

Appendix G2
Historical and Current
Water Use

Table G2-1. Sierra County Water Use 1975 Through 2000

Use Category	Withdrawal (acre-feet)		Depletion (acre-feet)		Return Flow (acre-feet)		Withdrawal (acre-feet)	Total Depletion (acre-feet)	Total Return Flow (acre-feet)
	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
2000 Water Year									
Commerical (self-supplied)	0	436	0	388	0	48	436	388	48
Domestic (self-supplied)	0	102	0	102	0	0	102	102	0
Industrial (self-supplied)	0	0.1	0	0.1	0	0	0.1	0.1	0
Irrigated Agriculture	23,869	11,342	11,069	7,149	12,800	4,193	35,211	18,218	16,993
Livestock (self-supplied)	72	631	72	631	0	0	703	703	0
Mining (self-supplied)	0	5	0	1	0	4	5	1	4
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	1,914	0	1,062	0	852	1,914	1,062	852
Reservoir Evaporation	219,325	0	219,325	0	0	0	219,325	219,325	0
Totals	243,266	14,430	230,466	9,333	12,800	5,097	257,696	239,799	17,897
1995 Water Year									
Commerical (self-supplied)	0	546	0	428	0	118	546	428	118
Domestic (self-supplied)	0	119	0	54	0	65	119	54	65
Industrial (self-supplied)	25	0.2	25	0.1	0	0	25	25	0
Irrigated Agriculture	28,650	15,013	13,301	9,796	15,349	5,217	43,663	23,097	20,566
Livestock (self-supplied)	73	488	73	469	0	19	561	542	19
Mining (self-supplied)	0	18	0	4	0	14	18	4	14
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	2,467	0	1,398	0	1,069	2,467	1,398	1,069
Reservoir Evaporation	292,561	0	292,561	0	0	0	292,561	292,561	0
Totals	321,309	18,651	305,960	12,149	15,349	6,502	339,960	318,109	21,851

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	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
1990 Water Year									
Commerical (self-supplied)	0	331	0	243	0	88	331	243	88
Domestic (self-supplied)	0	159	0	71	0	88	159	71	88
Industrial (self-supplied)	25	25	25	25	0	0	50	50	0
Irrigated Agriculture	25,470	11,316	11,940	7,081	13,530	4,235	36,786	19,021	17,765
Livestock (self-supplied)	67	409	67	396	0	13	476	463	13
Mining (self-supplied)	0	166	0	33	0	133	166	33	133
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	2,054	0	1,220	0	834	2,054	1,220	834
Reservoir Evaporation	164,974	0	164,974	0	0	0	164,974	164,974	0
Totals	190,536	14,460	177,006	9,069	13,530	5,391	204,996	186,075	18,921
1985 Water Year									
Commercial	0	34	0	17	0	17	34	17	17
Urban	0	1,438	0	719	0	719	1,438	719	719
Rural	0	233	0	117	0	116	233	117	116
Industrial	0	0	0	0	0	0	0	0	0
Irrigated Agriculture	27,484	7,698	11,627	4,366	15,857	3,332	35,182	15,993	19,189
Livestock	174	280	174	259	0	21	454	433	21
Minerals	0	75	0	48	0	27	75	48	27
Power	0	0	0	0	0	0	0	0	0
Stockpond Evaporation	820	0	820	0	0	0	820	820	0
Military	0	0	0	0	0	0	0	0	0
Fish and Wildlife	0	0	0	0	0	0	0	0	0
Recreation	0	62	0	61	0	1	62	61	1
Reservoir Evaporation	218,971	0	218,971	0	0	0	218,971	218,971	0
Totals	247,449	9,820	231,592	5,587	15,857	4,233	257,269	237,179	20,090

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Use Category	Withdrawal (acre-feet)		Depletion (acre-feet)		Return Flow (acre-feet)		Withdrawal (acre-feet)	Total Depletion (acre-feet)	Total Return Flow (acre-feet)
	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
1980 Water Year									
Urban	0	1,408	0	704	0	704	1,408	704	704
Rural	0	195	0	98	0	97	195	98	97
Irrigated Agriculture	24,810	11,900	10,230	7,490	14,580	4,410	36,710	17,720	18,990
Livestock	228	352	228	327	0	25	580	555	25
Stockpond Evaporation	820	0	820	0	0	0	820	820	0
Commercial	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0
Minerals	0	20	0	4	0	16	20	4	16
Military	0	0	0	0	0	0	0	0	0
Power	0	0	0	0	0	0	0	0	0
Fish and Wildlife	0	0	0	0	0	0	0	0	0
Recreation	0	174	0	174	0	0	174	174	0
Reservoir Evaporation	168,170	0	168,170	0	0	0	168,170	168,170	0
Totals	194,028	14,049	179,448	8,797	14,580	5,252	208,077	188,245	19,832
1975 Water Year									
Urban	0	1,275	0	638	0	637	1,275	638	637
Rural	0	336	0	168	0	168	336	168	168
Irrigated Agriculture	19,720	15,780	7,720	9,340	12,000	6,440	35,500	17,060	18,440
Manufacturing	0	10	0	6	0	4	10	6	4
Minerals	70	20	7	4	63	16	90	11	79
Military	0	0	0	0	0	0	0	0	0
Livestock	222	223	222	223	0	0	445	445	0
Stockpond Evaporation	556	0	556	0	0	0	556	556	0
Power	0	0	0	0	0	0	0	0	0
Fish and Wildlife	0	0	0	0	0	0	0	0	0
Recreation	0	100	0	100	0	0	100	100	0
Reservoir Evaporation	76,500	0	76,500	0	0	0	76,500	76,500	0
Playa Lake Evaporation	0	0	0	0	0	0	0	0	0
Totals	97,068	17,744	85,005	10,479	12,063	7,265	114,812	95,484	19,328

Table G2-2. Socorro County Water Use 1975 Through 2000

Use Category	Withdrawal (acre-feet)		Depletion (acre-feet)		Return Flow (acre-feet)		Withdrawal (acre-feet)	Total Depletion (acre-feet)	Total Return Flow (acre-feet)
	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
2000 Water Year									
Commerical (self-supplied)	0	1,274	0	896	0	378	1,274	896	378
Domestic (self-supplied)	0	457	0	457	0	0	457	457	0
Industrial (self-supplied)	0	2	0	2	0	0	2	2	0
Irrigated Agriculture	143,516	33,530	40,411	18,969	103,105	14,561	177,046	59,380	117,666
Livestock (self-supplied)	59	1,014	59	1,014	0	0	1,073	1,073	0
Mining (self-supplied)	0	2	0	2	0	0	2	2	0
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	2,576	0	958	0	1,618	2,576	958	1,618
Reservoir Evaporation	7,570	0	7,570	0	0	0	7,570	7,570	0
Totals	151,145	38,855	48,040	22,298	103,105	16,557	190,000	70,338	119,662
1995 Water Year									
Commerical (self-supplied)	0	1,049	0	676	0	373	1,049	676	373
Domestic (self-supplied)	0	323	0	145	0	178	323	145	178
Industrial (self-supplied)	0	16	0	16	0	0	16	16	0
Irrigated Agriculture	122,538	37,709	36,427	21,425	86,111	16,284	160,247	57,852	102,395
Livestock (self-supplied)	73	887	73	840	0	47	960.00	913	47
Mining (self-supplied)	0	16	0	8	0	8	16	8	8
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	2,184	0	816	0	1,368	2,184	816	1,368
Reservoir Evaporation	7,570	0	7,570	0	0	0	7,570	7,570	0
Totals	130,181	42,184	44,070	23,926	86,111	18,258	172,365	67,996	104,369

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Use Category	Withdrawal (acre-feet)		Depletion (acre-feet)		Return Flow (acre-feet)		Withdrawal (acre-feet)	Total Depletion (acre-feet)	Total Return Flow (acre-feet)
	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
1990 Water Year									
Commerical (self-supplied)	0	144	0	65	0	79	144	65	79
Domestic (self-supplied)	0	319	0	143	0	176	319	143	176
Industrial (self-supplied)	0	2	0	2	0	0	2	2	0
Irrigated Agriculture	103,356	30,962	35,442	20,759	67,914	10,203	134,318	56,201	78,117
Livestock (self-supplied)	72	636	72	613	0	23	708	685	23
Mining (self-supplied)	0	15	0	6	0	9	15	6	9
Power (self-supplied)	0	0	0	0	0	0	0	0	0
Public Water Supply	0	1,996	0	998	0	998	1,996	998	998
Reservoir Evaporation	7,570	0	7,570	0	0	0	7,570	7,570	0
Totals	110,998	34,074	43,084	22,586	67,914	11,488	145,072	65,670	79,402
1985 Water Year									
Commercial	0	773	0	387	0	386	773	387	386
Urban	0	1,918	0	959	0	959	1,918	959	959
Rural	0	400	0	201	0	199	400	201	199
Industrial	0	0	0	0	0	0	0	0	0
Irrigated Agriculture	79,732	15,637	16,151	9,322	63,581	6,315	95,369	25,473	69,896
Livestock	255	361	255	340	0	21	616	595	21
Minerals	0	155	0	77	0	78	155	77	78
Power	0	0	0	0	0	0	0	0	0
Stockpond Evaporation	686	0	686	0	0	0	686	686	0
Military	0	0	0	0	0	0	0	0	0
Fish and Wildlife	9,108	0	7,213	0	1,895	0	9,108	7,213	1,895
Recreation	0	479	0	317	0	162	479	317	162
Reservoir Evaporation	0	0	0	0	0	0	0	0	0
Totals	89,781	19,723	24,305	11,603	65,476	8,120	109,504	35,908	73,596

