
1976	259,823.95	5,845.81	265,669.76

Table 5025.1 continued...

Year	County Forest Lands	Special Use Lands	Total Acres
1977	259,823.95	5,845.81	265,669.76
1978	260,359.35	5,912.28	266,271.63
1979	260,359.35	5,912.28	266,271.63
1980	260,359.35	5,912.28	266,271.63
1981	260,359.35	5,912.28	266,271.63
1982	260,562.47	5,912.28	266,474.75
1983	261,063.98	5,912.28	266,976.26
1984	261,414.45	5,872.67	267,287.12
1985	261,197.82	5,973.58	267,171.40
1986	261,117.82	6,233.16	267,350.98
1987	260,907.20	6,233.16	267,140.36
1988	260,907.20	6,233.16	267,140.36
1989	260,776.45	6,233.16	267,009.61
1990	260,951.44	6,211.86	267,163.30
1991	260,551.44	6,211.86	266,763.30
1992	261,455.90	6,351.86	267,807.76
1993	261,535.90	6,411.86	267,947.76
1994	261,577.37	6,333.33	267,910.70
1995	262,089.74	6,486.70	268,576.44
1996	262,189.41	6,579.20	268,768.61
1997	262,199.41	6,592.20	268,791.61
1998	262,209.41	6,633.60	268,843.01
1999	262,219.41	6,633.60	268,853.01
2000	262,631.90	6,633.60	269,265.50
2001	262,631.90	6,673.60	269,305.50
2002	262,471.90	7,153.00	269,624.90
2003	262,471.90	7,170.35	269,642.25
2004	262,537.14	7,257.24	269,794.38
2005	262,537.14	7,253.84	269,790.98
2006	262,577.14	10,182.34	272,759.48

**Figure 5025.1
Douglas County Forest Land Adjustment Record 1934 to 2006**



5030 FISH AND WILDLIFE MANAGEMENT

The key to sustaining a healthy forest that supports abundant wildlife populations is maximizing the diversity of forest types and age classes in an area. Through the use of carefully planned timber sales, the DCFD is managing the Douglas County Forest for both commercial timber production and wildlife-habitat enhancement. The “edge” between forest types is a key part of most game and non-game habitats. The break in the forest canopy allows sunlight to reach the ground, resulting in a lush growth of browse and mast-producing plants.

5030.1 Wildlife Openings

One of the most effective methods for improving wildlife habitat within or adjacent to large tracts of woodland is establishing and maintaining openings with herbaceous growth, i.e., nonwoody plants that usually die back following each growing season. These include grasses and forbs; the latter include broad-leaved plants such as wildflowers and "weeds." These naturally occurring herbaceous plants are a valuable source of food and cover for wildlife. Wildlife openings add diverse plants that other cover types do not provide.

**Table 5030.1
Douglas County Forest Wildlife Openings by Treatment 1996 to 2006**

Year	Mechanical Brushing	Hand Brushing	Total Number	Total Approximate Acreage
1996	---	150	150	165
1997	26	6	32	35
1998	52	16	68	75
1999	3	---	3	3
2000	---	27	27	30
2001	88	56	144	158
2002	97	105	202	222
2003	105	20	125	138
2004	137	9	146	161
2005	94	4	98	108
2006	171	37	208	229
TOTAL	773	430	1,203	1,324

**Figure 5030.1
Douglas County Forest Wildlife Openings by Treatment 1996 to 2006**

