

KERN RIVER 1990



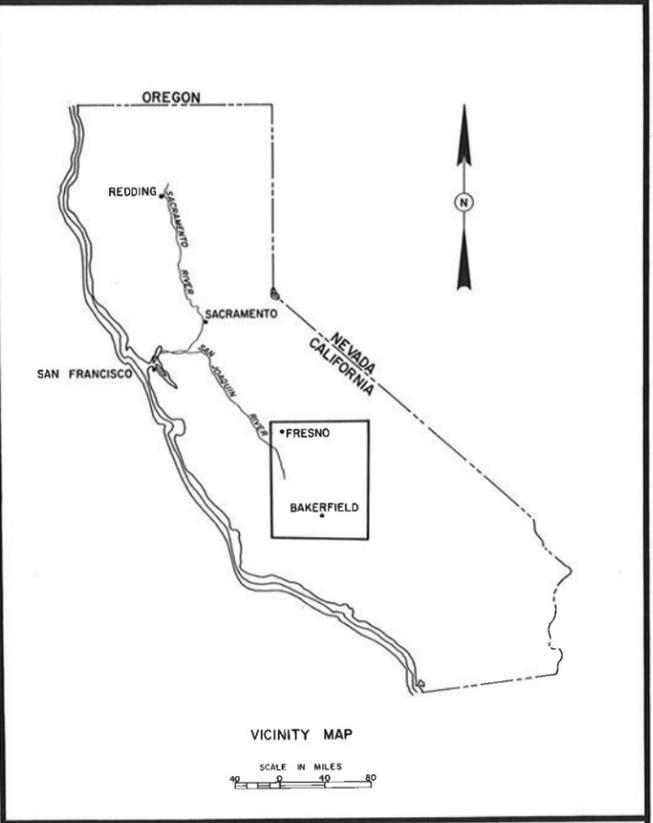
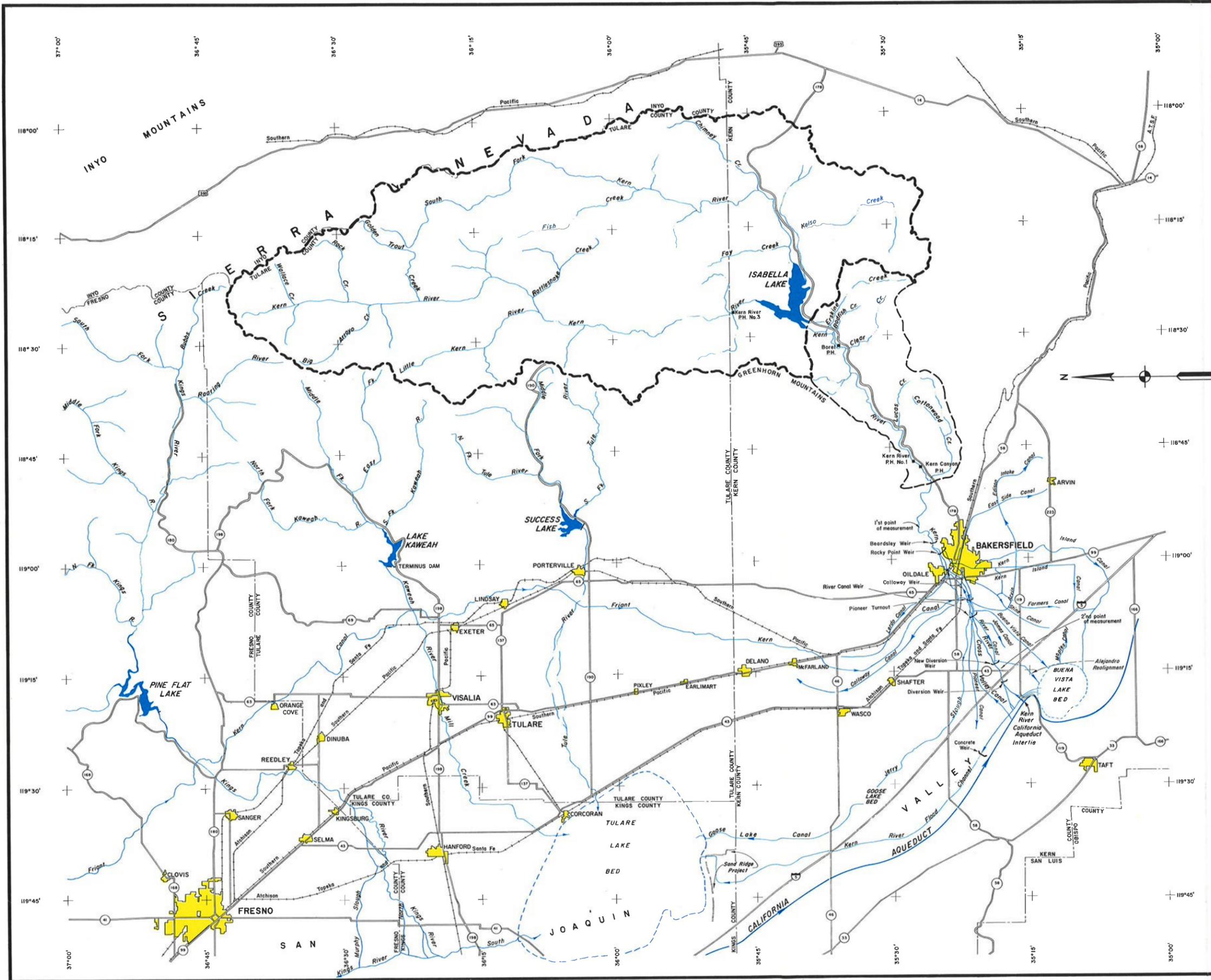
Prepared for:

ED STEINMETZ

1990
HYDROGRAPHIC ANNUAL REPORT

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- LEGEND**
- Drainage Boundary
 - U.S. Highway
 - State Highway
 - Interstate Highway
 - Railroad
 - Levee
 - Intermittent Stream
 - Perennial Stream
 - Canal
 - Reservoir or Lake
 - Authorized Reservoir
- SCALE
(Statute Miles)

**ISABELLA LAKE
KERN RIVER, CALIFORNIA**

GENERAL MAP

CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA
 Prepared: C.D.M. Date: NOVEMBER 1977
 Drawn: T.K.B.

**HISTORICAL RECAP
KERN RIVER AT FIRST POINT OF MEASUREMENT**

YEAR	QUANTITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	MAX.	MIN.	MEAN	
		Measurements and Estimates were not made prior to September 29, 1893...																
1893	acre-foot										32,864	30,827	31,757					
	mean s.f.d.										534	518	516					
1894	acre-foot	40,647	39,816	61,548	88,974	98,801	64,564	43,061	20,565	14,759	17,179	14,501	28,911	533,326				
	mean s.f.d.	661	717	1,001	1,495	1,607	1,085	700	334	248	279	244	470		2,208	172	737	
1895	acre-foot	49,769	69,521	84,456	162,071	268,635	172,890	91,133	38,672	20,452	20,091	20,604	24,758	1,023,052				
	mean s.f.d.	809	1,252	1,374	2,724	4,369	2,906	1,482	629	344	327	346	403		5,583	276	1,413	
1896	acre-foot	45,951	35,510	58,494	57,864	86,174	146,124	82,760	29,885	18,061	16,401	21,108	21,360	619,692				
	mean s.f.d.	747	617	951	972	1,401	2,456	1,346	486	304	267	355	347		3,611	223	854	
1897	acre-foot	22,949	44,941	56,756	173,393	281,639	137,393	61,837	28,842	17,728	20,888	21,146	25,922	893,434				
	mean s.f.d.	373	809	923	2,914	4,580	2,309	1,006	469	298	340	355	422		5,342	260	1,234	
1898	acre-foot	22,332	24,105	23,882	42,248	45,213	32,809	15,033	7,390	6,885	9,830	9,884	12,216	251,827				
	mean s.f.d.	363	434	388	710	735	551	244	120	116	160	166	199		1,342	80	348	
1899	acre-foot	16,185	16,754	36,279	53,133	51,353	79,178	30,046	9,600	6,248	9,952	13,180	17,064	338,872				
	mean s.f.d.	263	302	590	893	835	1,331	489	156	105	160	221	278		4,932	86	468	
1900	acre-foot	22,266	15,562	25,384	28,102	68,295	76,366	24,125	8,860	9,903	9,808	20,787	22,915	332,373				
	mean s.f.d.	362	280	413	472	1,111	1,283	392	144	166	160	349	373		1,969	101	459	
1901	acre-foot	30,337	47,760	78,109	83,190	186,446	197,792	114,613	59,536	20,535	19,468	22,429	19,874	880,089				
	mean s.f.d.	493	860	1,270	1,398	3,032	3,324	1,864	968	345	317	377	323		4,419	226	1,216	
1902	acre-foot	17,407	20,582	48,546	107,403	109,904	128,853	43,436	19,172	11,695	12,242	16,739	16,560	552,539				
	mean s.f.d.	283	371	790	1,805	1,787	2,165	706	312	197	199	281	269		3,758	160	763	
1903	acre-foot	21,531	25,192	35,575	74,315	132,097	139,222	53,355	18,623	11,357	10,681	12,107	12,340	546,395				
	mean s.f.d.	350	454	579	1,249	2,148	2,340	868	303	191	174	203	201		3,374	150	755	
1904	acre-foot	11,982	19,902	40,996	59,812	113,205	103,904	39,725	28,733	15,901	26,955	17,006	14,828	492,949				
	mean s.f.d.	195	346	667	1,005	1,841	1,746	646	467	267	438	286	241		3,167	156	679	
1905	acre-foot	17,258	22,001	50,598	62,047	117,748	132,766	53,835	20,134	12,563	12,744	14,041	16,074	531,809				
	mean s.f.d.	281	396	823	1,043	1,915	2,231	876	327	211	207	236	261		3,247	165	735	
1906	acre-foot	42,623	34,750	126,844	173,143	360,234	458,418	399,841	141,384	57,925	37,464	29,931	37,983	1,900,540				
	mean s.f.d.	693	626	2,063	2,910	5,859	7,704	6,503	2,299	973	609	503	618		9,684	222	2,625	
1907	acre-foot	41,697	56,834	83,272	197,720	199,950	183,995	97,083	41,940	24,623	22,428	19,747	21,611	990,900				
	mean s.f.d.	678	1,023	1,354	3,323	3,252	3,092	1,579	682	414	365	332	351				1,369	
1908	acre-foot	27,878	32,481	65,079	79,320	79,418	60,305	41,851	32,378	21,763	21,487	18,206	18,337	498,503				
	mean s.f.d.	453	565	1,058	1,333	1,292	1,013	681	527	366	349	306	298				687	
1909	acre-foot	118,441	125,050	128,649	247,402	382,617	394,086	194,870	66,224	43,448	31,214	34,350	72,292	1,838,643				
	mean s.f.d.	1,926	2,252	2,092	4,158	6,223	6,623	3,169	1,077	730	508	577	1,176		11,870	295	2,540	
1910	acre-foot	73,523	48,904	85,085	102,883	127,733	79,464	42,046	24,216	17,201	18,976	18,881	19,999	658,911				
	mean s.f.d.	1,196	881	1,384	1,729	2,077	1,335	684	394	289	309	317	325		4,847	222	910	