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	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water			
1980 Water Year									
Urban	0	2,607	0	1,304	0	1,303	2,607	1,304	1,303
Rural	0	295	0	147	0	148	295	147	148
Irrigated Agriculture	100,870	28,090	31,570	17,020	69,300	11,070	128,960	48,590	80,370
Livestock	324	360	324	353	0	7	684	677	7
Stockpond Evaporation	686	0	686	0	0	0	686	686	0
Commercial	0	18	0	11	0	7	18	11	7
Industrial	0	0	0	0	0	0	0	0	0
Minerals	0	155	0	77	0	78	155	77	78
Military	0	0	0	0	0	0	0	0	0
Power	0	0	0	0	0	0	0	0	0
Fish and Wildlife	6,719	384	6,200	192	519	192	7,103	6,392	711
Recreation	15	902	15	330	0	572	917	345	572
Reservoir Evaporation	0	0	0	0	0	0	0	0	0
Totals	108,614	32,811	38,795	19,434	69,819	13,377	141,425	58,229	83,196
1975 Water Year									
Urban	0	1,523	0	762	0	761	1,523	762	761
Rural	0	197	0	98	0	99	197	98	99
Irrigated Agriculture	92,170	31,250	26,900	18,730	65,270	12,520	123,420	45,630	77,790
Manufacturing	0	98	0	59	0	39	98	59	39
Minerals	0	40	0	8	0	32	40	8	32
Military	0	0	0	0	0	0	0	0	0
Livestock	294	293	294	293	0	0	587	587	0
Stockpond Evaporation	698	0	698	0	0	0	698	698	0
Power	0	0	0	0	0	0	0	0	0
Fish and Wildlife	5,124	6,622	3,250	3,311	1,874	3,311	11,746	6,561	5,185
Recreation	0	0	0	0	0	0	0	0	0
Reservoir Evaporation	0	0	0	0	0	0	0	0	0
Playa Lake Evaporation	0	0	0	0	0	0	0	0	0
Totals	98,286	40,023	31,142	23,261	67,144	16,762	138,309	54,403	83,906

Figure G2-1. Historic and current water use in public supply (PS) OSE water use category. Historic use was derived from OSE water use reports for 1975, 1980, 1985, 1990, 1995, and 2000, and 1999 water use values were obtained by methods described in text.

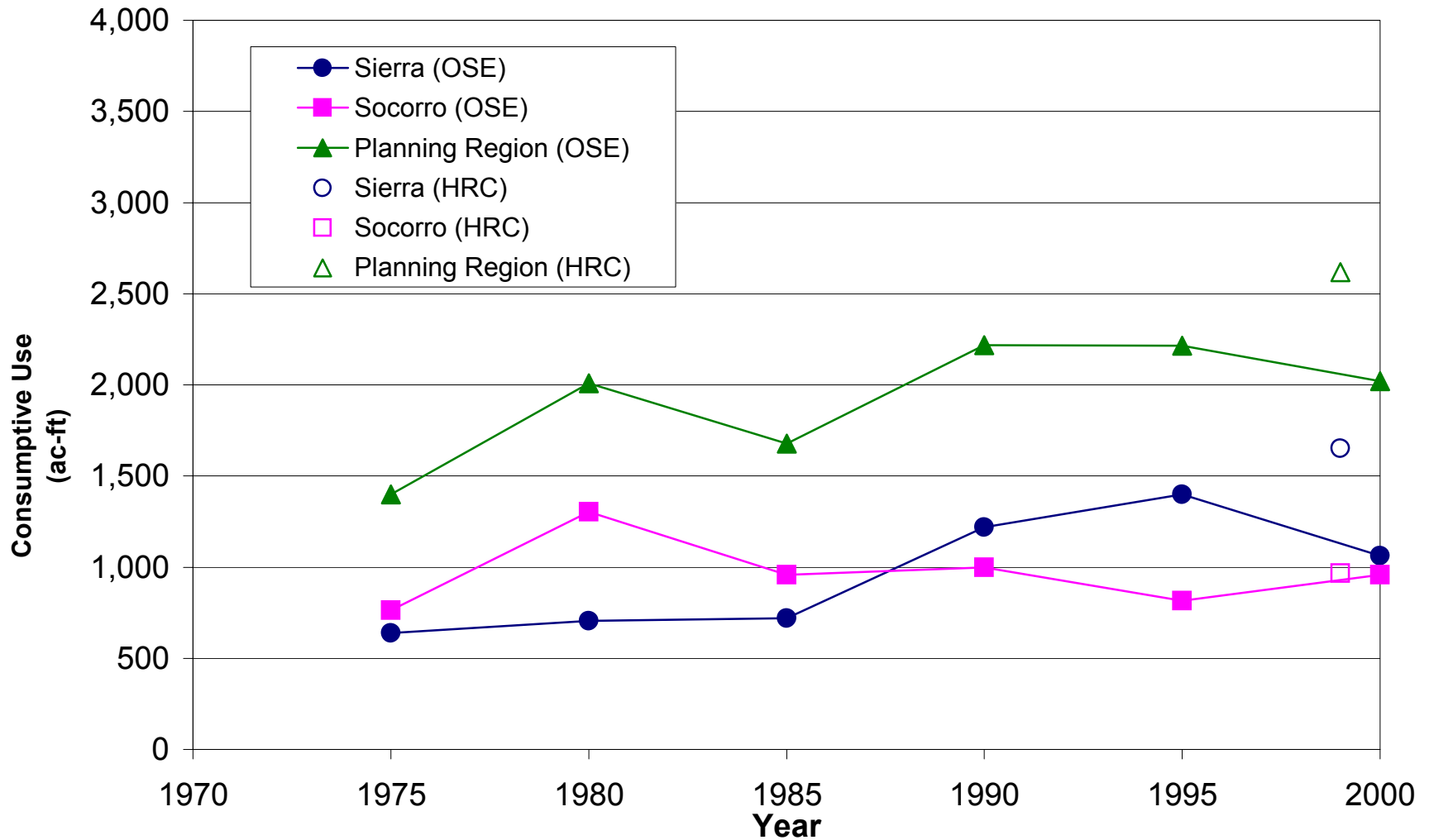


Figure G2-2. Historic and current water use in self-supplied domestic (DO) OSE water use category. Historic use wderived from OSE water use reports for 1975, 1985, 1990, 1995, and 2000, and 1999 water use was obtained by methods described in text.

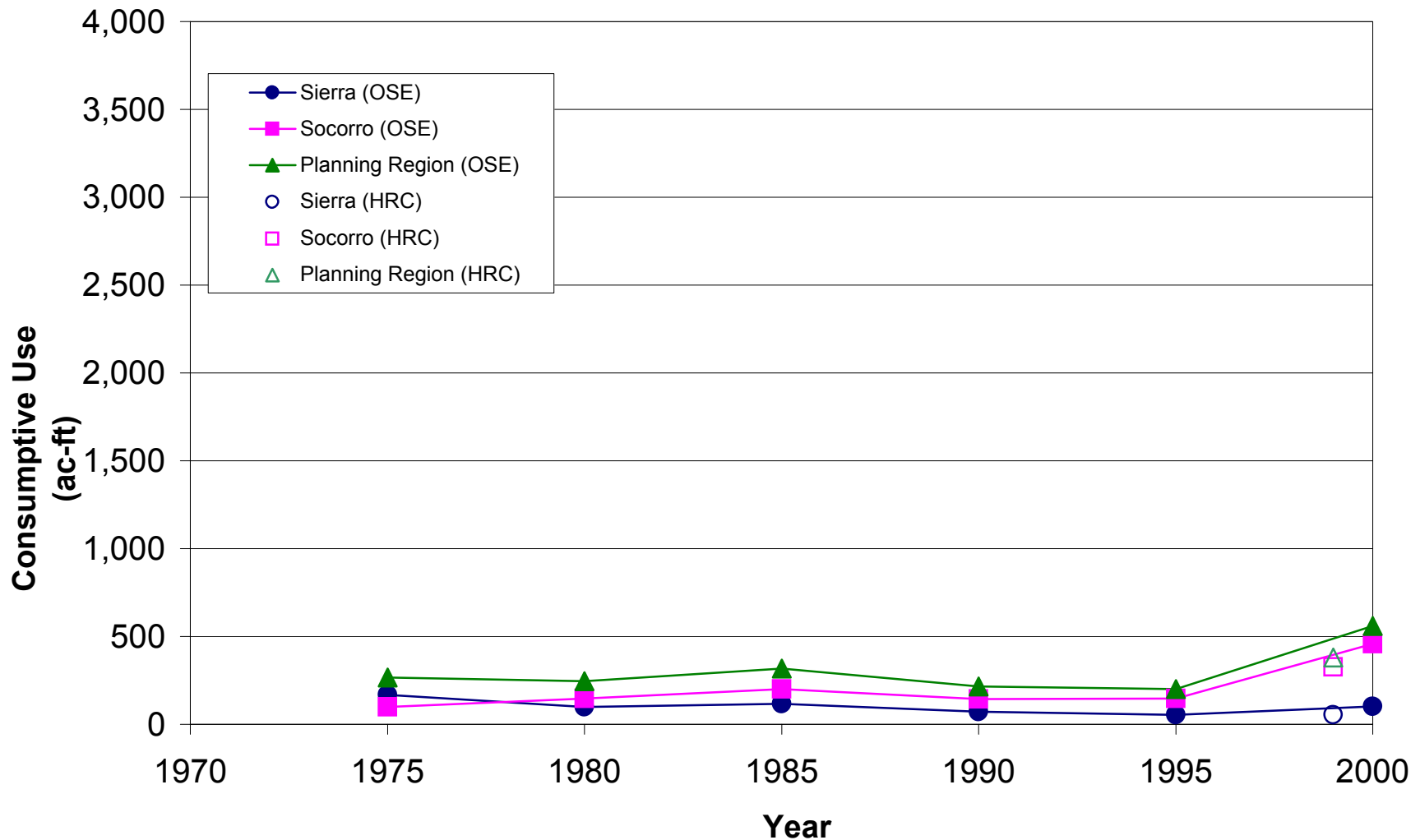


Figure G-3. Irrigated Agriculture consumptive use in Sierra County based on NMDA/USDA data calculated as described in text.

