

Preliminary Results of intensity and
extent of Insect Mortality on the
Sierra National Forest

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Take Home messages

The Southern Sierras are experiencing an unprecedented insect mortality outbreak - as a result on the average 1/3 of the trees in pine forests or forests with a mix of pine and white fir are dead.

1/3 of these pine forests or forests with a mix of pine and white fir are in a deforested condition.

The mortality will continue until drought weakened trees are all dead or several years of above normal rainfall occurs and trees regain vigor.

It Appears that maintaining dense stands:

will not result in increasing large trees,

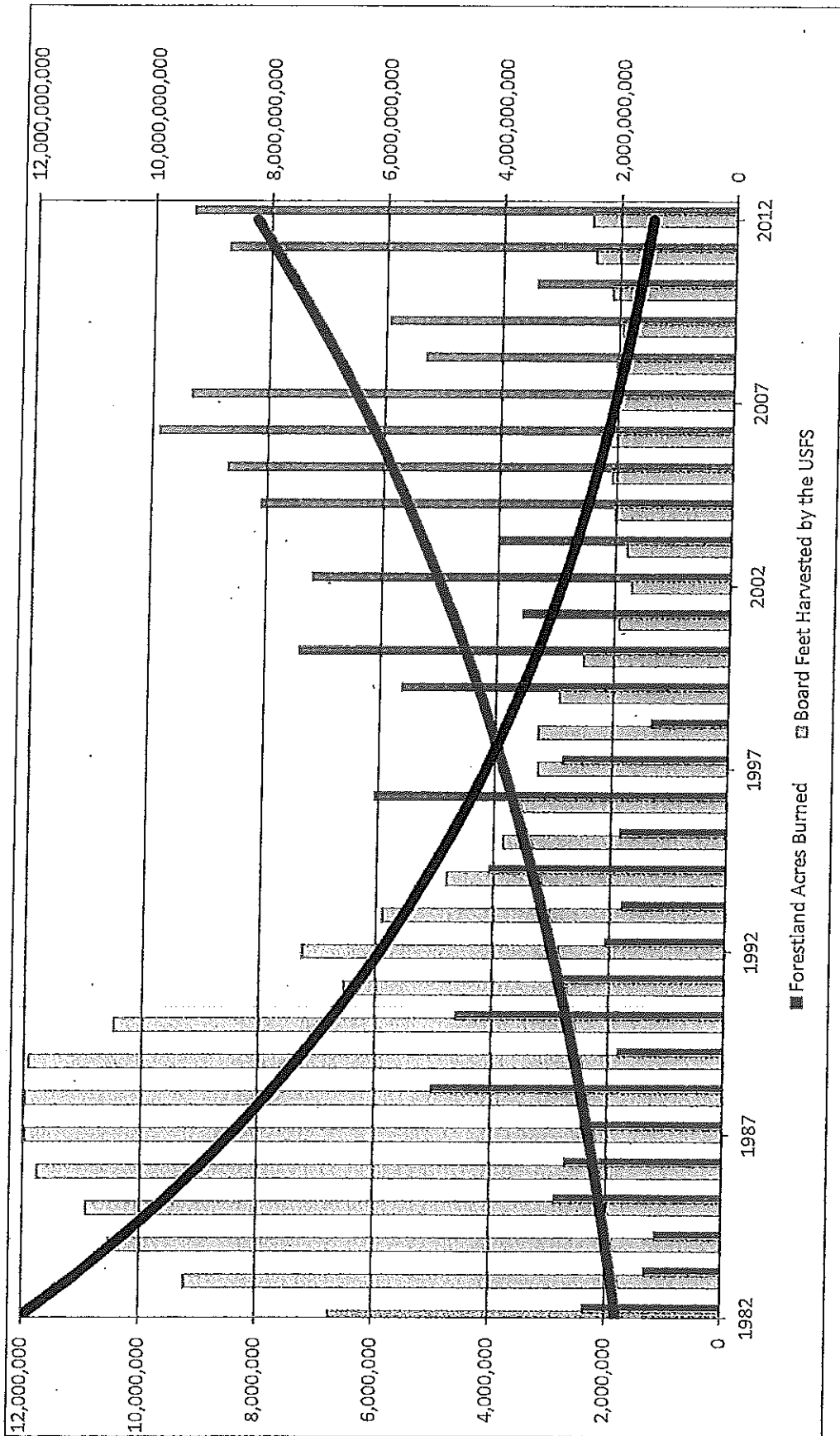
Will not maintaining pine species,

Will not maintaining owl habitat even without high severity fire.