**HISTORICAL RECAP
KERN RIVER AT FIRST POINT OF MEASUREMENT**

YEAR	QUANTITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	MAX.	MIN.	MEAN
1911	acre-foot	38,241	53,944	80,166	138,113	184,481	222,076	156,498	45,880	25,222	25,422	21,691	21,650	1,013,384	—	—	—
	mean s.f.d.	622	971	1,304	2,321	3,000	3,732	2,545	746	424	413	365	352	—	5,383	273	1,400
1912	acre-foot	23,320	21,302	28,090	37,246	80,471	100,925	33,170	16,653	10,899	11,780	11,772	11,804	387,432	—	—	—
	mean s.f.d.	379	370	457	626	1,309	1,696	539	271	183	192	198	192	—	3,220	147	534
1913	acre-foot	13,019	15,731	25,191	42,494	73,561	60,738	34,929	31,454	25,357	13,402	15,368	16,596	367,840	—	—	—
	mean s.f.d.	212	283	410	714	1,196	1,021	568	512	426	218	258	270	—	1,976	126	508
1914	acre-foot	116,541	62,575	102,739	144,934	210,676	201,064	128,338	55,127	25,240	24,462	20,390	21,427	1,113,513	—	—	—
	mean s.f.d.	1,895	1,127	1,671	2,436	3,426	3,379	2,087	897	424	398	343	348	—	18,287	285	1,538
1915	acre-foot	22,500	30,254	48,536	80,916	124,506	172,324	77,496	24,668	16,457	14,452	14,858	19,320	646,287	—	—	—
	mean s.f.d.	366	545	789	1,360	2,025	2,896	1,260	401	277	235	250	314	—	4,249	203	891
1916	acre-foot	172,346	202,510	378,116	481,749	472,994	391,700	225,154	56,755	33,808	41,774	30,879	32,364	2,520,149	—	—	—
	mean s.f.d.	2,803	3,521	6,149	8,096	7,693	6,583	3,662	923	568	679	519	526	—	17,962	274	3,481
1917	acre-foot	40,128	44,894	65,242	126,329	165,062	187,638	81,275	36,990	19,696	17,970	18,488	19,370	823,082	—	—	—
	mean s.f.d.	653	808	1,061	2,123	2,684	3,153	1,322	602	331	292	311	315	—	4,331	267	1,137
1918	acre-foot	18,918	18,559	48,087	74,513	78,722	136,753	44,828	20,807	17,562	32,555	22,160	25,039	538,503	—	—	—
	mean s.f.d.	308	334	782	1,252	1,280	2,298	729	338	295	529	372	407	—	3,478	227	744
1919	acre-foot	21,098	23,002	37,973	86,574	140,215	81,844	34,364	16,288	11,722	13,835	13,884	18,325	499,124	—	—	—
	mean s.f.d.	343	414	618	1,455	2,280	1,375	559	265	197	225	233	298	—	4,299	156	689
1920	acre-foot	17,220	18,044	40,397	83,370	159,904	137,840	50,699	22,431	14,949	16,596	19,490	20,703	600,643	—	—	—
	mean s.f.d.	280	314	657	1,401	2,584	2,316	825	365	251	270	328	337	—	4,456	196	827
1921	acre-foot	23,520	30,791	55,402	51,723	100,096	120,387	49,119	18,073	12,595	13,180	12,960	21,673	509,519	—	—	—
	mean s.f.d.	383	554	901	869	1,628	2,023	799	294	212	214	218	352	—	3,548	110	704
1922	acre-foot	30,682	33,846	52,468	84,407	242,259	202,395	88,649	37,061	23,772	17,770	19,835	28,282	861,426	—	—	—
	mean s.f.d.	499	609	853	1,419	3,940	3,401	1,442	603	400	289	333	460	—	5,300	196	1,190
1923	acre-foot	26,863	25,720	31,372	73,355	120,849	82,528	55,800	22,322	18,054	15,495	14,348	13,809	500,515	—	—	—
	mean s.f.d.	437	463	510	1,233	1,965	1,387	908	363	303	252	241	225	—	3,275	179	691
1924	acre-foot	13,676	13,702	15,953	28,540	41,722	14,069	8,225	5,881	5,494	7,642	14,196	18,627	187,727	—	—	—
	mean s.f.d.	222	238	259	480	679	236	134	96	92	124	239	303	—	1,073	74	259
1925	acre-foot	17,992	26,333	31,299	56,408	102,016	96,252	58,437	25,938	11,405	12,906	12,305	14,622	465,913	—	—	—
	mean s.f.d.	293	474	509	948	1,659	1,618	950	422	192	210	207	238	—	2,819	148	635
1926	acre-foot	12,022	15,667	24,739	66,079	98,598	49,530	18,575	9,522	7,029	8,358	28,493	28,094	366,706	—	—	—
	mean s.f.d.	196	282	402	1,110	1,604	832	302	155	118	136	479	457	—	6,511	74	507
1927	acre-foot	20,485	75,279	73,083	100,362	184,721	161,153	75,481	26,817	14,842	14,037	27,180	19,140	792,580	—	—	—
	mean s.f.d.	333	1,355	1,189	1,687	3,004	2,708	1,228	436	249	228	457	311	—	6,571	188	1,095
1928	acre-foot	18,452	17,818	32,668	37,757	76,885	60,344	18,716	9,189	6,583	8,792	11,974	13,710	312,828	—	—	—
	mean s.f.d.	300	310	531	635	1,250	1,014	304	149	111	142	201	223	—	2,058	101	431
1929	acre-foot	13,864	14,654	25,176	39,084	85,995	63,487	30,986	12,797	9,146	8,793	9,035	9,961	322,958	—	—	—
	mean s.f.d.	225	264	409	656	1,399	1,067	504	208	154	143	152	162	—	2,003	119	446
1930	acre-foot	12,234	20,099	34,550	53,506	67,851	82,824	28,401	11,819	7,743	9,314	11,042	10,590	349,973	—	—	—
	mean s.f.d.	199	362	562	899	1,103	1,392	462	192	130	151	186	172	—	2,423	118	483

**HISTORICAL RECAP
KERN RIVER AT FIRST POINT OF MEASUREMENT**

YEAR	QUANTITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	MAX.	MIN.	MEAN
1931	acre-foot	12,284	13,785	15,784	23,440	41,867	24,262	8,493	6,302	6,860	6,817	8,241	17,510	185,645	—	—	—
	mean s.f.d.	200	248	257	394	681	408	138	102	115	111	138	285	—	2,261	71	256
1932	acre-foot	22,235	39,596	68,647	111,273	154,742	166,404	94,013	28,243	13,593	13,942	12,077	12,962	737,727	—	—	—
	mean s.f.d.	362	688	1,116	1,870	2,517	2,797	1,529	459	228	227	203	211	—	3,726	180	1,016
1933	acre-foot	17,175	21,021	36,244	57,265	60,026	125,395	56,898	18,692	10,062	10,893	10,776	16,639	441,086	—	—	—
	mean s.f.d.	279	379	589	962	976	2,107	925	304	169	177	181	271	—	3,769	144	609
1934	acre-foot	20,033	16,842	27,429	39,919	43,065	21,820	11,341	6,948	7,043	8,196	11,272	13,757	227,665	—	—	—
	mean s.f.d.	326	303	446	671	700	367	184	113	118	133	189	224	—	914	82	314
1935	acre-foot	14,840	18,500	24,841	71,042	103,787	133,634	42,184	17,193	11,363	11,962	11,905	12,877	474,128	—	—	—
	mean s.f.d.	241	333	404	1,194	1,688	2,246	686	280	191	195	200	209	—	3,378	164	655
1936	acre-foot	14,737	46,808	57,374	157,290	219,404	137,028	67,902	32,987	14,372	15,423	15,828	17,294	796,447	—	—	—
	mean s.f.d.	240	814	933	2,643	3,568	2,303	1,104	536	242	251	266	281	—	4,173	194	1,097
1937	acre-foot	21,745	139,109	111,443	183,505	352,050	225,395	91,097	32,186	17,780	17,173	16,379	52,320	1,260,182	—	—	—
	mean s.f.d.	354	2,505	1,812	3,084	5,726	3,788	1,482	523	299	279	275	851	—	20,000	223	1,741
1938	acre-foot	31,265	42,456	162,121	223,928	315,044	291,880	130,917	54,155	28,693	27,475	24,748	26,003	1,358,685	—	—	—
	mean s.f.d.	508	764	2,637	3,763	5,124	4,905	2,129	881	482	447	416	423	—	14,582	356	1,877
1939	acre-foot	28,558	33,273	54,119	92,136	92,253	58,400	25,480	18,774	13,712	16,826	13,692	13,850	461,073	—	—	—
	mean s.f.d.	464	599	880	1,548	1,500	981	414	305	230	274	230	225	—	2,028	178	637
1940	acre-foot	45,082	65,032	77,810	118,175	196,465	145,503	50,471	18,926	13,234	14,670	16,007	27,723	789,098	—	—	—
	mean s.f.d.	733	1,131	1,265	1,986	3,195	2,445	821	308	222	239	269	451	—	5,454	167	1,087
1941	acre-foot	39,540	73,589	109,735	124,615	386,666	309,960	174,416	62,537	27,997	26,325	27,661	38,035	1,401,076	—	—	—
	mean s.f.d.	643	1,325	1,785	2,094	6,289	5,209	2,837	1,017	471	428	465	619	—	8,523	337	1,935
1942	acre-foot	49,438	40,834	58,487	112,586	150,036	178,754	81,529	30,284	16,500	14,648	16,130	22,740	771,966	—	—	—
	mean s.f.d.	804	735	951	1,892	2,440	3,004	1,326	493	277	238	271	370	—	4,060	141	1,066
1943	acre-foot	92,551	56,820	261,344	198,736	254,785	155,650	88,011	34,435	17,857	17,849	18,565	24,224	1,220,827	—	—	—
	mean s.f.d.	1,505	1,023	4,250	3,340	4,144	2,616	1,431	560	300	290	312	394	—	21,701	252	1,686
1944	acre-foot	27,473	32,781	69,836	80,223	150,109	115,862	59,197	20,305	12,843	12,952	21,521	22,435	625,537	—	—	—
	mean s.f.d.	447	570	1,136	1,348	2,441	1,947	963	330	216	211	362	365	—	3,071	191	862
1945	acre-foot	20,783	70,522	63,925	131,246	205,509	169,002	91,593	41,632	21,548	41,268	36,845	44,182	938,055	—	—	—
	mean s.f.d.	338	1,270	1,040	2,206	3,342	2,840	1,490	677	362	671	619	719	—	9,370	155	1,296
1946	acre-foot	45,481	34,854	60,958	109,658	155,476	85,880	39,733	20,091	13,261	16,141	31,365	37,785	650,683	—	—	—
	mean s.f.d.	740	628	991	1,843	2,529	1,443	646	327	223	263	527	615	—	3,814	192	899
1947	acre-foot	31,146	28,167	36,319	60,353	110,325	57,778	21,116	12,313	9,140	12,607	13,492	13,942	406,698	—	—	—
	mean s.f.d.	507	507	591	1,014	1,794	971	343	200	154	205	227	227	—	2,584	135	562
1948	acre-foot	13,486	13,267	16,233	43,976	86,108	78,565	31,331	9,927	6,899	8,908	9,586	11,220	329,506	—	—	—
	mean s.f.d.	219	231	264	739	1,400	1,320	510	161	116	145	161	182	—	2,206	97	454
1949	acre-foot	11,982	12,992	21,136	50,517	84,508	57,685	17,201	6,682	6,541	7,704	11,131	12,791	302,870	—	—	—
	mean s.f.d.	195	234	344	849	1,374	969	280	141	110	125	187	208	—	2,128	69	418
1950	acre-foot	17,119	39,761	37,087	76,155	98,483	90,367	34,901	12,179	10,393	9,955	96,968	77,992	601,360	—	—	—
	mean s.f.d.	278	716	603	1,260	1,602	1,519	568	198	175	162	1,630	1,268	—	37,000	128	831

**HISTORICAL RECAP
KERN RIVER AT FIRST POINT OF MEASUREMENT**

YEAR	QUANTITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	MAX.	MIN.	MEAN
1951	acre-feet	32,975	30,018	35,101	48,914	85,039	88,990	38,941	12,966	7,793	9,364	11,958	40,163	442,222	—	—	—
	mean s.f.d.	536	541	571	822	1,383	1,496	633	211	131	152	201	653	—	8,341	69	611
1952	acre-feet	60,367	53,673	84,726	222,633	434,769	302,557	159,856	68,200	30,670	23,417	24,871	35,260	1,500,989	—	—	—
	mean s.f.d.	982	933	1,378	3,741	7,071	5,085	2,600	1,109	515	381	418	573	—	8,530	254	2,073
1953	acre-feet	60,760	40,498	38,709	70,730	86,019	103,164	69,657	21,503	12,730	13,125	15,023	16,915	548,833	—	—	—
	mean s.f.d.	988	729	630	1,189	1,399	1,734	1,133	350	214	213	252	275	—	3,788	119	758
1954	acre-feet	22,019	30,361	44,575	101,203	139,719	73,553	39,642	19,198	12,571	12,351	15,328	17,837	528,357	—	—	—
	mean s.f.d.	358	547	725	1,701	2,272	1,236	645	312	211	201	258	290	—	2,948	150	729
1955	acre-feet	20,438	24,625	29,734	37,567	69,544	86,660	31,014	19,293	9,840	10,100	12,526	92,959	444,300	—	—	—
	mean s.f.d.	332	443	484	631	1,131	1,456	504	314	165	164	211	1,512	—	12,711	101	614
1956	acre-feet	82,943	49,993	62,767	97,553	159,683	168,876	99,529	41,141	21,370	23,397	17,042	16,568	840,862	—	—	—
	mean s.f.d.	1,349	869	1,021	1,639	2,597	2,838	1,619	669	359	381	286	269	—	5,167	207	1,158
1957	acre-feet	18,535	26,178	31,357	38,644	79,355	132,359	41,988	17,518	12,111	13,648	14,013	18,632	444,338	—	—	—
	mean s.f.d.	301	471	510	649	1,291	2,224	683	285	204	222	235	303	—	3,411	147	614
1958	acre-feet	22,088	39,453	68,140	168,105	316,974	230,866	115,724	56,190	27,515	20,815	19,835	19,025	1,104,730	—	—	—
	mean s.f.d.	359	710	1,108	2,825	5,155	3,880	1,882	914	462	339	333	309	—	6,592	236	1,526
1959	acre-feet	20,592	22,258	33,274	40,566	39,945	32,061	18,013	10,094	9,852	9,689	10,419	11,215	257,978	—	—	—
	mean s.f.d.	335	401	541	682	650	539	293	164	166	158	175	182	—	944	104	356
1960	acre-feet	13,363	30,682	31,908	46,272	58,336	47,181	16,683	9,638	8,678	10,187	14,183	12,926	300,037	—	—	—
	mean s.f.d.	217	533	519	778	949	793	271	157	146	166	238	210	—	1,690	89	413
1961	acre-feet	11,466	10,905	14,221	24,137	29,980	24,305	8,952	16,018	8,463	7,353	9,554	12,288	177,642	—	—	—
	mean s.f.d.	186	196	231	406	488	408	146	261	142	120	161	200	—	626	89	245
1962	acre-feet	13,507	53,411	37,660	147,463	135,884	157,253	74,874	25,416	13,849	14,051	12,407	11,929	697,704	—	—	—
	mean s.f.d.	220	962	612	2,478	2,210	2,643	1,218	413	233	229	209	194	—	3,604	144	964
1963	acre-feet	27,793	101,595	42,994	69,412	137,839	163,944	105,384	47,008	28,883	27,291	25,837	23,470	801,450	—	—	—
	mean s.f.d.	452	1,829	699	1,167	2,242	2,755	1,714	765	485	444	434	382	—	15,584	160	1,107
1964	acre-feet	19,943	17,119	25,146	42,946	61,521	54,658	23,803	14,097	9,025	9,150	14,939	46,919	339,266	—	—	—
	mean s.f.d.	324	298	409	722	1,001	919	387	229	152	149	251	763	—	4,693	120	467
1965	acre-feet	46,768	31,702	36,359	80,043	131,980	149,357	95,288	49,105	22,036	17,631	29,542	30,551	720,362	—	—	—
	mean s.f.d.	761	571	591	1,345	2,146	2,510	1,550	799	370	287	496	497	—	3,322	226	985
1966	acre-feet	29,272	22,439	39,108	68,779	82,336	45,431	23,347	18,141	9,608	10,822	15,501	313,811	678,595	—	—	—
	mean s.f.d.	476	404	636	1,156	1,339	763	380	295	161	176	261	5,104	—	80,029	112	937
1967	acre-feet	63,580	65,831	86,200	99,509	269,631	311,063	243,802	94,834	55,255	36,230	34,546	35,746	1,396,227	—	—	—
	mean s.f.d.	1,034	1,185	1,402	1,672	4,385	5,228	3,965	1,542	929	589	581	581	—	7,223	419	1,928
1968	acre-feet	34,052	40,354	48,803	65,584	87,991	64,054	30,690	20,600	11,466	13,599	16,982	19,585	453,760	—	—	—
	mean s.f.d.	554	702	794	1,102	1,431	1,076	499	335	193	221	285	319	—	1,923	155	625
1969	acre-feet	178,493	111,342	157,595	378,333	617,968	496,796	254,777	111,100	49,936	36,036	34,862	34,132	2,461,370	—	—	—
	mean s.f.d.	2,903	2,005	2,563	6,358	10,050	8,349	4,144	1,807	839	586	586	555	—	24,218	344	3,400
1970	acre-feet	66,480	41,419	59,917	63,513	110,057	95,700	50,138	24,224	14,392	13,301	21,519	28,814	589,474	—	—	—
	mean s.f.d.	1,081	746	974	1,067	1,780	1,608	815	394	242	216	362	469	—	6,298	171	814