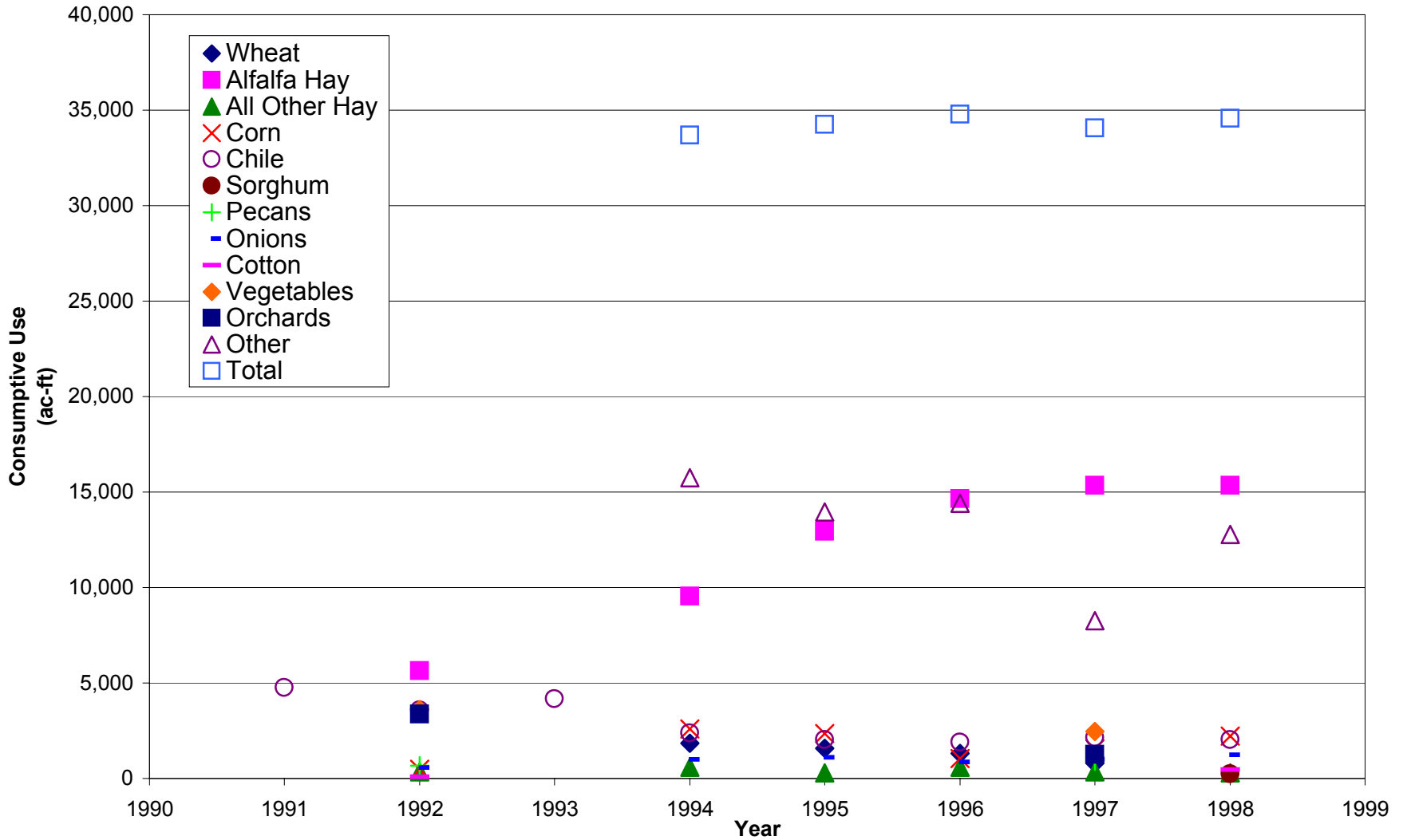


Figure G-4. Irrigated agriculture consumptive use in Socorro County based on NMDA/USDA data calculated as described in text.

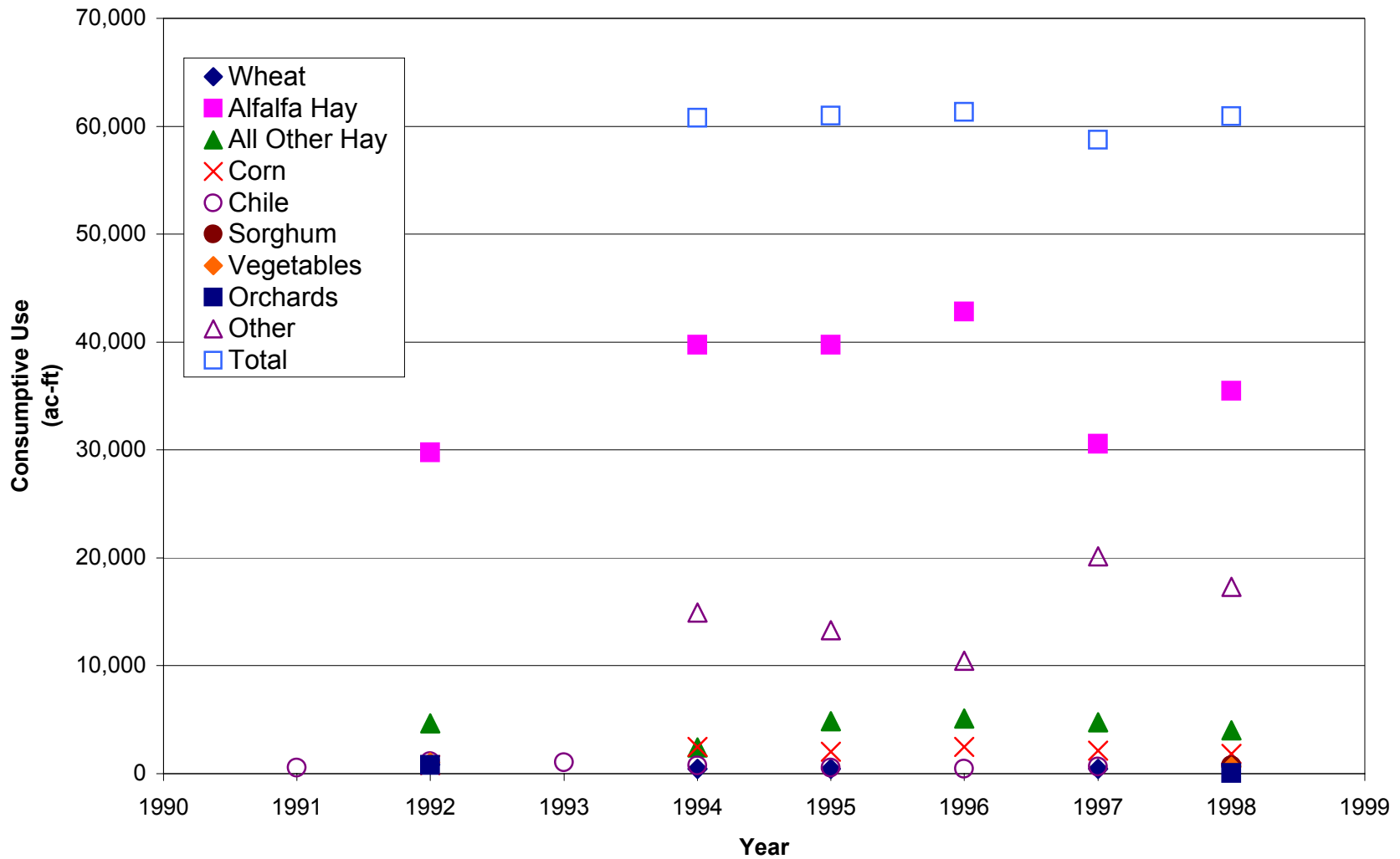


Figure G-5. Irrigated agriculture water consumptive use reported in NMOSE water use reports 1975-2000 and HRC independently estimated values obtained as described in text and Appendix G3. HRC1 illustrates estimates obtained by summing NMDA/USDA crop-specific acreages times crop-specific consumptive water requirements. HRC2 estimates derived from surveyed irrigated acreages times a default crop consumptive water use.