Insects are killing trees >35" faster than they can be grown.

The combination of high severity fire and insect mortality make the current objectives of maximizing owl/fisher habitat unsustainable.

Timber Harvested vs. Forestland Acres Burned



Top 20 Largest California Wildfires

FIRE NAME (CAUSE)	DATE	COUNTY	ACRES	STRUCTURES	DEATHS
1 CEDAR (Human Related)	October 2003	San Diego	273,246	2,820	15
2 RUSH (Lightning)	August 2012	Lassen	271,911 CA / 43,666 NV	0	0
3 RIM (Human Related)	August 2013	Tuolumne	257,314	112	0
4 ZACA (Human Related)	July 2007	Santa Barbara	240,207	1	0
5 MATILAJA (Undetermined)	September 1932	Ventura	220,000	0	0
6 WITCH (Powerlines)	October 2007	San Diego	197,990	1,650	2
7 KLAMATH THEATER COMPLEX (Lightning)	June 2008	Siskiyou	192,038	0	2
8 MARBLE CONE (Lightning)	July 1977	Monterey	177,866	0	0
9 LAGUNA (POWERLINES)	September 1970	San Diego	175,425	382	5
10 BASIN COMPLEX (Lightning)	June 2008	Monterey	162,818	58	0
11 DAY FIRE (Human Related)	September 2006	Ventura	162,702	11	0
12 STATION FIRE (Human Related)	August 2009	Los Angeles	160,557	209	2
13 McNALLY (Human Related)	July 2002	Tulare	150,696	17	0
14 STANISLAUS COMPLEX (Lightning)	August 1987	Tuolumne	145,980	28	1
15 BIG BAR COMPLEX (Lightning)	August 1999	Trinity	140,948	0	0
16 HAPPY CAMP COMPLEX (Lightning)	August 2014	Siskiyou	134,056	6	0
17 CAMPBELL COMPLEX (Powerlines)	August 1990	Tehama	125,892	27	0
18 ROUGH (Lightning)	July 2015	Fresno	119,069	4	0
19 WHEELER (Arson)	July 1985	Ventura	118,000	26	0
20 SIMI (Under Investigation)	October 2003	Ventura	108,204	300	0

*Rough Fire information will change until the fire is contained.

**There is no doubt that there were fires with significant acreage burned in years prior to 1932, but those records are less reliable, and this list is meant to give an overview of the large fires in more recent times.

***This list does not include fire jurisdiction. These are the Top 20 regardless of whether they were state, federal, or local responsibility.