**HISTORICAL RECAP
KERN RIVER AT FIRST POINT OF MEASUREMENT**

YEAR	QUANTITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	MAX.	MIN.	MEAN
1971	acre-foot	34,143	30,960	41,913	52,661	66,635	82,707	42,472	19,841	11,371	11,540	14,102	19,109	427,454	—	—	—
	mean s.f.d.	555	557	682	885	1,084	1,390	691	323	191	188	237	311	—	1,895	125	590
1972	acre-foot	19,864	18,827	33,213	28,288	45,965	38,531	14,936	10,927	11,334	11,431	14,703	20,408	268,427	—	—	—
	mean s.f.d.	323	327	540	475	748	648	243	178	190	186	247	332	—	951	111	370
1973	acre-foot	33,628	36,395	52,778	110,892	288,652	230,390	93,834	41,028	23,030	18,895	22,342	27,788	979,652	—	—	—
	mean s.f.d.	547	655	858	1,864	4,694	3,872	1,526	667	387	307	375	452	—	5,886	220	1,353
1974	acre-foot	50,337	29,673	74,247	114,113	183,733	167,740	69,580	39,991	23,532	21,953	19,904	23,603	818,606	—	—	—
	mean s.f.d.	819	538	1,208	1,918	2,988	2,819	1,132	650	395	357	334	384	—	4,141	220	1,130
1975	acre-foot	21,521	26,725	42,815	46,602	147,001	140,660	51,917	22,625	17,133	16,209	15,049	16,310	564,567	—	—	—
	mean s.f.d.	350	481	696	783	2,391	2,364	844	368	288	264	253	265	—	3,783	164	780
1976	acre-foot	16,308	16,994	23,074	25,924	47,151	20,930	14,749	14,573	25,097	20,523	12,954	11,191	249,468	—	—	—
	mean s.f.d.	265	295	375	436	767	352	240	237	422	334	218	182	—	1,188	142	344
1977	acre-foot	13,456	13,704	14,765	23,391	25,630	35,655	10,973	10,979	7,815	8,146	8,456	24,028	196,998	—	—	—
	mean s.f.d.	219	247	240	393	417	599	178	179	131	132	142	391	—	2,049	57	272
1978	acre-foot	46,596	116,432	175,484	181,700	363,157	354,825	194,693	74,001	61,696	29,562	26,874	28,485	1,653,505	—	—	—
	mean s.f.d.	758	2,096	2,854	3,054	5,906	5,963	3,166	1,204	1,037	481	452	463	—	10,901	350	2,284
1979	acre-foot	34,062	41,825	72,299	102,079	164,935	106,112	46,733	27,243	19,583	19,781	18,779	19,230	672,661	—	—	—
	mean s.f.d.	554	753	1,176	1,715	2,682	1,783	760	443	329	322	316	313	—	3,540	229	929
1980	acre-foot	145,545	168,887	139,620	211,608	287,825	282,877	208,715	78,143	35,068	26,955	25,006	29,708	1,639,957	—	—	—
	mean s.f.d.	2,367	2,936	2,271	3,556	4,681	4,754	3,394	1,271	589	438	420	483	—	14,171	261	2,259
1981	acre-foot	28,709	34,762	45,608	69,320	91,914	65,817	25,630	17,389	13,222	14,781	18,922	23,189	449,263	—	—	—
	mean s.f.d.	467	626	742	1,165	1,495	1,106	417	283	222	240	318	377	—	2,211	157	621
1982	acre-foot	37,682	52,996	78,724	212,963	254,985	198,748	130,098	61,956	61,716	46,306	57,116	77,849	1,271,139	—	—	—
	mean s.f.d.	613	954	1,280	3,579	4,147	3,340	2,116	1,008	1,037	753	960	1,266	—	9,075	389	1,756
1983	acre-foot	87,905	138,514	265,543	206,473	478,625	571,846	288,866	154,935	68,503	53,300	71,599	103,019	2,489,128	—	—	—
	mean s.f.d.	1,430	2,494	4,319	3,470	7,784	9,610	4,698	2,520	1,151	867	1,203	1,675	—	14,038	602	3,438
1984	acre-foot	76,054	60,926	82,738	91,359	161,613	93,114	77,046	49,698	28,306	26,428	35,020	39,495	821,797	—	—	—
	mean s.f.d.	1,237	1,059	1,346	1,535	2,628	1,565	1,253	808	476	430	589	642	—	3,305	288	1,132
1985	acre-foot	40,423	40,610	53,371	136,241	146,799	99,858	41,395	23,956	17,024	16,495	22,314	33,945	672,431	—	—	—
	mean s.f.d.	657	731	868	2,290	2,387	1,678	673	390	286	268	375	552	—	3,353	208	929
1986	acre-foot	42,668	149,966	204,775	208,147	293,335	263,794	121,398	57,160	26,567	28,330	25,341	23,458	1,444,939	—	—	—
	mean s.f.d.	694	2,700	3,330	3,498	4,771	4,433	1,974	930	446	461	426	382	—	8,296	313	1,996
1987	acre-foot	25,595	29,504	41,566	55,236	75,108	56,146	24,918	14,735	10,683	11,484	14,745	16,215	375,935	—	—	—
	mean s.f.d.	416	531	676	928	1,222	944	405	240	180	187	248	264	—	1,817	145	519
1988	acre-foot	22,677	19,815	30,210	39,584	58,350	43,140	20,969	13,454	10,733	9,283	10,955	15,515	294,685	—	—	—
	mean s.f.d.	369	344	491	665	949	725	341	219	180	151	184	252	—	1,418	118	406
1989	acre-foot	15,947	23,528	67,430	91,380	71,849	49,823	21,378	13,010	10,213	10,824	10,707	10,949	397,038	—	—	—
	mean s.f.d.	259	424	1,097	1,536	1,169	837	348	212	172	176	180	178	—	2,068	123	548
1990	acre-foot	12,916	13,127	23,048	32,019	38,600	29,345	13,380	8,386	6,428	8,934	8,340	9,148	203,571	—	—	—
	mean s.f.d.	210	256	375	538	628	493	218	136	108	144	140	149	—	845	78	281

KERN RIVER AT FIRST POINT OF MEASUREMENT
HISTORICAL MONTHLY NATURAL FLOWS

October 1893 to Date...

YEAR: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Mean Monthly Flow (acre-feet)	36,333	43,223	64,569	99,983	156,775	140,249	72,179	31,337	18,489	17,688	19,940	28,037	728,802
Mean Monthly Flow (second foot days)	591	771	1,050	1,680	2,550	2,357	1,174	510	311	288	335	456	1,006
Maximum Monthly Flow (acre-feet)	178,493	202,510	378,116	481,749	617,968	571,846	399,841	154,935	68,503	53,300	96,968	313,811	
Minimum Monthly Flow (acre-feet)	11,466	10,905	14,221	23,391	25,630	14,069	8,225	5,881	5,494	6,817	8,241	9,148	
Number Months of Record	97	97	97	97	97	97	97	97	97	98	98	98	
Cumulative Monthly Flow (All Months - acre-feet)	3,524,320	4,192,624	6,263,186	9,698,383	15,207,186	13,604,110	7,001,396	3,039,731	1,793,410	1,733,398	1,954,126	2,747,575	
Median Monthly Flow (acre-feet)	23,209	30,506	46,875	75,749	120,252	112,830	49,497	22,058	14,065	14,594	16,143	19,749	545,527
Median Monthly Flow (second foot days)	377	549	762	1,273	1,956	1,896	805	359	236	237	271	321	754

MEAN APRIL - JULY RUNOFF TO DATE = 469,186 AcFt MEAN MARCH - OCTOBER RUNOFF TO DATE = 601,269 AcFt
 MEDIAN APRIL - JULY RUNOFF TO DATE = 358,328 AcFt MEDIAN MARCH - OCTOBER RUNOFF TO DATE = 455,920 AcFt

**KERN RIVER IN REVIEW
1990**

Introduction

Kern River runoff during the 1990 April-July snowmelt period was 24% of the 97-year average flow, extending to four, the consecutive years of deficient surface water yield from the Kern River basin. The 1989-1990 Water Year began with single storm events during the months of October and November of 1989, followed by a rainless December. Isabella, California received .41 inches of precipitation during the period of October 1 through December 31, 1989, a meager 12% of normal.

On September 8, 1990, the natural flow of the Kern River began falling below previous record minimum flows, and continued at or near record lows for the remainder of the year. December 1990 runoff from the Kern River watershed amounted to 9,148 acre-feet, the lowest volume on record for the month.

Precipitation

Monthly precipitation amounts in inches as recorded at selected Kern County stations during the 1989-1990 Water Year were as follows:

	Bakersfield (Water Resources Office) (Elev. 403 ft.)			Isabella Dam & Reservoir (Elev. 2660 ft.)			Glenville (Elev. 3140 ft.)		
	<u>89-90</u>	<u>Ave.</u>	<u>% of Ave.</u>	<u>89-90</u>	<u>Ave.</u>	<u>% of Ave.</u>	<u>89-90</u>	<u>Ave.</u>	<u>% of Ave.</u>
Oct	0.02	0.30	7%	0.11	0.30	37%	0.50	0.75	67%
Nov	0.00	0.65	0%	0.30	1.15	26%	0.92	1.85	50%
Dec	0.00	0.65	0%	0.00	1.89	0%	0.00	2.96	0%
Jan	0.73	0.98	74%	1.33	2.07	64%	3.66	3.32	110%
Feb	0.91	1.07	85%	1.00	1.73	58%	3.12	2.99	104%
Mar	0.19	0.87	22%	0.67	1.23	54%	1.35	3.05	44%
Apr	0.21	0.70	30%	0.44	0.93	47%	1.59	2.06	77%
May	0.38	0.24	158%	0.26	0.28	93%	1.25	0.75	167%
Jun	0.02	0.07	29%	0.02	0.10	20%	0.00	0.18	0%
Jul	0.00	0.01	0%	0.00	0.09	0%	0.00	0.04	0%
Aug	0.00	0.05	0%	0.00	0.22	0%	0.00	0.10	0%
Sep	0.17	0.13	131%	0.35	0.44	80%	0.13	0.37	35%
TOTAL	2.63	5.72	46%	4.48	10.43	43%	12.52	18.42	68%

The initial rainfall of the 1989-1990 Water Year occurred over the Kern River watershed on October 25, 1989, followed by 31 days of dry weather. The final storm event of 1989 was encountered November 25-26. The month of December 1989 was the driest throughout the State of California in over 100 years.