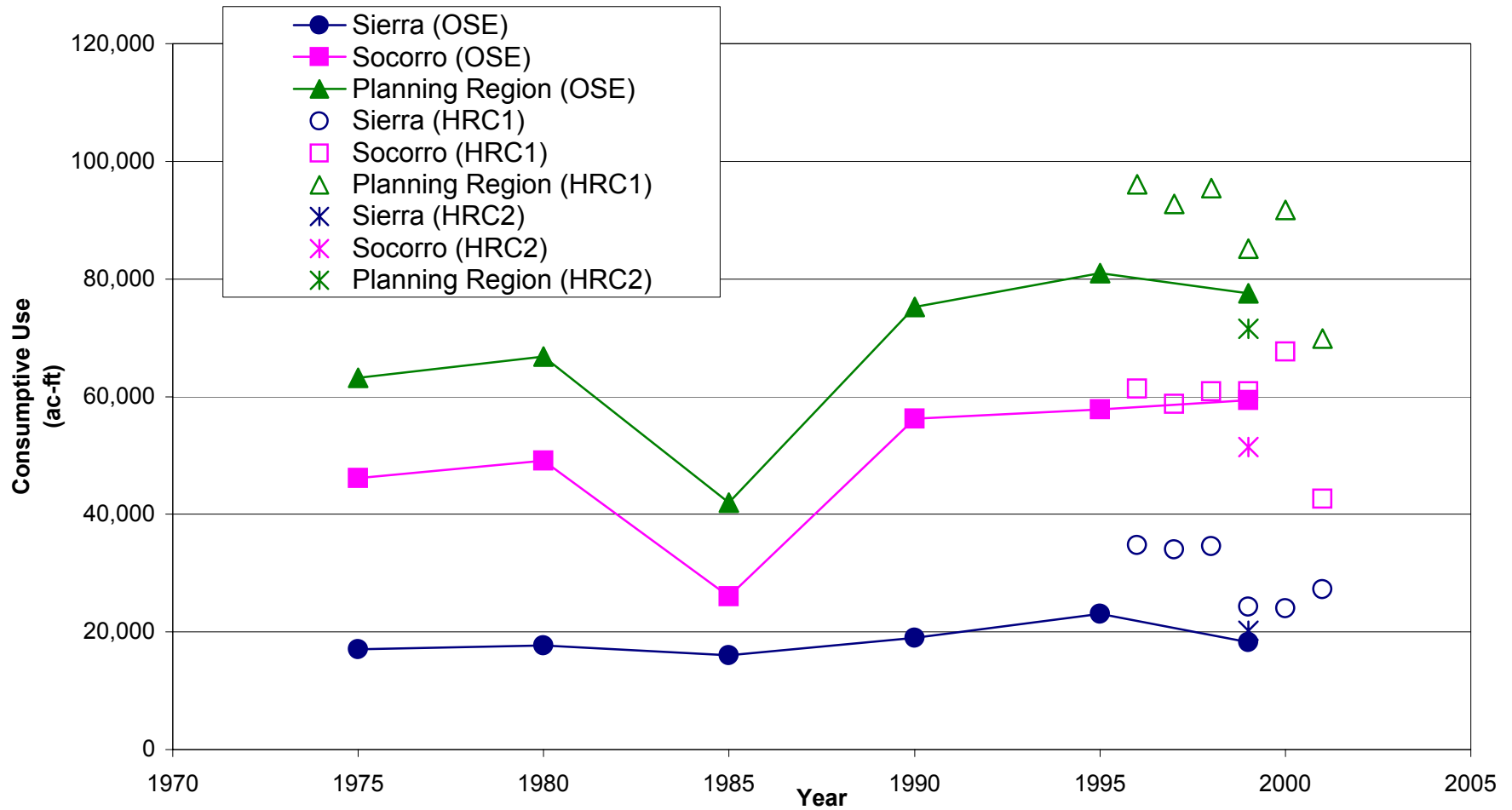


Figure G2-6. Irrigated agriculture water diversions reported by NMOSE for 1975, 1985, 1990, 1995, and 2000.

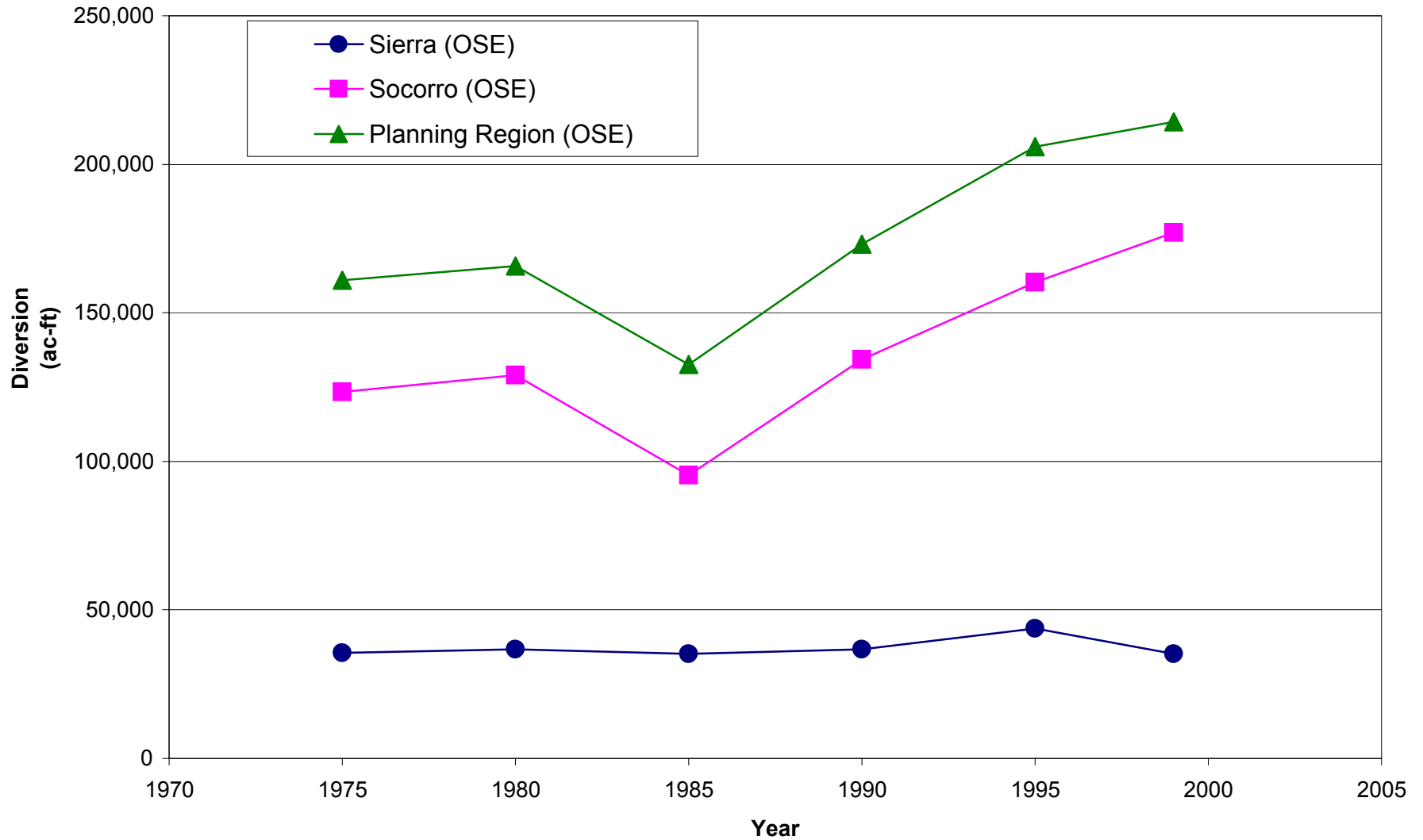


Figure G2-7. Historic water demand by livestock in the Socorro-Sierra planning region reported in NMOSE water use reports for 1975, 1985, 1990, 1995, and 2000 and HRC 1996-2002 values obtained as described in text.