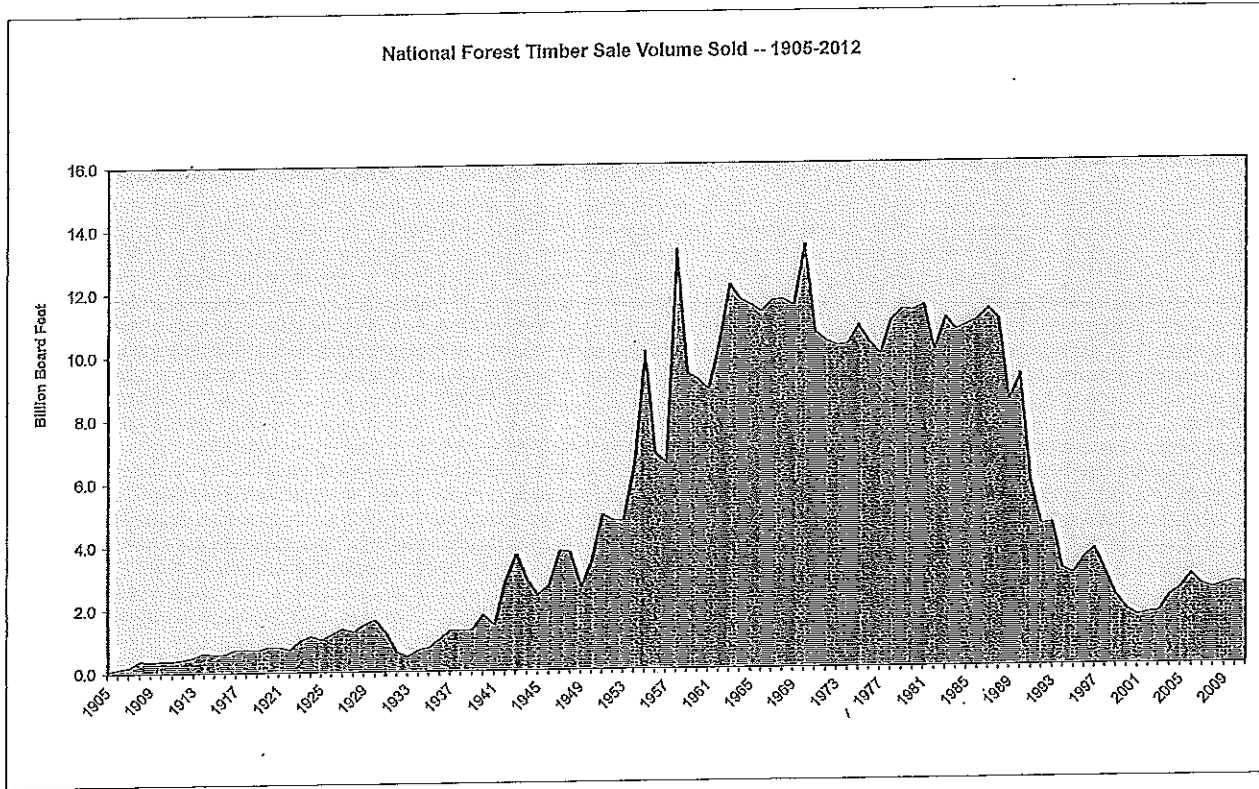


Number of Sales, Volume, Value & Price Per MBF of Convertible Timber Cut & Sold
FOREST SERVICE WIDE