The extended dry period was ended on January 1, 1990, as the first of three storm events during the month passed through the Kern River basin. The major storm event of February 1990 occurred between the

16th and 18th, producing .91 inches of precipitation at Isabella Dam & Reservoir and depositing 4-5 feet of new snow in the basin at elevations near 8,000 feet.

During the month of March 1990, three storm periods affected the Kern River watershed. These storm systems appeared promising as they approached the California coastline, but weakened upon moving inland, and eventually moved toward central and southern California. Precipitation throughout the basin was less than 50% of normal for March, leading to a 50,000 acre-feet reduction as of April 1, 1990, in anticipated runoff from the Kern River basin from the March 1 forecasted runoff volume. The month of April 1990 was characterized by the presence of afternoon cumulus towers over the Kern River watershed, similar to cloud developments normally experienced in July and August. Rainfall amounts at the Pascoe precipitation station, located north of Lake Isabella at an elevation of 9,150 feet, totaled 1.80 inches during April 1990, compared to a normal of 3.23 inches. Precipitation during the month of May, while abundant in Northern California, was sparse throughout the southern Sierra Nevada mountain range. The only measurable precipitation during the month occurred on the 27th and 28th, affecting only the Memorial Day weekend activities scheduled for Lake Isabella.

Temperature

Isabella, California 1990 mean air temperatures (°F) with comparative averages were as follows:

	<u>1990 Actual</u>	<u>Average</u>	<u>Variance from Norm</u>		<u>1990 Actual</u>	<u>Average</u>	<u>Variance from Norm</u>
Jan	42.5	43.9	-1.4	Jul	80.1	78.8	+1.3
Feb	42.6	46.9	-4.3	Aug	74.9	77.4	-2.5
Mar	50.7	49.8	+0.9	Sep	69.6	71.1	-1.5
Apr	57.9	55.1	+2.8	Oct	62.7	61.2	+1.5
May	61.7	62.9	-1.2	Nov	49.4	50.7	-1.3
Jun	71.9	72.4	-0.5	Dec	37.4	44.3	-6.9

The mean air temperature for December 1990, was the coldest on record for Isabella, California. On December 22 and 23, 1990, the temperature in Bakersfield, California dropped to 19 degrees, the minimum temperature experienced in the city since records were begun in 1937.

Snowpack

Listed below are approximate readings in inches of water content for the eight remote snow sensor sites located within the Kern River basin on April 1, 1990, with April 1st historical average water contents of same shown for comparison:

	<u>Upper Tyndall Creek</u>	<u>Crabtree Meadow</u>	<u>Chagoopa Plateau</u>	<u>Pascoe</u>	<u>Wet Meadow</u>	<u>Tunnel Guard</u>	<u>Casa Vieja Meadow</u>	<u>Beach Meadows</u>
April 1, 1990	12.7	7.1	11.3	12.0	6.6	0.0	10.5	0.0
April 1, Average	27.7	19.8	21.8	24.9	30.3	15.6	20.9	11.0

Forecasts

The State of California, Department of Water Resources issued the following forecasts of Kern River runoff into Isabella Reservoir for the 1990 April-July snowmelt period:

February 1, 1990:	36% of average (175,000 acre-feet)
March 1, 1990:	37% of average (180,000 acre-feet)
April 1, 1990:	26% of average (130,000 acre-feet)
May 1, 1990:	21% of average (105,000 acre-feet)

Runoff

Actual 1990 April-July Kern River inflow to Isabella Reservoir was 114,458 acre-feet (23% of average). Peak inflow occurred on May 8, 1990 at 871 cubic feet per second. Calendar year runoff at First Point of Measurement totaled 203,571 acre-feet, 28% of the long-term average and 37% of the historical median.

By month Kern River runoff as measured at First Point during 1990 with historical ranking (#1 is the lowest on record) was as follows:

	<u>Runoff in</u> <u>Acre-Feet</u>	<u>Rank</u>		<u>Runoff in</u> <u>Acre-Feet</u>	<u>Rank</u>
Jan	12,916	7	Jul	13,380	6
Feb	13,127	3	Aug	8,386	5
Mar	23,048	7	Sep	6,428	3
Apr	32,019	8	Oct	8,834	10
May	38,600	3	Nov	8,340	2
Jun	29,345	6	Dec	9,148	1

During the six-month period of July-December 1990, total runoff from the Kern River basin was 54,516 acre-feet. This amount is the second lowest measured on the Kern River in recorded history, only to the July-December period of 1931, which yielded 54,223 acre-feet.

Storage

On January 1, 1990, Isabella Reservoir contained 85,978 acre-feet of water. Peak storage volume for 1990 was reached on June 12, with 97,420 acre-feet. On December 31, 1990, 46,014 acre-feet remained in storage behind Isabella Dam, constituting 8% of the lake capacity and 31% of the 37-year average December 31st carryover storage volume of 150,274 acre-feet.

Operations

Kern river regulated flow during the 1990 calendar year amounted to 219,501 acre-feet, 30% of the 1954-1990 average regulated flow at First Point of Measurement of 721,173 acre-feet. Peak regulated flow occurred on July 20, 1990, with a mean daily discharge of 662 cubic feet per second. This peak flow coincided with a requested 900 cubic feet per second turbine flow test at the Rio Bravo Hydroelectric Project.

The total water yield of the Kern River basin and its surface storage reservoir in acre-feet during 1990 is summarized as follows:

Kern River Computed Natural Flow.....	203,571	+
Isabella Reservoir Storage Withdrawal.....	39,968	+
Isabella Reservoir Evaporation.....	22,423	-
Kern River Diversions Above First Point.....	2,149	-
Rio Bravo Well.....	534	+
Kern River Regulated Flow at First Point.....	219,501	=

There were no Kern River water deliveries to Second Point of Measurement for Buena Vista Water Storage District during 1990. On May 22, 1990, eight water wells owned by the City of Bakersfield and located within the 2,800 Acre Recharge Facility were activated. The water produced from this well operation was discharged into the Kern River Canal for distribution below Second Point of Measurement. The banked water recovery program yielded 10,426 acre-feet of water prior to its termination on August 22, 1990. Beneficiaries of this 1990 well operation included Buena Vista Water Storage District, Olcese Water District, Kern Delta Water District, North Kern Water Storage District, the County of Kern and the Kern Valley Golf Course in Kernville, California. An additional 16,534 acre-feet of water was recovered from the City of Bakersfield's 2,800 acre groundwater storage account through operation of water wells owned by the Kern County Water Agency and State of California. This water was conveyed through the Cross Valley Canal and delivered to Cawelo Water District.

Year: 1990

Kern River at First Point of Measurement "Computed Natural"

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	178	203	289	420	607	546	262	143	123	149	121	151
2	212	229	301	418	558	512	258	139	120	156	122	155
3	198	218	322	435	554	538	252	142	113	164	122	151
4	175	211	338	443	586	593	234	140	106	165	124	150
5	182	213	332	442	638	669	221	138	105	162	127	153
6	180	211	318	437	722	724	215	130	99	157	132	155
7	199	204	310	429	797	748	206	147	90	156	134	156
8	191	203	322	432	845	743	218	141	79	152	133	158
9	191	199	332	427	829	734	230	139	85	147	133	160
10	188	202	339	436	800	827	231	143	91	139	142	156
11	198	199	336	470	732	711	224	159	88	145	144	154
12	229	197	331	521	695	574	211	172	81	146	145	146
13	250	190	302	586	640	529	222	172	78	155	133	155
14	279	192	304	637	638	466	234	158	78	150	139	142
15	228	204	311	699	613	440	244	138	89	157	136	139
16	238	229	340	689	587	420	258	125	92	149	139	132
17	259	268	340	665	573	418	257	119	100	147	132	129
18	239	272	349	590	544	394	247	118	99	127	131	145
19	225	253	353	570	545	387	263	114	99	122	136	160
20	207	251	382	556	509	384	279	128	107	127	145	166
21	205	254	402	531	533	385	274	147	110	136	145	154
22	217	242	425	509	524	394	241	149	118	145	147	127
23	219	246	441	526	560	395	194	144	124	139	141	120
24	205	263	458	540	564	390	172	127	130	138	147	128
25	200	330	488	543	563	359	157	117	132	134	164	153
26	195	313	500	525	533	341	158	110	131	134	172	165
27	205	303	503	583	489	305	161	121	135	141	170	156
28	208	319	490	658	631	303	151	127	140	138	154	145
29	210	-	475	715	746	293	154	132	145	133	146	145
30	209	-	462	711	681	273	163	125	154	127	149	149
31	193	-	425	-	625	-	155	124	-	117	-	157
TOTAL	6,512	6,618	11,620	16,143	19,461	14,795	6,746	4,228	3,241	4,454	4,205	4,612
MAXIMUM DAY	279	330	503	715	845	827	279	172	154	165	172	166
MINIMUM DAY	175	190	289	418	489	273	151	110	78	117	121	120
MEAN	210	236	375	538	628	493	218	136	108	144	140	149
TOTAL AC.FT.	12,916	13,127	23,048	32,019	38,600	29,345	13,380	8,386	6,428	8,834	8,340	9,148
WHOLE YEAR:-	TOTAL,	102,635	MAX.,	845	MIN.,	78	MEAN,	281	TOTAL AC.FT.,	203,571		

Kern River North Fork Flow at Kernville
(As reported by U.S. Army Corps of Engineers)

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	150	182	242	347	579	538	246	120	105	148	129	138
2	174	178	249	328	513	478	242	119	98	135	127	140
3	159	178	262	363	496	491	244	118	97	127	127	134
4	138	184	273	394	520	582	240	118	98	123	127	132
5	146	180	283	377	602	652	226	116	81	121	125	134
6	158	180	260	365	686	694	213	118	84	134	128	134
7	164	189	251	384	813	720	203	117	83	134	132	132
8	167	168	254	389	845	672	193	116	82	134	132	132
9	163	171	255	374	860	709	186	126	84	134	131	131
10	155	181	256	383	796	784	179	129	81	134	134	132
11	153	184	276	412	767	710	182	132	79	133	129	132
12	154	191	253	462	644	556	190	145	79	132	125	140
13	204	195	238	521	619	512	185	151	79	132	127	137
14	244	172	245	596	621	465	209	145	79	132	127	126
15	197	144	254	653	607	414	228	142	79	132	125	114
16	188	170	261	677	572	403	262	138	79	130	122	120
17	176	194	269	639	558	371	241	130	83	129	124	107
18	185	190	289	540	554	360	236	126	83	129	124	116
19	181	190	311	517	532	353	249	121	88	129	125	151
20	162	209	332	521	511	331	248	122	91	129	132	124
21	168	236	346	516	474	337	221	122	92	129	135	114
22	187	219	368	480	506	352	204	121	101	129	128	97
23	192	229	397	500	548	359	192	117	114	129	127	101
24	185	235	415	540	559	348	183	117	120	129	128	116
25	185	237	429	474	554	321	171	114	119	125	128	147
26	183	240	445	464	487	301	158	114	114	125	146	144
27	180	247	447	548	466	284	149	112	112	125	131	141
28	177	255	440	667	650	269	137	112	112	123	126	142
29	179	-	403	726	743	260	132	106	136	121	135	135
30	183	-	372	669	630	251	126	104	125	121	137	131
31	187	-	334	-	612	-	122	101	-	121	-	131
TOTAL	5,424	5,528	9,709	14,826	18,924	13,877	6,197	3,789	2,857	4,008	3,873	4,005
MAXIMUM DAY	244	255	447	726	860	784	262	151	136	148	146	151
MINIMUM DAY	138	144	238	328	466	251	122	101	79	121	122	97
MEAN	175	197	313	494	610	463	200	122	95	129	129	129
TOTAL AC.FT.	10,758	10,965	19,258	29,407	37,535	27,525	12,292	7,515	5,667	7,950	7,682	7,944
WHOLE YEAR:-	TOTAL,	93,017	MAX.,	860	MIN.,	79	MEAN,	255	TOTAL AC.FT.,	184,498		

Kern River at First Point of Measurement "Regulated" Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	190	267	363	402	401	439	431	532	117	145	118	148
2	188	275	372	398	406	459	462	523	120	179	111	149
3	187	278	343	403	404	466	460	471	117	160	113	145
4	181	281	363	412	411	463	467	377	120	161	110	147
5	174	276	425	419	403	457	469	343	126	170	111	153
6	170	264	438	417	404	472	485	379	131	172	120	156
7	161	255	470	425	402	472	557	382	111	159	121	155
8	162	212	483	416	401	474	557	425	109	138	120	158
9	161	204	505	413	403	478	539	414	114	146	120	157
10	187	204	466	415	405	474	426	426	129	144	127	159
11	198	214	458	412	398	470	424	467	121	141	130	156
12	191	253	426	413	411	467	468	452	119	151	142	153
13	197	251	399	406	419	464	465	453	121	137	144	150
14	252	256	364	412	414	464	493	452	122	143	145	148
15	268	261	386	407	406	465	475	404	123	140	152	155
16	278	267	358	407	412	486	506	372	125	133	150	156
17	265	298	352	415	416	477	552	354	87	112	153	151
18	255	281	329	409	422	480	576	338	94	134	155	129
19	215	283	361	410	422	501	580	342	98	146	145	125
20	203	352	372	413	424	537	662	391	93	150	147	136
21	200	372	423	415	419	588	575	347	107	155	140	137
22	189	346	425	407	423	616	534	283	111	152	133	126
23	180	253	431	416	421	640	532	233	110	150	129	124
24	165	374	419	416	421	628	487	198	109	142	130	126
25	193	391	417	409	424	615	532	181	109	138	139	117
26	226	445	415	406	420	570	488	177	126	144	150	113
27	256	358	420	402	422	497	507	214	123	147	138	116
28	259	358	415	405	426	484	489	262	115	146	154	161
29	266	-	416	405	429	524	447	232	124	138	155	157
30	252	-	410	408	429	513	538	238	140	135	150	163
31	248	-	416	-	415	-	511	187	-	119	-	174
TOTAL	6,517	8,129	12,640	12,313	12,833	15,140	15,694	10,849	3,471	4,527	4,052	4,500
MAXIMUM INSTAN.	304	813	524	440	459	661	994	555	195	197	165	179
MINIMUM INSTAN.	123	67	272	367	371	345	395	84	64	58	107	109
MEAN	210	290	408	410	414	505	506	350	116	146	135	145
TOTAL AC.F.T.	12,926	16,124	25,071	24,422	25,454	30,030	31,129	21,519	6,885	8,979	8,037	8,925
WHOLE YEAR:-	TOTAL,	110,665	MAX.,	994	MIN.,	58	MEAN,	303	TOTAL AC.F.T.,	219,501		