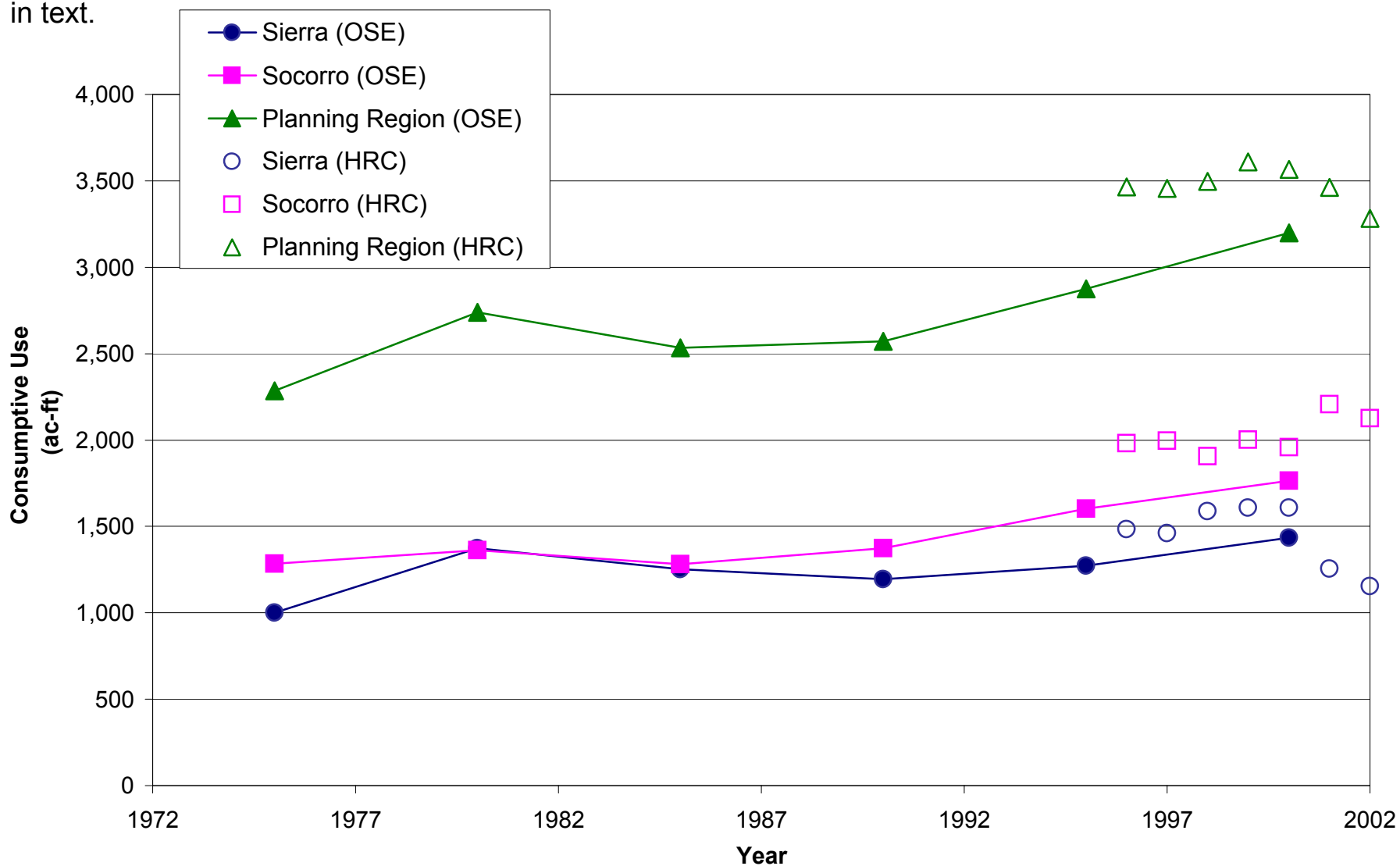


Figure G2-8. Livestock consumptive use in Sierra County based on NMDA/USDA data calculated as described in text.

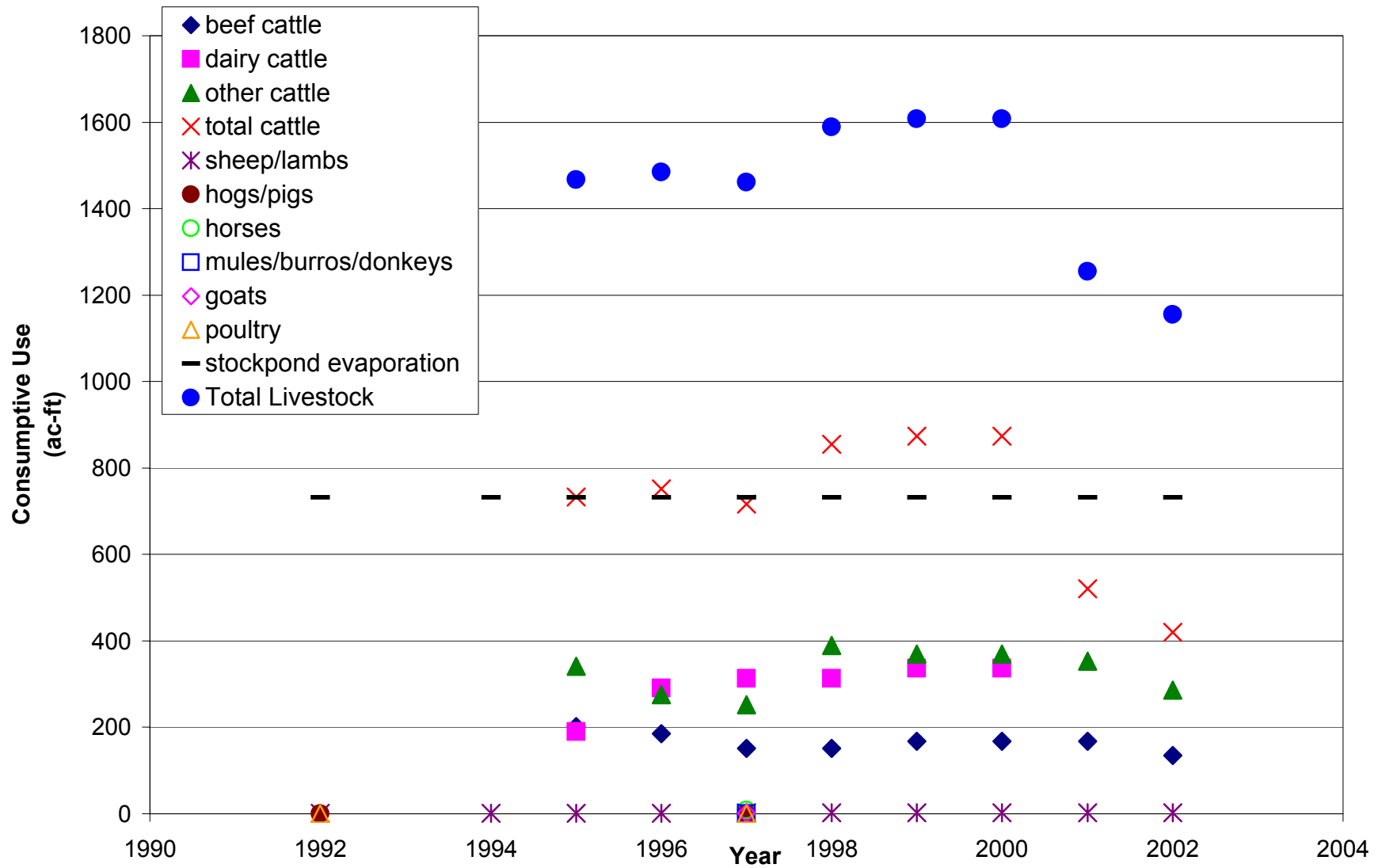


Figure G2-9. Livestock Consumptive Use in Socorro County based on NMDA/USDA data calculated as described in text.

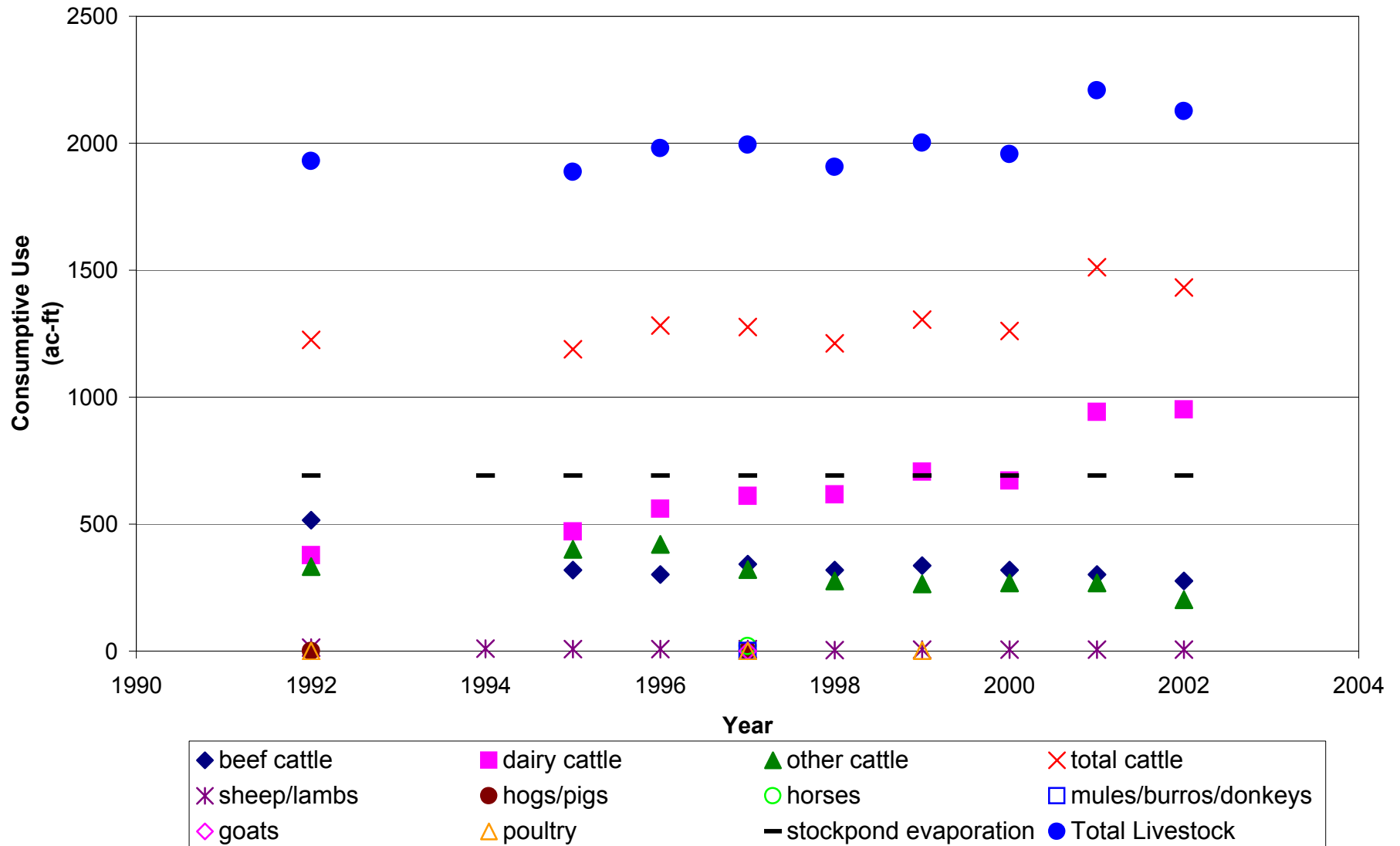


Figure G2-10. Historic water consumptive use by the commercial (CO) category reported in NMOSE water use reports (Sorenson, 1977; Sorenson, 1982; Wilson, 1986; Wilson, 1992; Wilson and Lucero, 1997; Wilson et al, 2003) plus NMT data (Trueline Engineering, 1999).