FISCAL Year	TIMBER SOLD			TIMBER HARVESTED			Comments		
	VOLUME MBF	VALUE Dollars	PRICE Per MBF	VOLUME MBF	VALUE Dollars	PRICE Per MBF			
1905	0	68,476	0.1		\$85,597	\$1.25			
1906	0	138,665	0.1		\$203,333	\$1.47			
1907	0	194,872	0.2		\$337,652	\$1.73			
1908	0	392,792	0.4		\$794,252	\$2.02			
1909	0	352,434	0.4		\$677,784	\$1.92			
1910	0	379,616	0.4		\$906,308	\$2.39			
1911	0	374,678	0.4		\$842,993	\$2.25			
1912	0	431,492	0.4		\$942,819	\$2.19			
1913	0	495,668	0.5		\$1,076,185	\$2.17			
1914	1	628,306	0.6		\$1,271,060	\$2.03			
1915	1	665,764	0.6		\$1,179,449	\$2.08			
1916	1	584,767	0.6		\$1,254,562	\$2.11			
1917	1	738,430	0.7		\$1,533,349	\$2.08			
1918	1	730,179	0.7		\$1,526,981	\$2.09			
1919	1	705,399	0.7		\$1,514,667	\$2.15			
1920	1	805,375	0.8		\$1,763,927	\$2.19			
1921	1	800,452	0.8		\$1,896,047	\$2.37			
1922	1	722,779	0.7		\$1,752,424	\$2.42			
1923	1	894,605	1.0		\$2,670,300	\$2.58			
1924	1	1,143,654	1.1		\$3,094,738	\$2.71			
1925	1	1,021,879	1.0		\$2,808,005	\$2.76			
1926	1	1,192,517	1.2		\$3,370,616	\$2.83			
1927	1	1,360,242	1.4		\$3,846,441	\$2.83			
1928	1	1,271,562	1.3		\$3,507,999	\$2.76			
1929	1	1,498,725	1.5		\$4,328,395	\$2.89			
1930	2	1,653,265	1.7		\$4,789,803	\$2.90			
1931	1	1,222,361	1.2		\$3,347,969	\$2.74	Depression		
1932	1	611,751	0.6		\$1,519,141	\$2.48			
1933	0	473,922	0.5		\$1,077,185	\$2.27			
1934	1	674,542	0.7		\$1,609,288	\$2.39			
1935	1	752,368	0.8		\$1,938,057	\$2.58			
1936	1	1,021,156	1.0		\$2,589,731	\$2.54			
1937	1	1,290,623	1.3		\$3,188,672	\$2.47			
1938	1	1,287,917	1.3		\$3,208,507	\$2.49			
1939	1	1,286,561	1.3		\$2,275,284	\$2.62			
1940	2	1,779,209	1.8	\$4,671,541	\$2.63	1,740,271	\$4,806,729	\$2.76	
1941	1	1,484,523	1.5	\$4,769,348	\$3.26	2,067,279	\$5,781,819	\$2.79	
1942	3	2,839,416	2.8	\$8,195,727	\$2.89	2,204,749	\$8,109,097	\$2.77	
1943	4	3,693,048	3.7	\$16,171,529	\$4.38	2,359,473	\$8,671,729	\$3.68	
1944	3	2,858,465	2.9	\$12,121,348	\$4.24	3,333,167	\$14,154,983	\$4.25	
1945	2	2,391,449	2.4	\$10,465,748	\$4.38	3,144,789	\$13,016,232	\$4.14	
1946	3	2,687,018	2.7	\$10,626,293	\$3.95	2,729,708	\$11,490,318	\$4.21	
1947	4	3,786,231	3.8	\$21,954,920	\$5.80	3,834,588	\$16,399,890	\$4.28	
1948	4	3,741,856	3.7	\$30,275,736	\$8.09	3,758,885	\$21,054,111	\$5.60	
1949	3	2,614,701	2.6	\$29,122,287	\$11.14	3,740,810	\$28,749,007	\$7.69	
1950	3	3,434,114	3.4	\$20,329,017	\$5.92	3,501,568	\$29,111,440	\$8.31	
1951	5	4,912,958	4.9	\$60,482,569	\$12.31	4,688,280	\$46,752,531	\$9.97	
1952	5	4,731,337	4.7	\$80,002,439	\$16.91	4,806,230	\$58,256,920	\$12.12	
1953	5	4,714,321	4.7	\$56,928,928	\$12.08	5,359,819	\$69,709,832	\$13.01	
1954	6	6,432,421	6.4	\$59,660,296	\$9.31	5,853,807	\$64,148,673	\$10.96	
1955	10	10,068,058	10.1	\$94,062,121	\$9.34	6,577,535	\$70,104,927	\$10.66	Ketchikan Pu'p Co. Sale, Alaska
1956	7	6,837,262	6.8	\$135,550,245	\$19.83	6,898,043	\$98,884,795	\$14.04	
1957	7	6,533,375	6.5	\$111,247,544	\$17.03	6,898,185	\$115,092,649	\$16.45	
1958	13	13,292,643	13.3	\$103,330,896	\$7.77	6,420,701	\$93,807,167	\$14.61	Alaska Pu'p Corp. Sale
1959	9	9,359,085	9.4	\$129,424,637	\$13.83	8,340,518	\$113,509,134	\$13.61	
1960	9	9,167,180	9.2	\$170,892,642	\$14.05	9,366,897	\$156,423,791	\$16.70	3 BBF sale in R3
1961	9	8,856,904	8.9	\$125,145,413	\$14.13	8,380,689	\$123,893,902	\$14.78	
1962	10	10,325,872	10.3	\$133,660,089	\$12.94	9,032,237	\$128,514,023	\$14.23	