Year: 1990

Kern River Conduit at Alternate Second Point (Total Flow)

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	0	MAX.,	0	MIN.,	0	MEAN,	0	TOTAL AC.FT.,	0	0	0

2800 Acre Well Water Production
Conveyed via Kern River Canal

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	62	60	53	0	0	0	0
2	0	0	0	0	0	62	60	49	0	0	0	0
3	0	0	0	0	0	59	60	50	0	0	0	0
4	0	0	0	0	0	57	60	53	0	0	0	0
5	0	0	0	0	0	61	60	52	0	0	0	0
6	0	0	0	0	0	62	59	49	0	0	0	0
7	0	0	0	0	0	62	59	49	0	0	0	0
8	0	0	0	0	0	62	59	52	0	0	0	0
9	0	0	0	0	0	62	59	52	0	0	0	0
10	0	0	0	0	0	62	59	52	0	0	0	0
11	0	0	0	0	0	62	59	52	0	0	0	0
12	0	0	0	0	0	61	59	52	0	0	0	0
13	0	0	0	0	0	61	54	52	0	0	0	0
14	0	0	0	0	0	61	51	52	0	0	0	0
15	0	0	0	0	0	61	53	52	0	0	0	0
16	0	0	0	0	0	61	56	52	0	0	0	0
17	0	0	0	0	0	61	55	52	0	0	0	0
18	0	0	0	0	0	61	53	52	0	0	0	0
19	0	0	0	0	0	61	53	52	0	0	0	0
20	0	0	0	0	0	61	53	49	0	0	0	0
21	0	0	0	0	0	61	53	46	0	0	0	0
22	0	0	0	0	37	61	53	30	0	0	0	0
23	0	0	0	0	66	61	53	0	0	0	0	0
24	0	0	0	0	64	61	53	0	0	0	0	0
25	0	0	0	0	61	60	53	0	0	0	0	0
26	0	0	0	0	61	60	53	0	0	0	0	0
27	0	0	0	0	62	60	53	0	0	0	0	0
28	0	0	0	0	63	60	53	0	0	0	0	0
29	0	-	0	0	63	60	53	0	0	0	0	0
30	0	-	0	0	63	60	53	0	0	0	0	0
31	0	-	0	-	63	-	53	0	-	0	-	0
TOTAL	0	0	0	0	603	1,826	1,724	1,104	0	0	0	0
MAXIMUM DAY	0	0	0	0	66	62	60	53	0	0	0	0
MINIMUM DAY	0	0	0	0	0	57	51	0	0	0	0	0
MEAN	0	0	0	0	19	61	56	36	0	0	0	0
TOTAL AC.FT.	0	0	0	0	1,196	3,622	3,419	2,189	0	0	0	0
WHOLE YEAR:--	TOTAL,	5,257	MAX.,	66	MIN.,	0	MEAN,	14	TOTAL AC.FT.,	10,426		

2800 Acre Well Water Diverted to Kern Delta WD
 (Pursuant to City of Bakersfield/KDWD Letter Agreement Dated 4-26-90) Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	40	13	13	0	0	0	0
2	0	0	0	0	0	41	13	13	0	0	0	0
3	0	0	0	0	0	40	13	13	0	0	0	0
4	0	0	0	0	0	38	13	13	0	0	0	0
5	0	0	0	0	0	41	13	13	0	0	0	0
6	0	0	0	0	0	37	13	13	0	0	0	0
7	0	0	0	0	0	43	13	20	0	0	0	0
8	0	0	0	0	0	32	13	20	0	0	0	0
9	0	0	0	0	0	13	13	20	0	0	0	0
10	0	0	0	0	0	13	13	20	0	0	0	0
11	0	0	0	0	0	13	13	20	0	0	0	0
12	0	0	0	0	0	13	13	20	0	0	0	0
13	0	0	0	0	0	13	13	20	0	0	0	0
14	0	0	0	0	0	13	13	20	0	0	0	0
15	0	0	0	0	0	13	13	20	0	0	0	0
16	0	0	0	0	0	13	13	20	0	0	0	0
17	0	0	0	0	0	13	13	20	0	0	0	0
18	0	0	0	0	0	13	13	20	0	0	0	0
19	0	0	0	0	0	13	13	20	0	0	0	0
20	0	0	0	0	0	13	13	18	0	0	0	0
21	0	0	0	0	0	13	13	0	0	0	0	0
22	0	0	0	0	0	37	13	0	0	0	0	0
23	0	0	0	0	0	13	13	0	0	0	0	0
24	0	0	0	0	0	13	13	0	0	0	0	0
25	0	0	0	0	0	13	13	0	0	0	0	0
26	0	0	0	0	0	40	13	0	0	0	0	0
27	0	0	0	0	0	40	13	0	0	0	0	0
28	0	0	0	0	0	40	13	0	0	0	0	0
29	0	-	0	0	0	40	13	0	0	0	0	0
30	0	-	0	0	0	40	13	0	0	0	0	0
31	0	-	0	-	40	-	13	0	-	0	-	0
TOTAL	0	0	0	0	316	598	403	356	0	0	0	0
MAXIMUM DAY	0	0	0	0	40	43	13	20	0	0	0	0
MINIMUM DAY	0	0	0	0	0	13	13	0	0	0	0	0
MEAN	0	0	0	0	10	20	13	11	0	0	0	0
TOTAL AC.FT.	0	0	0	0	627	1,186	799	706	0	0	0	0
WHOLE YEAR:-	TOTAL,	1,673	MAX.,	43	MIN.,	0	MEAN,	5	TOTAL AC.FT.,	3,318		

Second Point Group Flow
via Kern River Canal

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	22	47	40	0	0	0	0
2	0	0	0	0	0	21	47	36	0	0	0	0
3	0	0	0	0	0	19	47	37	0	0	0	0
4	0	0	0	0	0	19	47	40	0	0	0	0
5	0	0	0	0	0	20	47	39	0	0	0	0
6	0	0	0	0	0	25	46	36	0	0	0	0
7	0	0	0	0	0	19	46	29	0	0	0	0
8	0	0	0	0	0	30	46	32	0	0	0	0
9	0	0	0	0	0	49	46	32	0	0	0	0
10	0	0	0	0	0	49	46	32	0	0	0	0
11	0	0	0	0	0	49	46	32	0	0	0	0
12	0	0	0	0	0	48	46	32	0	0	0	0
13	0	0	0	0	0	48	41	32	0	0	0	0
14	0	0	0	0	0	48	38	32	0	0	0	0
15	0	0	0	0	0	48	40	32	0	0	0	0
16	0	0	0	0	0	48	43	32	0	0	0	0
17	0	0	0	0	0	48	42	32	0	0	0	0
18	0	0	0	0	0	48	40	32	0	0	0	0
19	0	0	0	0	0	48	40	32	0	0	0	0
20	0	0	0	0	0	48	40	31	0	0	0	0
21	0	0	0	0	0	48	40	46	0	0	0	0
22	0	0	0	0	0	48	40	30	0	0	0	0
23	0	0	0	0	53	48	40	0	0	0	0	0
24	0	0	0	0	51	48	40	0	0	0	0	0
25	0	0	0	0	48	47	40	0	0	0	0	0
26	0	0	0	0	21	47	40	0	0	0	0	0
27	0	0	0	0	22	47	40	0	0	0	0	0
28	0	0	0	0	23	47	40	0	0	0	0	0
29	0	-	0	0	23	47	40	0	0	0	0	0
30	0	-	0	0	23	47	40	0	0	0	0	0
31	0	-	0	-	23	-	40	0	-	0	-	0
TOTAL	0	0	0	0	287	1,228	1,321	748	0	0	0	0
MAXIMUM DAY	0	0	0	0	53	49	47	46	0	0	0	0
MINIMUM DAY	0	0	0	0	0	19	38	0	0	0	0	0
MEAN	0	0	0	0	9	41	43	24	0	0	0	0
TOTAL AC.FT.	0	0	0	0	569	2,436	2,620	1,483	0	0	0	0
WHOLE YEAR:--	TOTAL,	3,584	MAX.,	53	MIN.,	0	MEAN,	10	TOTAL AC.FT.,	7,108		

Year: 1990

Friant-Kern Inflow to Kern River Channel (Total Flow)

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	0	MAX.,	0	MIN.,	0	MEAN,	0	TOTAL AC.FT.,	0	0	0

Quantities in acre-feet

CITY OF BAKERSFIELD
SUMMARY OF KERN RIVER ENTITLEMENTS

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Buena Vista W.S.D. Entitlement	0	0	1,478	4,502	6,411	3,679	0	0	0	0	0	0	16,070
Hacienda W.D. Entitlement	0	0	0	0	0	0	0	0	0	0	0	0	0
K.C.L. Entitlement @ 2nd Point	0	0	0	99	309	173	0	0	0	0	0	0	581
Kern Island (1-st)	12,240	12,458	17,742	17,459	18,446	17,706	12,704	7,710	5,773	8,158	7,685	8,472	146,553
Eastside	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kern River Conduit	0	14	3,152	9,304	12,361	6,919	0	0	0	0	0	0	31,736
Castro	0	32	0	0	6	2	0	0	0	0	0	0	22
KCC & W Co.	0	12	0	0	10	6	0	0	0	0	0	0	48
South Fork					8	2							22
Buena Vista (1-st)					60	34							94
James (1-st)					93	56							149
Anderson (1-st)					16	8							24
Stine					117	65							182
Meacham					24	14							38
Farmers					63	26							89
Plunket					0	0							0
Joyce													0
Johnson													0
Pioneer													0
Beardsley (1-st)													0
(NKWSD)													0
Lerdo (2-nd)													0
Anderson													0
James & Dixon													0
Wilson													0
KCC & W Co.													0
McCaffrey													0
McCord:													0
Lerdo													0
Beardsley													0
Central													0
NKWSD													0
KCC & W Co.													0
NKWSD													0
Buena Vista (2-nd)													0
James (2-nd)													0
Pioneer (2-nd)													0
Beardsley (3-rd)													0
Kern Island (2-nd)													0
Computed Loss	676	611	676	655	676	655	676	676	655	676	655	676	7,963
Total 1st Point Group Entitlement	12,916	13,127	21,570	27,517	32,189	25,666	13,380	8,386	6,428	8,834	8,340	9,148	187,501

CITY OF BAKERSFIELD
SUMMARY OF KERN RIVER FIRST POINT GROUP
KERN RIVER DIVERSIONS

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
FIRST POINT REGULATED FLOW	12,926	16,124	25,071	24,422	25,454	30,030	31,129	21,519	6,885	8,979	8,037	8,925	219,501
BEARDSLEY CANAL	2,898	1,142	7,869	9,132	7,674	11,560	18,665	7,720	657	1,456	1,884	71	70,728
CALLOWAY CANAL	1,325	1,107	0	885	0	0	0	0	0	0	0	0	3,317
KERN ISLAND CANAL	4,546	8,152	13,843	10,254	15,168	15,713	9,249	12,008	5,573	6,373	2,715	7,779	111,373
EASTSIDE CANAL	692	389	1,702	1,700	1,936	2,102	2,376	1,115	0	0	0	0	12,012
STINE CANAL	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUXTUN LAKES	0	0	0	0	0	0	0	0	0	0	0	0	0
ARVIN-EDISON TURNOUT	0	0	0	0	0	0	0	0	0	0	0	0	0
BUENA VISTA CANAL	1,085	3,340	627	321	0	0	0	0	0	0	603	208	6,184
JAMES CANAL	0	0	0	0	0	0	0	0	0	0	0	0	0
ROSEDALE CHANNEL	0	0	0	0	0	0	0	0	0	0	0	0	0
PIONEER CANAL	0	0	0	0	0	0	0	0	0	0	0	0	0
2800 ACRE SPREADING FACILITY	0	0	0	0	0	0	0	0	0	0	0	0	0
CARRIER CANAL LOSS	647	807	252	615	0	0	0	0	0	474	2,180	191	5,166
RIVER LOSS & SPREADING	1,733	1,187	778	1,515	676	655	839	676	655	676	655	676	10,721
FIRST POINT GROUP TOTAL FLOW	12,926	16,124	25,071	24,422	25,454	30,030	31,129	21,519	6,885	8,979	8,037	8,925	219,501
SECOND POINT TOTAL FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0