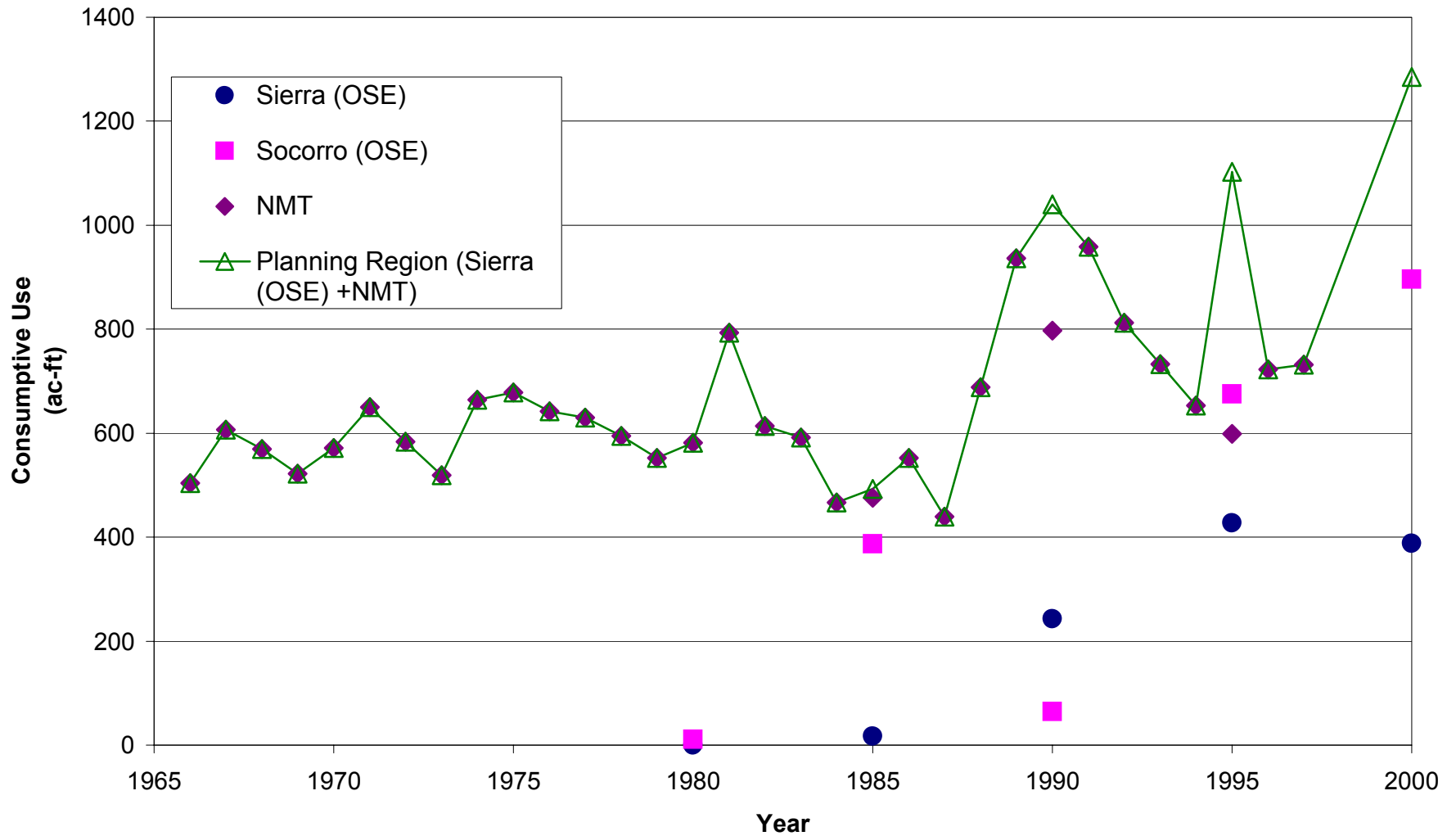


Figure G2-11. Historic water demand by the industrial (IN) category reported in NMOSE water use reports for 1975, 1985, 1990, 1995, and 2000.

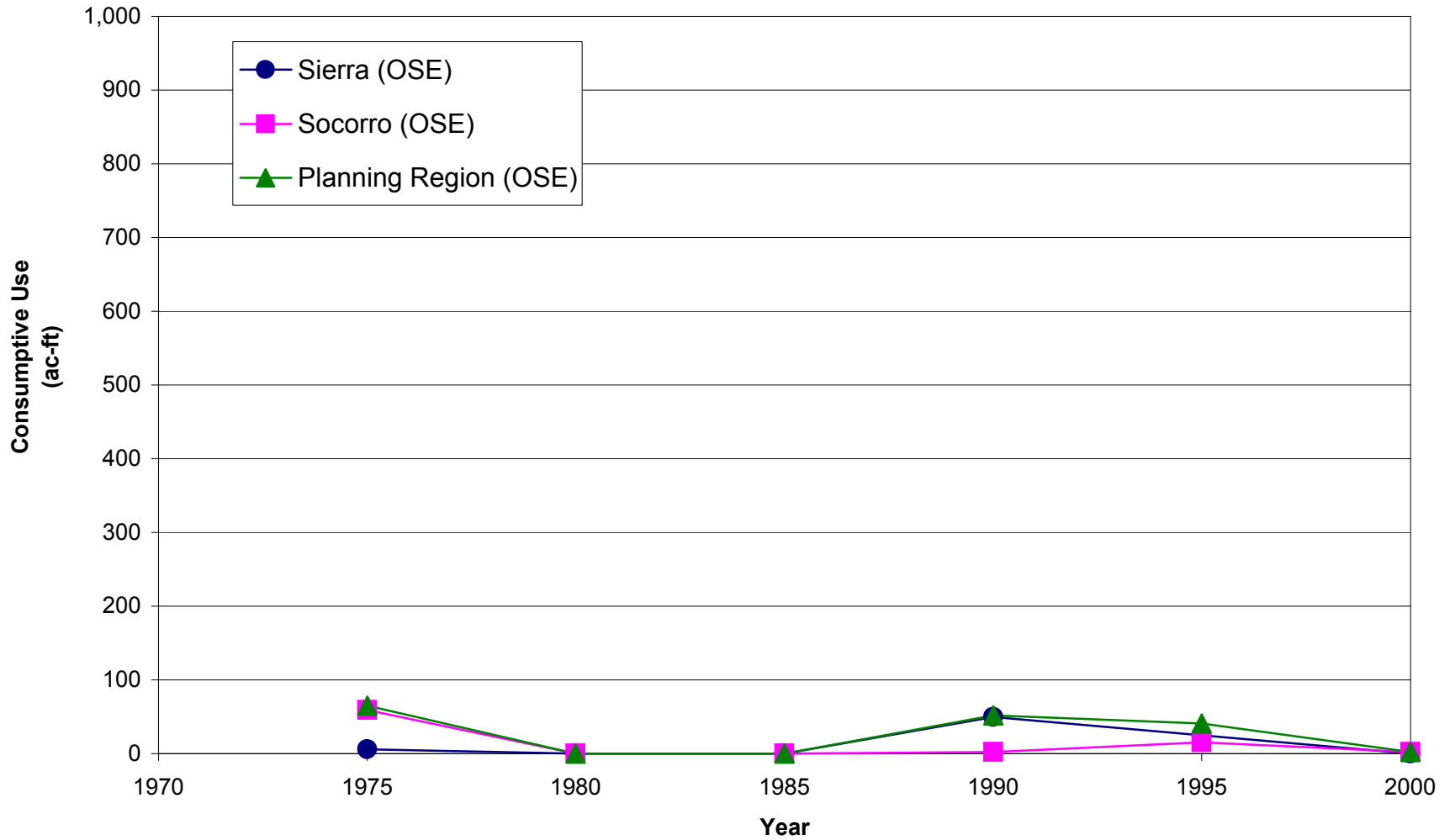


Figure G2-12. Historic water demand by the mining (MI) category reported in NMOSE water use reports for 1975, 1985, 1990, 1995, and 2000.