1963	12	12,175,253	12.2	\$158,587,600	\$13.02	10,026,242	\$134,147,839	\$13.36	
1964	12	11,681,508	11.7	\$171,895,104	\$14.72	10,854,193	\$160,711,558	\$13.76	
1965	12	11,510,150	11.5	\$189,134,903	\$17.30	11,243,725	\$160,759,474	\$14.30	
1966	11	11,284,440	11.3	\$222,403,062	\$19.69	12,138,401	\$185,590,802	\$16.11	
1967	12	11,640,532	11.6	\$209,673,441	\$18.04	10,759,041	\$188,711,969	\$17.54	
1968	12	11,683,952	11.7	\$274,263,980	\$23.47	12,128,225	\$239,341,569	\$19.73	
1969	11	11,482,529	11.5	\$502,140,808	\$25.77	11,863,473	\$326,996,862	\$27.56	8 BBF Sale in Alaska, later cancelled
1970	13	13,382,026	13.4	\$317,302,594	\$23.71	11,626,725	\$307,609,817	\$26.69	
1971	11	10,636,387	10.6	\$215,299,552	\$20.24	10,341,204	\$257,020,185	\$24.85	
1972	10	10,339,486	10.3	\$326,446,311	\$31.77	11,700,364	\$381,958,590	\$32.64	
1973	10	10,199,250	10.2	\$636,151,669	\$62.37	12,357,023	\$479,233,003	\$38.78	
1974	10	10,241,085	10.2	\$902,608,483	\$88.14	10,958,393	\$508,615,356	\$46.41	
1975	11	10,823,549	10.8	\$657,185,830	\$60.72	9,173,785	\$365,951,687	\$39.89	Economic recession
1976	10	10,287,270	10.3	\$707,832,690	\$68.81	9,676,455	\$492,029,190	\$51.38	
1977	10	9,919,695	9.9	\$987,416,476	\$99.54	10,481,536	\$732,556,790	\$69.89	
1978	11	10,993,851	11.0	\$1,328,415,687	\$120.81	10,078,524	\$854,682,200	\$84.79	
1979	11	11,330,376	11.3	\$1,962,624,421	\$173.22	10,376,955	\$987,923,445	\$93.28	
1980	11	11,290,029	11.3	\$1,948,657,998	\$172.60	9,178,209	\$729,829,429	\$79.52	Began limiting sale contracts to 3 years
1981	11	11,456,829	11.5	\$1,787,749,387	\$154.30	8,036,240	\$714,922,395	\$88.86	
1982	10	10,029,836	10.0	\$614,187,924	\$61.24	6,747,260	\$339,214,989	\$50.27	Economic recession; eliminated free use
1983	11	11,081,397	11.1	\$775,170,460	\$70.08	9,244,037	\$649,622,237	\$70.27	
1984	11	10,691,897	10.7	\$698,718,203	\$65.54	10,548,687	\$759,577,188	\$72.01	
1985	11	10,818,990	10.8	\$558,132,137	\$51.59	10,941,266	\$720,636,166	\$65.86	
1986	11	10,968,577	11.0	\$757,022,933	\$69.03	11,788,490	\$788,881,222	\$66.78	
1987	11	11,318,987	11.3	\$1,003,389,792	\$88.65	12,712,103	\$1,015,995,028	\$79.92	
1988	11	10,968,233	11.0	\$1,254,387,610	\$114.37	12,596,361	\$1,235,734,207	\$98.10	
1989	8	8,414,687	8.4	\$1,077,534,474	\$128.03	11,550,937	\$1,316,841,207	\$110.19	
1990	9	9,229,693	9.2	\$1,609,925,598	\$174.43	10,500,276	\$1,187,384,520	\$113.08	
1991	6	5,786,287	5.8	\$688,645,684	\$118.67	6,558,689	\$845,694,147	\$128.04	
1992	4	4,458,452	4.5	\$575,921,207	\$129.18	7,289,632	\$934,504,178	\$128.20	
1993	5	4,516,324	4.5	\$774,887,925	\$171.61	5,916,937	\$914,646,052	\$154.58	
1994	3	3,958,346	3.1	\$508,903,659	\$168.81	4,815,329	\$783,038,266	\$162.81	
1995	3	2,885,262	2.9	\$369,736,307	\$128.16	3,885,913	\$616,117,347	\$159.37	Rescissions Act supports salvage
1996	3	3,384,448	3.4	\$450,452,674	\$133.09	3,724,552	\$544,349,011	\$146.16	
1997	4	3,687,683	3.7	\$494,025,135	\$133.97	3,285,284	\$497,956,596	\$151.57	
1998	3	2,955,292	3.0	\$365,554,063	\$123.69	3,287,834	\$445,773,656	\$135.17	
1999	2	2,200,407	2.2	\$224,160,027	\$101.87	2,938,571	\$339,470,621	\$116.62	
2000	2	1,744,502	1.7	\$187,651,212	\$107.51	2,542,427	\$302,933,984	\$119.15	
2001	2	1,534,115	1.5	\$140,819,639	\$91.79	1,938,198	\$177,833,842	\$91.65	
2002	2	1,619,412	1.6	\$149,696,681	\$92.44	1,728,141	\$164,050,835	\$95.04	
2003	2	1,837,633	1.6	\$141,212,915	\$86.23	1,817,751	\$167,323,242	\$86.55	