UTILIZATION OF STORAGE - ISABELLA RESERVOIR
KERN RIVER FIRST POINT GROUP

Year: 1990

Quantities in acre-feet

End of Month Unit Storage

STORAGE UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Kern Island	2,500	4,118	6,248	5,909	5,814	5,005	6,586	719	573	329	561	756	39,118
Buena Vista	1,373	420	361	341	353	347	0	0	0	0	0	0	3,195
Stine	0	0	0	0	50	69	0	0	0	0	0	0	119
Farmers	0	0	0	0	28	34	0	0	0	0	0	0	62
KERN DELTA WD TOTAL	3,873	4,538	6,609	6,250	6,245	5,455	6,586	719	573	329	561	756	42,494
City of Bakersfield	1,179	661	1,398	6,424	14,216	9,054	3,284	1,434	815	684	636	584	40,369
Kern River Canal & Irr. Co.	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork	600	612	521	521	503	279	116	13	0	0	0	0	3,165
CITY OF BAKERSFIELD TOTAL	1,779	1,273	1,919	6,945	14,719	9,333	3,400	1,447	815	684	636	584	43,534
NORTH KERN WSD	30,163	29,167	24,103	23,284	22,443	25,505	15,510	9,274	8,169	7,278	6,830	6,564	208,290
TOTAL 1ST POINT STORAGE	35,815	34,978	32,631	36,479	43,407	40,293	25,496	11,440	9,557	8,291	8,027	7,904	294,318

KERN DELTA WATER DISTRICT

KERN DELTA WATER DISTRICT
Monthly Summary of Kern River Entitlements, Diversions,
Deliveries and Storage ... All Canals

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Kern River Entitlement	12,240	12,458	17,742	17,459	18,686	17,831	12,704	7,710	5,773	8,158	7,685	8,472	146,918
Release	(4,856)	0	(691)	(2,112)	(504)	0	0	0	(146)	(1,069)	(1,340)	(79)	(10,797)
Ent'l + or - Releases	= 7,384	12,458	17,051	15,347	18,182	17,831	12,704	7,710	5,627	7,089	6,345	8,393	136,121
Into Isabella Storage	1,164	1,786	3,054	0	293	429	2,914	0	581	246	492	506	11,465
From Isabella Storage	2	1,070	862	123	0	860	1,245	5,490	667	432	230	285	11,266
From City of Bakersfield	0	0	0	0	627	1,186	799	706	0	0	0	0	3,318
Kern Island Canal to Kern Delta WD	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage Transfer/Exch.	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrier Canal Loss	647	807	289	615	0	0	0	0	0	0	0	0	0
To North Kern WSD	0	0	0	1,061	821	673	400	353	153	474	2,180	185	5,197
To Improvement District #4	0	0	0	1,745	0	0	0	0	0	428	585	0	4,474
Diversified at Heads of Canals	= 5,575	10,935	14,570	12,049	17,695	18,775	11,434	13,553	5,560	6,373	3,318	7,987	127,824
From Improvement District #4	0	0	0	1,745	0	0	0	0	0	0	0	0	1,745
Kern Delta WD to Kern Island Canal	0	0	0	0	0	669	5,682	1,866	99	0	0	0	8,316
Total Utility Supply	= 5,575	10,935	14,570	13,794	17,695	19,444	17,116	15,419	5,659	6,373	3,318	7,987	137,885
Utility Deliveries	3,427	7,935	10,633	10,258	13,804	14,512	13,992	11,830	3,125	3,577	1,359	5,477	99,929
Contract Deliveries	195	533	684	467	461	630	523	494	130	169	145	279	4,710
Total Irrigation Use	- 3,622	8,468	11,317	10,725	14,265	15,142	14,515	12,324	3,255	3,746	1,504	5,756	104,639
Canal Conveyance Losses	= 1,953	2,467	3,253	3,069	3,430	4,302	2,601	3,095	2,404	2,627	1,814	2,231	33,246
Irrigation Delivery Percentage	65%	77%	78%	78%	81%	78%	85%	80%	58%	59%	45%	72%	76%
Reservoir Evaporation Loss	40	51	121	236	298	359	538	377	60	58	30	26	2,194
End of Month Reservoir Storage	3,873	4,538	6,609	6,250	6,245	5,455	6,586	719	573	329	561	756	

Year: 1990

Total Flow via the Kern Island Canal Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	22	102	250	157	249	252	129	228	93	88	58	10
2	25	116	250	210	275	254	136	240	96	108	48	28
3	28	114	226	217	276	254	138	239	94	131	40	134
4	27	104	235	235	273	258	150	161	97	131	43	136
5	30	109	267	291	246	253	141	143	104	140	71	158
6	39	106	276	296	235	252	144	156	110	144	100	156
7	61	100	321	257	228	250	239	123	88	132	98	150
8	117	63	345	194	236	252	240	151	91	113	94	147
9	114	72	376	182	224	267	210	160	99	121	90	149
10	108	78	365	174	195	275	114	173	109	114	69	149
11	106	88	339	179	205	269	110	262	108	95	67	147
12	106	114	285	129	250	264	136	262	108	121	67	144
13	113	119	269	121	223	258	129	236	110	118	76	137
14	104	131	252	104	228	264	140	233	111	125	69	131
15	109	135	267	100	235	254	98	207	112	120	70	138
16	101	138	235	137	259	243	114	215	107	113	68	143
17	99	133	217	151	244	250	141	223	70	90	62	135
18	93	117	200	179	266	230	127	220	72	107	54	113
19	69	145	220	183	265	227	148	212	75	116	55	110
20	68	208	204	203	264	276	155	251	71	109	70	119
21	69	209	225	152	263	323	192	229	87	116	0	126
22	67	227	201	112	262	334	178	224	92	105	0	110
23	59	207	136	147	258	329	179	168	90	82	0	113
24	61	228	97	156	255	319	128	146	90	84	0	115
25	57	223	94	127	251	292	181	138	98	96	0	106
26	54	242	111	144	244	276	150	140	115	91	0	102
27	60	234	159	140	251	233	139	173	99	58	0	105
28	62	248	145	134	251	215	117	216	86	54	0	150
29	74	-	136	146	245	259	110	198	64	60	0	146
30	87	-	130	213	245	240	178	187	64	65	0	152
31	103	-	146	-	246	-	172	140	-	66	-	163
TOTAL	2,292	4,110	6,979	5,170	7,647	7,922	4,663	6,054	2,810	3,213	1,369	3,922
MAXIMUM DAY	117	248	376	296	276	334	240	262	115	144	100	163
MINIMUM DAY	22	63	94	100	195	215	98	123	64	54	0	10
MEAN	74	147	225	172	247	264	150	195	94	104	46	127
TOTAL AC.FT.	4,546	8,152	13,843	10,254	15,168	15,713	9,249	12,008	5,573	6,373	2,715	7,779
WHOLE YEAR:-	TOTAL,	56,151	MAX.,	376	MIN.,	0	MEAN,	154	TOTAL AC.FT.,	111,373		

Kern Delta Water District/Improvement District #4
Instantaneous Kern River-State Water Exchange
 (Delivered via Arvin-Edison Canal/Kern Island Canal Siphon Installation)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	44	0	0	0	0	0	0	0	0
13	0	0	0	35	0	0	0	0	0	0	0	0
14	0	0	0	36	0	0	0	0	0	0	0	0
15	0	0	0	37	0	0	0	0	0	0	0	0
16	0	0	0	43	0	0	0	0	0	0	0	0
17	0	0	0	43	0	0	0	0	0	0	0	0
18	0	0	0	41	0	0	0	0	0	0	0	0
19	0	0	0	60	0	0	0	0	0	0	0	0
20	0	0	0	61	0	0	0	0	0	0	0	0
21	0	0	0	60	0	0	0	0	0	0	0	0
22	0	0	0	45	0	0	0	0	0	0	0	0
23	0	0	0	40	0	0	0	0	0	0	0	0
24	0	0	0	40	0	0	0	0	0	0	0	0
25	0	0	0	60	0	0	0	0	0	0	0	0
26	0	0	0	60	0	0	0	0	0	0	0	0
27	0	0	0	59	0	0	0	0	0	0	0	0
28	0	0	0	58	0	0	0	0	0	0	0	0
29	0	-	0	58	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	880	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	61	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	29	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	1,745	0	0	0	0	0	0	0	0
WHOLE YEAR:--	TOTAL,	880	MAX.,	61	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,745		

State of California Demonstration Water and Improvement District #4 Water
 Delivered to Kern Delta Water District
 Via Arvin-Edison Canal/Kern Island Canal Siphon Installation

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	63	102	0	0	0	0
2	0	0	0	0	0	0	46	101	0	0	0	0
3	0	0	0	0	0	0	74	104	0	0	0	0
4	0	0	0	0	0	0	90	110	0	0	0	0
5	0	0	0	0	0	0	102	110	0	0	0	0
6	0	0	0	0	0	0	100	97	0	0	0	0
7	0	0	0	0	0	0	97	98	9	0	0	0
8	0	0	0	0	0	0	96	96	11	0	0	0
9	0	0	0	0	0	0	102	90	10	0	0	0
10	0	0	0	0	0	0	82	92	10	0	0	0
11	0	0	0	0	0	0	87	90	10	0	0	0
12	0	0	0	0	0	0	110	95	0	0	0	0
13	0	0	0	0	0	0	110	95	0	0	0	0
14	0	0	0	0	0	0	110	65	0	0	0	0
15	0	0	0	0	0	0	100	60	0	0	0	0
16	0	0	0	0	0	0	95	35	0	0	0	0
17	0	0	0	0	0	0	98	0	0	0	0	0
18	0	0	0	0	0	0	107	0	0	0	0	0
19	0	0	0	0	0	0	108	0	0	0	0	0
20	0	0	0	0	0	0	108	0	0	0	0	0
21	0	0	0	0	0	0	109	0	0	0	0	0
22	0	0	0	0	0	0	105	0	0	0	0	0
23	0	0	0	0	0	0	108	0	0	0	0	0
24	0	0	0	0	0	0	107	0	0	0	0	0
25	0	0	0	0	0	80	110	0	0	0	0	0
26	0	0	0	0	0	81	107	0	0	0	0	0
27	0	0	0	0	0	83	108	0	0	0	0	0
28	0	0	0	0	0	83	111	0	0	0	0	0
29	0	-	0	0	0	62	108	0	0	0	0	0
30	0	-	0	0	0	58	107	0	0	0	0	0
31	0	-	0	-	0	-	92	0	-	0	-	0
TOTAL	0	0	0	0	0	447	3,057	1,440	50	0	0	0
MAXIMUM DAY	0	0	0	0	0	83	111	110	11	0	0	0
MINIMUM DAY	0	0	0	0	0	0	46	0	0	0	0	0
MEAN	0	0	0	0	0	15	99	46	2	0	0	0
TOTAL AC.FT.	0	0	0	0	0	887	6,063	2,856	99	0	0	0
WHOLE YEAR:-	TOTAL,	4,994	MAX.,	111	MIN.,	0	MEAN,	14	TOTAL AC.FT.,	9,905		

NOTE: WHOLE YEAR AC.FT. INCLUDES 7,465 AC.FT. OF STATE DEMONSTRATION WATER; 851 AC.FT. OF ID#4 1988 PAYBACK WATER; 1,589 AC.FT. OF ID#4 1980 WATER

Year: 1990

KERN DELTA WATER DISTRICT
KERN ISLAND CANAL SERVICE AREA

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
River Entitlement	+ 12,240	12,458	17,742	17,459	18,446	17,706	12,704	7,710	5,773	8,158	7,685	8,472	146,553
Release	- 7,130	0	691	3,863	917	0	0	0	299	1,971	3,942	361	19,174
Ent'l + or - Releases	= 5,110	12,458	17,051	13,596	17,529	17,706	12,704	7,710	5,474	6,187	3,743	8,111	127,379
Into Storage	- 128	1,786	3,054	0	185	384	2,914	0	581	246	492	506	10,276
From Storage	+ 0	125	813	117	0	860	795	5,490	667	432	230	285	9,814
From City of Bakersfield	+ 0	0	0	0	627	1,186	799	706	0	0	0	0	3,318
Carrier Canal Loss	- 77	669	276	177	0	0	0	0	0	0	597	52	1,848
To Kern Delta WD	- 0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer in Storage	+ 0	0	0	0	0	0	416	0	0	0	0	0	416
Eastside Canal Ent'l	- 0	0	1,125	1,647	1,936	2,102	2,376	1,115	0	0	0	0	10,301
To Improvement District #4	- 0	0	0	1,745	0	0	0	0	0	0	0	0	1,745
To North Kern WSD	- 0	0	0	0	276	593	400	353	0	0	0	0	1,622
Diverted at Head	= 4,905	10,128	13,409	10,144	15,759	16,673	9,024	12,438	5,560	6,373	2,884	7,838	115,135
From Improvement District #4	+ 0	0	0	1,745	0	0	0	0	0	0	0	0	1,745
From Kern Delta WD	+ 0	0	0	0	0	669	5,682	1,866	99	0	0	0	8,316
Total Utility Supply	= 4,905	10,128	13,409	11,889	15,759	17,342	14,706	14,304	5,659	6,373	2,884	7,838	125,196
Utility Deliveries	3,170	7,265	9,687	8,804	12,346	12,809	11,790	10,845	3,125	3,577	1,254	5,339	90,011
Contract Deliveries	195	533	680	461	343	528	513	486	130	169	145	279	4,462
Total Deliveries	- 3,365	7,798	10,367	9,265	12,689	13,337	12,303	11,331	3,255	3,746	1,399	5,618	94,473
Conveyance Losses	= 1,540	2,330	3,042	2,624	3,070	4,005	2,403	2,973	2,404	2,627	1,485	2,220	30,723
Delivery Percentage	69%	77%	77%	78%	81%	77%	84%	79%	58%	59%	49%	72%	75%

Into Reservoir Storage	128	1,786	3,054	0	185	384	2,914	0	581	246	492	506	10,276
Reservoir Evaporation Loss	32	43	111	222	280	333	538	377	60	58	30	26	2,110
From Reservoir Storage	0	125	813	117	0	860	795	5,490	667	432	230	285	9,814
End of Month Reservoir Storage	2,500	4,118	6,248	5,909	5,814	5,005	6,586	719	573	329	561	756	

State Exchange Diverted	56	557	934	133	0	0	827	173	0	0	0	0	2,680
i.D. #4 Water Diverted	0	0	0	0	0	218	381	990	0	0	0	0	1,589
State Exch. Delivered	56	557	934	133	0	0	827	173	0	0	0	0	2,680
i.D. #4 Water Delivered	0	0	0	0	0	196	308	711	0	0	0	0	1,215

KERN ISLAND CANAL
ENTITLEMENT AND DIVERSION OF CONTRACT WATER
BALFOUR - GUTHRIE CONTRACT

Year: 1990

Quantities in acre-feet
except where noted.....