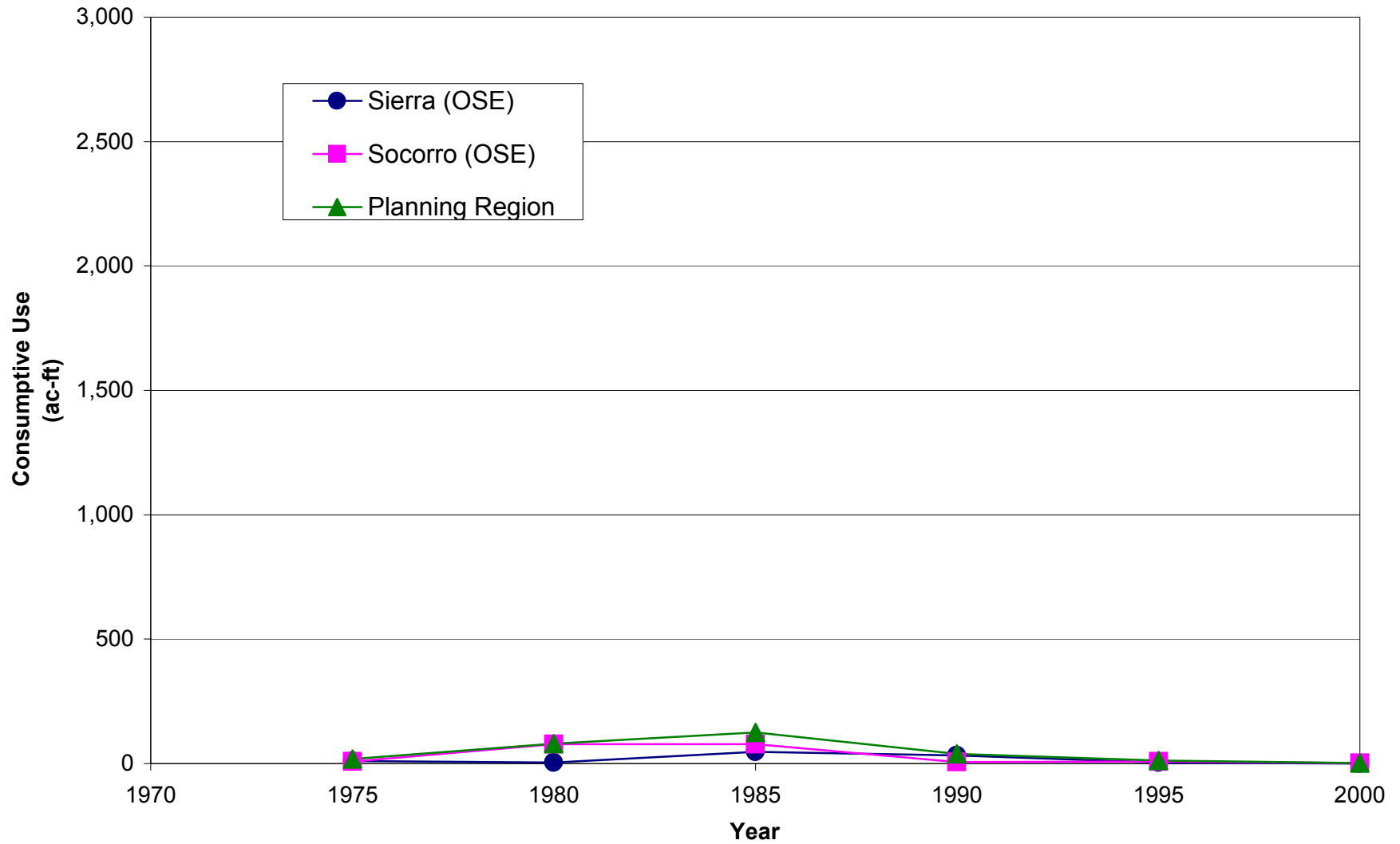


Figure G2-13. Total riparian evapotranspiration (RPET) for Socorro County (from SSPA, 2000).

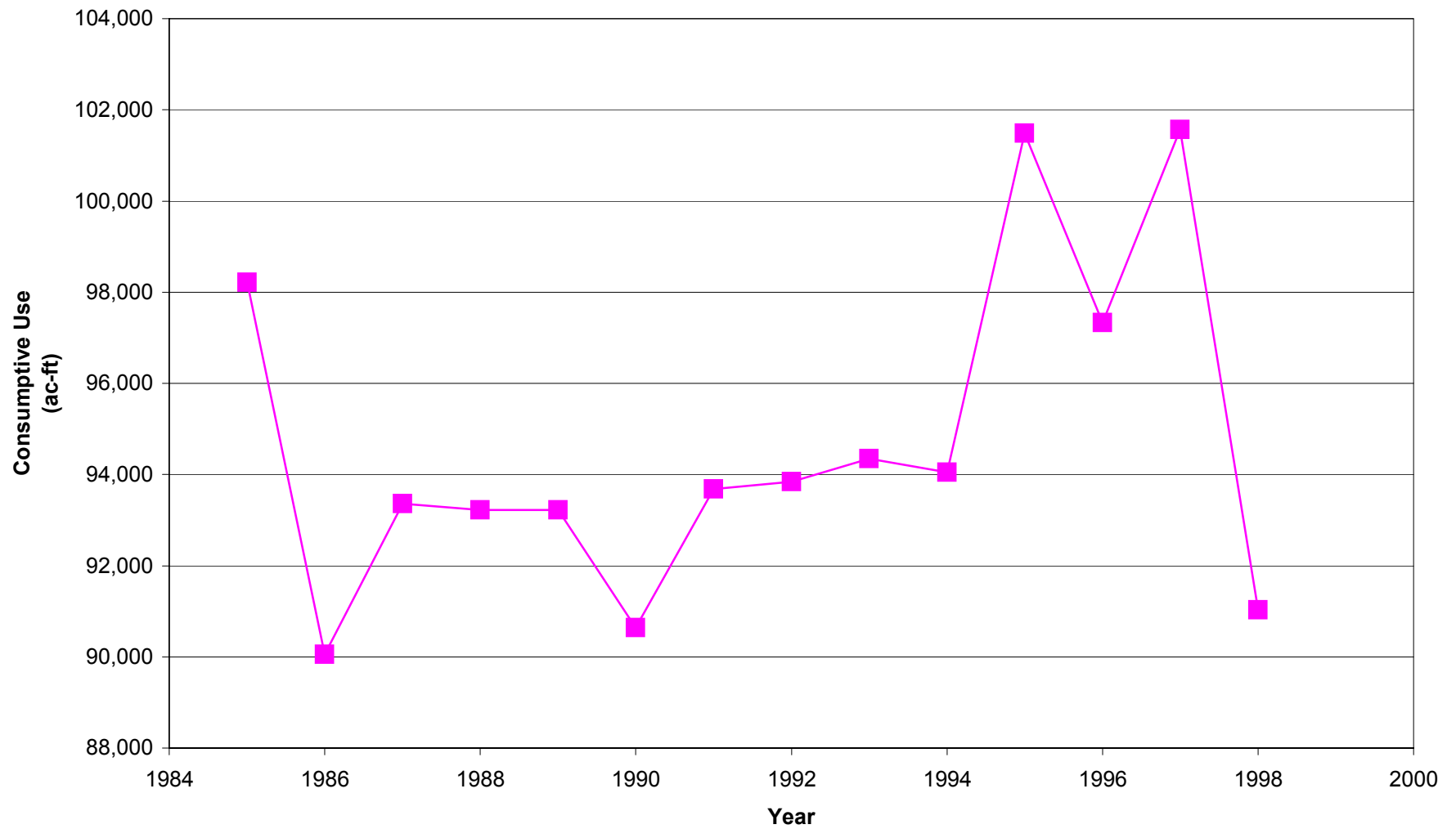


Figure G2-14. Historic open water evaporation in the Socorro-Sierra water planning region.