2004	2	2,163,943	2.2	\$196,234,804	\$90.68	2,031,607	\$217,534,158	\$107.07	
2005	2	2,399,640	2.4	\$248,194,085	\$103.43	2,097,811	\$224,142,724	\$108.66	
2006	3	2,835,056	2.8	\$249,379,873	\$87.96	2,288,491	\$221,390,371	\$96.40	
2007	2	2,498,327	2.5	\$197,455,405	\$79.00	1,980,363	\$166,641,434	\$85.01	
2008	2	2,379,597	2.4	\$156,787,741	\$65.89	2,048,928	\$138,119,022	\$67.41	
2009	3	2,507,672	2.5	\$104,686,662	\$41.76	1,954,052	\$98,087,910	\$50.20	Economic recession
2010	3	2,597,108	2.6	\$135,371,885	\$52.61	2,137,859	\$104,809,312	\$49.03	Economic recession
2011	3	2,636,704	2.5	\$154,855,702	\$61.05	2,440,432	\$131,904,238	\$54.05	
2012*	0	0	2.6						

* - estimated



Net Growth, Annual Mortality, & 2011 Sold Volume for Stanislaus Natl. Forest
 (Data Source: www.fs.fed.us/r5/rsl/publications/westcore/ & 2011 Accomplishment Report)
 (Data from growing stock on available, productive forestland)
 by Steve Brink, 8/24/2012.

Total Acres	896,993
Acres Forested	745,607
Acres Not Forested	151,386
Acres of Productive Forestland	620,547
Acres of Non-Productive Forestland	125,060
Acres of Productive Reserved	132,565
Acres Productive Not Reserved	487,982
Tentatively Suitable	385,691

Softwood volume in growing stock (>5" dbh)
 on productive forestland

10,878.78 mmbf

Avg. Above Ground Biomass (> 1" dbh (live and standing dead)
 on productive forestland

30,355,889 bone dry tons

49 BDT/Acre

278

Average # of Trees/acre on productive not reserved forestland

Annual net growth = 0.37 mbf/acre on productive not reserved

Stanislaus

		(in MMBF)		
Gross Growth	222.525	Net Growth	181.354	2011 Sold Vol.
		Annual Mortality	41.171	22.1