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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KERN ISLAND CANAL ENTITLEMENT:

Maximum	18,446	16,661	18,424	17,851	18,446	17,851	18,446	18,446	17,851	18,446	17,851	18,446	217,165
Actual	12,240	12,458	17,742	17,459	18,446	17,706	12,704	7,710	5,773	8,158	7,685	8,472	146,553
Maximum Percentage	66%	75%	96%	98%	100%	99%	69%	42%	32%	44%	43%	46%	--

CONTRACT ENTITLEMENT:

Maximum	269	242	269	260	269	260	269	269	260	269	260	--	2,896
Actual	178	182	258	255	269	257	186	113	83	118	112	--	2,011
Sum to Date	178	360	618	873	1,142	1,399	1,585	1,698	1,781	1,899	2,011	2,011	--

CONTRACT DIVERTED:

For Month	0	198	506	138	169	249	294	205	14	46	52	77	1,948
To Date	0	198	704	842	1,011	1,260	1,554	1,759	1,773	1,819	1,871	1,948	--

UNUSED ENTITLEMENT:

For Month	178	(16)	(248)	117	100	8	(108)	(92)	69	72	60	(77)	63
Sum to Date	178	162	(86)	31	131	139	31	(61)	8	80	140	63	--

KERN ISLAND CANAL
ENTITLEMENT AND DIVERSION OF CONTRACT WATER
BLOOMFIELD CONTRACT

Year: 1990

Quantities in acre-feet
except where noted.....

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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KERN ISLAND CANAL ENTITLEMENT:

Maximum	18,446	16,661	18,424	17,851	18,446	17,851	18,446	18,446	17,851	18,446	17,851	18,446	217,165
Actual	12,240	12,458	17,742	17,459	18,446	17,706	12,704	7,710	5,773	8,158	7,685	8,472	146,553
Maximum Percentage	66%	75%	96%	98%	100%	99%	69%	42%	32%	44%	43%	46%	--

CONTRACT ENTITLEMENT:

Maximum	336	303	336	325	336	325	336	336	325	336	325	336	3,619
Actual	222	227	323	319	336	322	232	141	104	148	140	--	2,514
Sum to Date	222	449	772	1,091	1,427	1,749	1,981	2,122	2,226	2,374	2,514	2,514	--

CONTRACT DIVERTED:

For Month	195	335	174	323	174	279	219	281	116	123	93	202	2,514
To Date	195	530	704	1,027	1,201	1,480	1,699	1,980	2,096	2,219	2,312	2,514	--

UNUSED ENTITLEMENT:

For Month	27	(108)	149	(4)	162	43	13	(140)	(12)	25	47	(202)	0
Sum to Date	27	(81)	68	64	226	269	282	142	130	155	202	0	--

Year: 1990

Total Flow via the Eastside Canal Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	16	7	11	36	31	29	39	43	0	0	0	0
2	19	5	8	33	25	27	38	44	0	0	0	0
3	16	4	2	30	24	28	34	40	0	0	0	0
4	12	8	8	32	27	25	32	37	0	0	0	0
5	11	18	19	32	27	27	35	34	0	0	0	0
6	11	7	21	23	26	31	39	37	0	0	0	0
7	13	1	22	11	30	31	43	34	0	0	0	0
8	18	0	24	13	33	33	40	35	0	0	0	0
9	19	0	25	24	33	31	33	35	0	0	0	0
10	23	0	19	26	30	24	35	37	0	0	0	0
11	23	0	17	33	28	29	40	38	0	0	0	0
12	19	0	23	36	23	35	45	38	0	0	0	0
13	15	0	27	39	23	36	49	44	0	0	0	0
14	12	0	26	21	27	35	47	43	0	0	0	0
15	10	0	26	21	31	32	44	23	0	0	0	0
16	2	1	29	36	31	32	45	0	0	0	0	0
17	0	9	31	38	31	27	47	0	0	0	0	0
18	1	9	30	37	34	29	47	0	0	0	0	0
19	6	10	38	34	35	34	35	0	0	0	0	0
20	6	8	47	33	36	37	34	0	0	0	0	0
21	6	8	50	31	37	39	31	0	0	0	0	0
22	8	6	42	23	39	44	31	0	0	0	0	0
23	11	6	31	28	36	47	40	0	0	0	0	0
24	11	11	30	30	38	48	49	0	0	0	0	0
25	12	14	31	26	43	51	50	0	0	0	0	0
26	10	21	35	29	36	46	37	0	0	0	0	0
27	10	22	32	28	29	43	32	0	0	0	0	0
28	10	21	39	24	29	45	30	0	0	0	0	0
29	8	-	41	24	35	43	25	0	0	0	0	0
30	3	-	38	26	35	42	35	0	0	0	0	0
31	8	-	36	-	34	-	37	0	-	-	-	0
TOTAL	349	196	858	857	976	1,060	1,198	562	0	0	0	0
MAXIMUM DAY	23	22	50	39	43	51	50	44	0	0	0	0
MINIMUM DAY	0	0	2	11	23	24	25	0	0	0	0	0
MEAN	11	7	28	29	31	35	39	18	0	0	0	0
TOTAL AC.FT.	692	389	1,702	1,700	1,936	2,102	2,376	1,115	0	0	0	0
WHOLE YEAR:-	TOTAL,	6,056	MAX.,	51	MIN.,	0	MEAN,	17	TOTAL AC.FT.,	12,012		

KERN DELTA WATER DISTRICT
EASTSIDE CANAL SERVICE AREA

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
River Entitlement	0	0	1,125	1,647	1,936	2,102	2,376	1,115	0	0	0	0	10,301
Total River Diverted	0	0	1,125	1,647	1,936	2,102	2,376	1,115	0	0	0	0	10,301
State Exchange Diverted	692	389	577	53	0	0	0	0	0	0	0	0	1,711
Other Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
Total State/Other Div.	692	389	577	53	0	0	0	0	0	0	0	0	1,711

Eastside Canal at Head	692	389	1,702	1,700	1,936	2,102	2,376	1,115	0	0	0	0	12,012
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Utility Deliveries	0	0	926	1,368	1,458	1,703	2,168	985	0	0	0	0	8,608
Contract Deliveries	0	0	4	6	118	102	10	8	0	0	0	0	248
Total Utility Deliveries	0	0	930	1,374	1,576	1,805	2,178	993	0	0	0	0	8,856
State Exchange Delivered	558	239	493	53	0	0	0	0	0	0	0	0	1,343
Other Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Total State/Other Del.	558	239	493	53	0	0	0	0	0	0	0	0	1,343
Total Deliveries	558	239	1,423	1,427	1,576	1,805	2,178	993	0	0	0	0	10,199
Canal Loss (Utility)	0	0	195	273	360	297	198	122	0	0	0	0	1,445
Canal Loss (State/Other)	134	150	84	0	0	0	0	0	0	0	0	0	368
Total Canal Loss	134	150	279	273	360	297	198	122	0	0	0	0	1,813
Delivery Percentage	81%	61%	84%	84%	81%	86%	92%	89%	0%	0%	0%	0%	85%

Year: 1990

Total Flow via the Buena Vista Canal Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	87	34	0	0	0	0	0	0	0	0	55
2	0	86	42	0	0	0	0	0	0	0	0	50
3	0	95	37	0	0	0	0	0	0	0	0	0
4	0	86	40	0	0	0	0	0	0	0	0	0
5	0	87	43	0	0	0	0	0	0	0	0	0
6	0	91	37	0	0	0	0	0	0	0	0	0
7	0	85	39	0	0	0	0	0	0	0	0	0
8	0	83	19	0	0	0	0	0	0	0	0	0
9	0	81	22	0	0	0	0	0	0	0	0	0
10	0	84	3	0	0	0	0	0	0	0	0	0
11	0	81	0	0	0	0	0	0	0	0	0	0
12	0	75	0	0	0	0	0	0	0	0	0	0
13	0	77	0	0	0	0	0	0	0	0	0	0
14	0	64	0	37	0	0	0	0	0	0	0	0
15	0	60	0	43	0	0	0	0	0	0	0	0
16	0	60	0	32	0	0	0	0	0	0	0	0
17	24	58	0	18	0	0	0	0	0	0	0	0
18	35	46	0	0	0	0	0	0	0	0	0	0
19	40	45	0	0	0	0	0	0	0	0	0	0
20	23	46	0	0	0	0	0	0	0	0	0	0
21	21	43	0	0	0	0	0	0	0	0	0	0
22	5	24	0	18	0	0	0	0	0	0	13	0
23	9	23	0	14	0	0	0	0	0	0	11	0
24	15	14	0	0	0	0	0	0	0	0	15	0
25	7	24	0	0	0	0	0	0	0	0	27	0
26	34	28	0	0	0	0	0	0	0	0	38	0
27	64	25	0	0	0	0	0	0	0	0	38	0
28	73	26	0	0	0	0	0	0	0	0	49	0
29	69	-	0	0	0	0	0	0	0	0	59	0
30	63	-	0	0	0	0	0	0	0	0	54	0
31	65	-	0	-	0	-	0	0	-	0	-	0
TOTAL	547	1,684	316	162	0	0	0	0	0	0	304	105
MAXIMUM DAY	73	95	43	43	0	0	0	0	0	0	59	55
MINIMUM DAY	0	14	0	0	0	0	0	0	0	0	0	0
MEAN	18	60	10	5	0	0	0	0	0	0	10	3
TOTAL AC.FT.	1,085	3,340	627	321	0	0	0	0	0	0	603	208
WHOLE YEAR:--	TOTAL,	3,118	MAX.,	95	MIN.,	0	MEAN,	9	TOTAL AC.FT.,	6,184		

KERN DELTA WATER DISTRICT
BUENA VISTA CANAL SERVICE AREA

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Kern River Entitlement	0	0	0	0	60	34	0	0	0	0	0	0	94
Release	2,274	0	0	1,751	413	0	0	0	153	902	2,602	282	8,377
Ent'l + or - Releases	2,274	0	0	1,751	473	34	0	0	153	902	2,602	282	8,471
Into Storage	1,036	0	0	0	28	14	0	0	0	0	0	0	1,078
From Storage	2	945	49	6	0	0	347	0	0	0	0	0	1,349
To North Kern WSD	0	0	0	1,061	445	20	0	0	153	428	585	0	2,692
Transfer in Storage	0	0	0	0	0	0	347	0	0	0	0	0	347
Carrier Canal Loss	570	138	13	438	0	0	0	0	0	474	1,583	133	3,349
Diverted at Head of Canal	670	807	36	258	0	0	0	0	0	0	434	149	2,354
Utility Deliveries	257	670	20	86	0	0	0	0	0	0	105	138	1,276
Contract Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Deliveries	257	670	20	86	0	0	0	0	0	0	105	138	1,276
Canal Conveyance Losses	413	137	16	172	0	0	0	0	0	0	329	11	1,078
Irrigation Delivery Percentage	38%	83%	56%	33%	0%	0%	0%	0%	0%	0%	24%	93%	54%

Into Reservoir Storage	1,036	0	0	0	28	14	0	0	0	0	0	0	1,078
Reservoir Evaporation Loss	8	8	10	14	16	20	0	0	0	0	0	0	76
From Reservoir Storage	2	945	49	6	0	0	347	0	0	0	0	0	1,349
End of Month Reservoir Storage	1,373	420	361	341	353	347	0	0	0	0	0	0	0

State Exchange Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
State Water Div. via Maples Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
I.D. #4 Water Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
State Exch. Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0
State Water Del. via Maples Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
I.D. #4 Water Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0