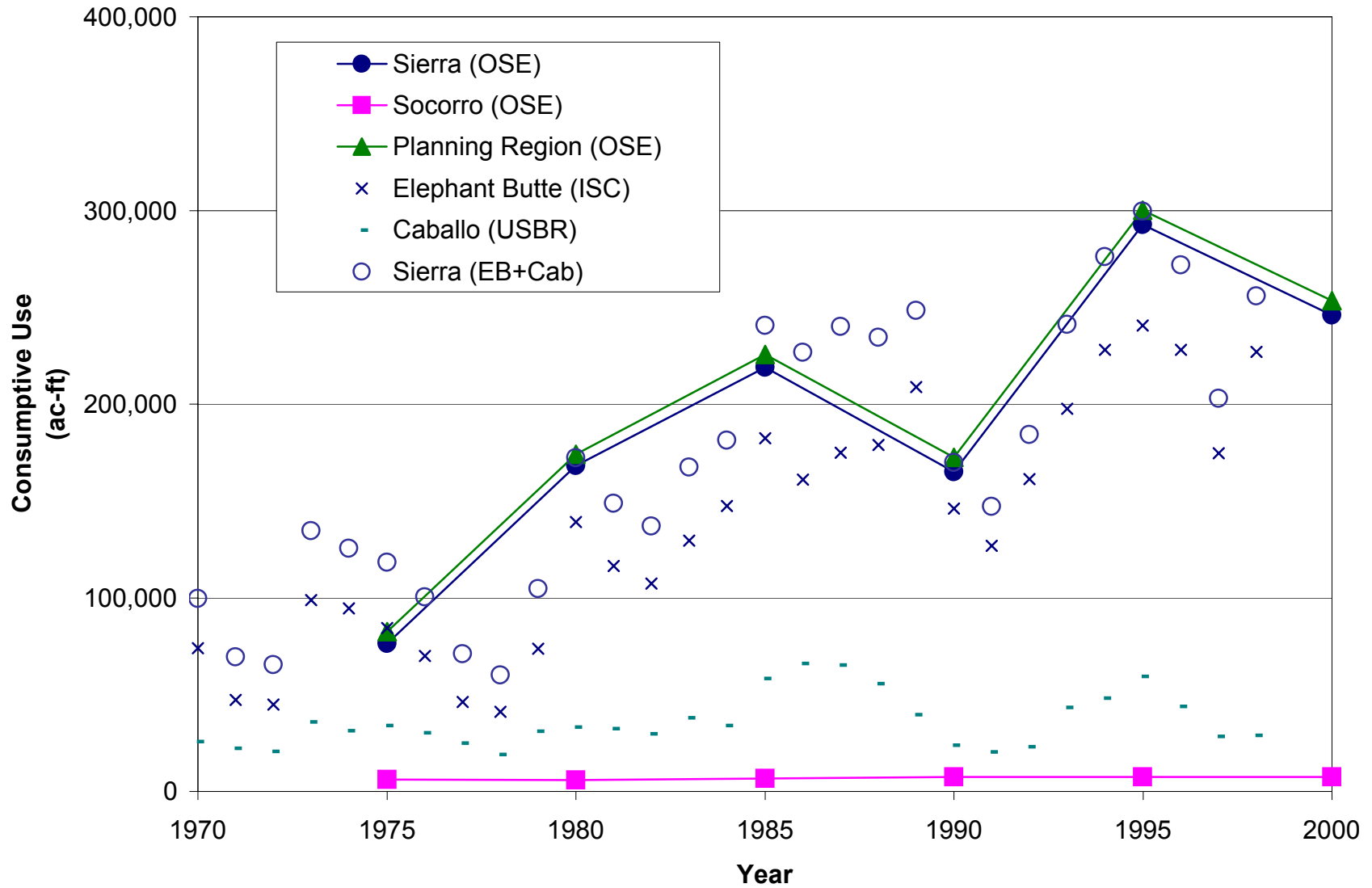


Figure G2-15. Total surface water consumptive use by category for the Socorro-Sierra Planning Region as reported by the OSE, with the exception of RPET, which was obtained from SSPA (2000).

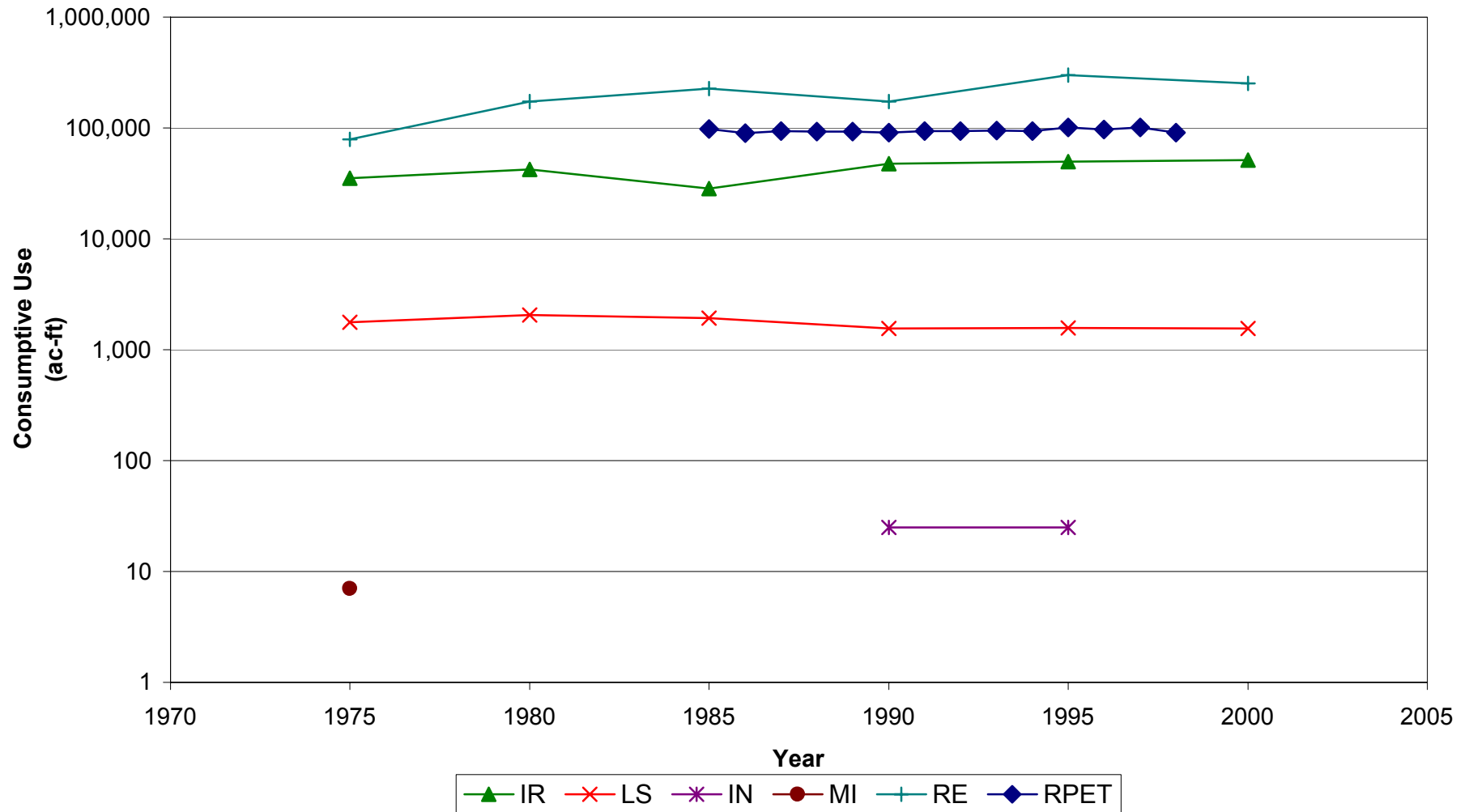


Figure G2-16. Total ground water consumptive use by category for the Socorro-Sierra Planning Region as reported by the OSE.

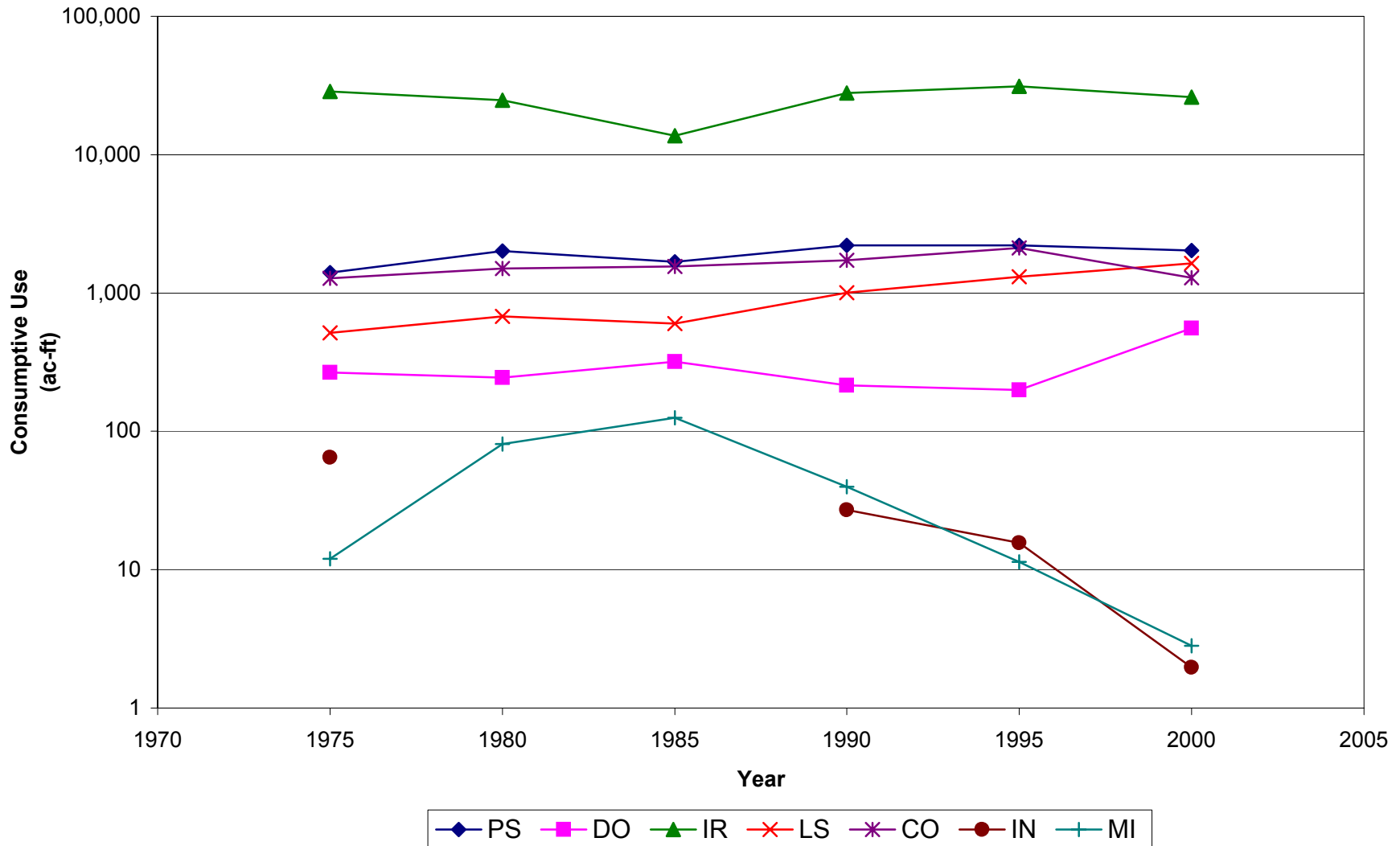


Figure G2-17. Total water consumptive use by county as reported by the OSE. Socorro County value includes riparian evaporation from SSPA, 2003 (Appendix E1)