KERN DELTA WATER DISTRICT
BUENA VISTA CANAL
DISTRIBUTION OF WATER

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
BUENA VISTA CANAL AT HEAD	1,085	3,340	627	321	0	0	0	0	0	0	603	208	6,184

Deliveries: Head to Section 17

Buena Vista Utility	133	135	20	60	0	0	0	0	0	0	46	139	533
Buena Vista State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Stine Utility	0	0	0	0	0	0	0	0	0	0	0	0	0
Stine State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Improvement District #4	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	133	135	20	60	0	0	0	0	0	0	46	139	533

Deliveries: at Section 17

Buena Vista Utility	125	536	0	26	0	0	0	0	0	0	60	0	747
Buena Vista State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern Island Utility	238	2,095	407	0	0	0	0	0	0	0	30	45	2,815
Kern Island State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	363	2,631	407	26	0	0	0	0	0	0	90	45	3,562

TOTAL DELIVERED	496	2,766	427	86	0	0	0	0	0	0	136	184	4,095
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Canal Conveyance Losses	589	574	200	235	0	0	0	0	0	0	467	24	2,089
Irrigation Delivery Percentage	46%	83%	68%	27%	0%	0%	0%	0%	0%	0%	23%	88%	66%

DISTRIBUTION:

Buena Vista Utility	670	807	36	258	0	0	0	0	0	0	434	149	2,354
Buena Vista State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Stine Utility	0	0	0	0	0	0	0	0	0	0	0	0	0
Stine State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
Improvement District #4	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern Island Utility	415	2,533	591	63	0	0	0	0	0	0	169	59	3,830
Kern Island State Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1,085	3,340	627	321	0	0	0	0	0	0	603	208	6,184

Year: 1990

Total Flow via the Stine Canal Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR--	TOTAL,	0	MAX.,	0	MIN.,	0	MEAN,	0	TOTAL AC.FT.,	0	0	0

KERN DELTA WATER DISTRICT
STINE CANAL SERVICE AREA

Quantities in acre-feet

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
River Entitlement	0	0	0	0	117	65	0	0	0	0	0	0	182
Release	0	0	0	0	0	0	0	0	0	0	0	0	0
Ent'l + or - Releases	0	0	0	0	117	65	0	0	0	0	0	0	182
Into Storage	0	0	0	0	52	23	0	0	0	0	0	0	75
From Storage	0	0	0	0	0	0	69	0	0	0	0	0	69
To North Kern WSD	0	0	0	0	65	42	0	0	0	0	0	0	107
Transfer in Storage	0	0	0	0	0	0	69	0	0	0	0	0	69
Carrier Canal Loss	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted at Head	0	0	0	0	0	0	0	0	0	0	0	0	0
Utility Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Conveyance Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Into Reservoir Storage	0	0	0	0	52	23	0	0	0	0	0	0	75
Reservoir Evaporation Loss	0	0	0	0	2	4	0	0	0	0	0	0	6
From Reservoir Storage	0	0	0	0	0	0	69	0	0	0	0	0	69
End of Month Reservoir Storage	0	0	0	0	50	69	0	0	0	0	0	0	

State Exchange Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Diversions	0	0	0	0	0	0	0	0	0	0	0	0	0
State Exch. Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0

KERN DELTA WATER DISTRICT
FARMERS CANAL SERVICE AREA

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
River Entitlement	0	0	0	0	63	26	0	0	0	0	0	0	89
Release	0	0	0	0	0	0	0	0	0	0	0	0	0
Ent'l + or - Releases	=	0	0	0	63	26	0	0	0	0	0	0	89
Into Storage	0	0	0	0	28	8	0	0	0	0	0	0	36
From Storage	0	0	0	0	0	0	34	0	0	0	0	0	34
To North Kern WSD	0	0	0	0	35	18	0	0	0	0	0	0	53
Other Supply	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrier Canal Loss	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted at Head	=	0	0	0	0	0	34	0	0	0	0	0	34
Utility Deliveries	0	0	0	0	0	0	34	0	0	0	0	0	34
Contract Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Deliveries	-	0	0	0	0	0	34	0	0	0	0	0	34
Conveyance Losses	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Percentage	=	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%

Into Reservoir Storage	0	0	0	0	28	8	0	0	0	0	0	0	36
Reservoir Evaporation Loss	0	0	0	0	0	2	0	0	0	0	0	0	2
From Reservoir Storage	0	0	0	0	0	0	34	0	0	0	0	0	34
End of Month Reservoir Storage	0	0	0	0	28	34	0	0	0	0	0	0	0

State Exchange Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Diversions	0	0	0	0	0	0	0	0	0	0	0	0	0
State Exch. Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Delivered	0	0	0	0	0	0	0	0	0	0	0	0	0

Year: 1990

KERN DELTA WATER DISTRICT

State Aqueduct Exchange Diversion and Storage Recapitulation

Quantities in acre-feet

	Kern Island	Eastside	Eastside via K.I.	Buena Vista	Stine	Farmers	Resv. Loss	Other	Total	Storage
										Balance
November	0	153	26	0	0	0	0	0	179	3,233
December	77	216	48	0	0	0	0	0	341	3,054
January	45	692	11	0	0	0	0	0	748	2,713
February	113	389	444	0	0	0	0	0	946	1,965
March	0	514	505	0	0	0	0	0	1,019	1,019
Total	235	1,964	1,034	0	0	0	0	0	3,233	3,233

Notes: 1990 Contract Amount = 25,500; 1990 Contract Allocation = 12,750; 1990 Contract Use = 1,678

March	219	63	210	0	0	0	0	0	492	1,186
April	9	53	124	0	0	0	0	0	186	1,000
May	0	0	0	0	0	0	0	0	0	1,000
June	0	0	0	0	0	0	0	0	0	1,000
July	0	0	827	0	0	0	0	0	827	173
August	0	0	173	0	0	0	0	0	173	0
September	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0
Total	228	116	1,334	0	0	0	0	0	1,678	1,678

November	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

KERN RIVER CHANNEL OPERATIONS
CITY OF BAKERSFIELD

Quantities in acre-feet

Year: 1990

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
+ Kern River at First Point	12,926	16,124	25,071	24,422	25,454	30,030	31,129	21,519	6,885	8,979	8,037	8,925	219,501
- Computed Loss	676	611	676	655	676	655	676	676	655	676	655	676	7,963
- Beardsley Canal at Head	2,898	1,142	7,869	9,132	7,674	11,560	18,665	7,720	657	1,456	1,884	71	70,728
- Carrier Canal at Head	9,352	14,371	16,526	14,635	17,104	17,815	11,625	13,123	5,573	6,847	5,498	8,178	140,647
= Rocky Point Weir	0	0	0	0	0	0	163	0	0	0	0	0	163
+ Carrier Waste Gate	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Farmers-Stine-Anderson: to River	2,400	1,764	124	1,745	0	0	0	0	0	0	0	0	6,033
- Farmers-Stine-Anderson: from River	0	81	22	0	0	0	0	0	0	0	0	0	103
- Calloway Canal at Head	1,325	1,107	0	885	0	0	0	0	0	0	0	0	3,317
- River Loss: Rocky Pt. to Cally. Weir	1,075	576	102	860	0	0	163	0	0	0	0	0	2,776
= Calloway River Weir	0	0	0	0	0	0	0	0	0	0	0	0	0
+ CVC T.O. #4 to River	0	0	0	0	0	0	0	0	150	0	0	0	150
+ CVC T.O. #3 to River	0	0	0	0	0	0	0	272	378	21	15	33	719
+ Friant-Kern Inflow	0	0	0	0	0	0	0	0	0	0	0	0	0
- River Canal from River	0	0	0	0	0	0	0	0	0	0	0	0	0
- River Loss: Cally. Weir to River Canal Weir	0	0	0	0	0	0	0	272	528	21	15	33	869
= River Canal Weir	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Pioneer Turnout	0	0	0	0	0	0	0	0	0	0	0	0	0
+ CVC T.O. #2 to River	0	0	0	0	0	0	0	0	0	0	0	0	0
- Rosedale Channel at Head	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pioneer Canal at Head	0	0	0	0	0	0	0	0	0	0	0	0	0
- River Loss: River Canal to Stockdale Hwy.	0	0	0	0	0	0	0	0	0	0	0	0	0
= Flow at Stockdale Highway	0	0	0	0	0	0	0	0	0	0	0	0	0
- River Loss: Std. Hwy. to Berrenda Mesa T.O.	0	0	0	0	0	0	0	0	0	0	0	0	0
- Berrenda Mesa Turnout from River	0	0	0	0	0	0	0	0	0	0	0	0	0
+ CVC T.O. #1 to River	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Pioneer Canal (P-1 Lateral) to 2800 Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
- Pioneer Canal (P-1 Lateral) from 2800 Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
+ River Canal T.O. to 2800 Acres	0	0	0	0	0	0	0	0	0	0	0	0	0
- 2800 Acre Recharge Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
= River Channel Below 2800 Acres	0	0	0	0	0	0	0	0	0	0	0	0	0

**CARRIER CANAL OPERATIONS
CITY OF BAKERSFIELD**

Quantities in acre-feet

Year: 1990

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
+ Carrier Canal at Head	9,352	14,371	16,526	14,635	17,104	17,815	11,625	13,123	5,573	6,847	5,498	8,178	140,647
- Carrier Waste Gate	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Oilfield Discharge (Texaco Inc.)	0	0	0	0	0	0	0	0	0	0	0	0	0
= Carrier Reclamation Weir	9,352	14,371	16,526	14,635	17,104	17,815	11,625	13,123	5,573	6,847	5,498	8,178	140,647
+ Oilfield Discharge (Arco Oil)	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Storm Drain Inflow/Canal Drainage	43	0	0	0	0	0	0	0	0	0	0	0	43
- Eastside Canal at Head	692	389	1,702	1,700	1,936	2,102	2,376	1,115	0	0	0	0	12,012
- Kern Island Canal at Head	4,546	8,152	13,843	10,254	15,168	15,713	9,249	12,008	5,573	6,373	2,715	7,779	111,373
= Levee No. 1	4,157	5,830	981	2,681	0	0	0	0	0	474	2,783	399	17,305
- Farmers-Stine-Anderson: to River	2,400	1,764	124	1,745	0	0	0	0	0	0	0	0	6,033
+ Farmers-Stine-Anderson: from River	0	81	22	0	0	0	0	0	0	0	0	0	103
= Carrier Canal at Oak Street	1,757	4,147	879	936	0	0	0	0	0	474	2,783	399	11,375
- Stine Canal at Head	0	0	0	0	0	0	0	0	0	0	0	0	0
- Truxtun Lakes	0	0	0	0	0	0	0	0	0	0	0	0	0
- Arvin-Edison Turnout	0	0	0	0	0	0	0	0	0	0	0	0	0
- Total Carrier Canal Loss	672	807	252	615	0	0	0	0	0	474	2,180	191	5,191
+ River Canal from River	0	0	0	0	0	0	0	0	0	0	0	0	0
= River Canal at Stockdale Highway	1,085	3,340	627	321	0	0	0	0	0	0	603	208	6,184
- Buena Vista Canal at Head	1,085	3,340	627	321	0	0	0	0	0	0	603	208	6,184
- Pioneer Turnout	0	0	0	0	0	0	0	0	0	0	0	0	0
- James Canal at Head	0	0	0	0	0	0	0	0	0	0	0	0	0
= River Canal at Alternate Second Point	0	0	0	0	0	0	0	0	0	0	0	0	0
+ 2800 Acre Well Water Production	0	0	0	0	1,196	3,622	3,419	2,189	0	0	0	0	10,426
- River Canal Turnout	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern Delta WD via River Canal	0	0	0	0	627	1,186	799	706	0	0	0	0	3,318
= Second Point Group Flow via River Canal	0	0	0	0	569	2,436	2,620	1,483	0	0	0	0	7,108

MONTHLY SUMMARY OF ENTITLEMENT, EXCHANGES, DIVERSIONS, DELIVERIES, LOSSES & SALES
CITY OF BAKERSFIELD

Quantities in acre-feet

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
River Entitlement	0	46	3,152	9,304	12,377	6,927	0	0	0	0	0	0	31,806
Release	1,230	0	265	1,082	494	0	0	0	146	1,069	1,148	79	5,513
ENTITLEMENT + OR - RELEASE	1,230	46	3,417	10,386	12,871	6,927	0	0	146	1,069	1,148	79	37,319
NKWS to City	1,552	0	0	0	0	0	0	0	0	0	0	0	1,552
From Reservoir Storage	204	508	270	0	0	8,022	5,363	1,760	479	46	7	29	16,688
Into Reservoir Storage	624	10	1,039	5,158	8,309	3,407	0	190	0	0	0	0	18,737
Other	0	0	0	0	0	534	730	269	0	0	0	0	1,533
TOTAL SUPPLY	2,362	544	2,648	5,228	4,562	12,076	6,093	1,839	625	1,115	1,155	108	38,355

Lake Ming	16	16	44	60	77	105	127	121	91	65	42	26	790
Kern Valley Golf Course	0	0	0	0	0	0	0	31	30	22	7	3	93
North Kern WSD	288	0	89	3,737	2,903	10,534	4,023	0	0	0	268	71	21,913
Cawelo WD	765	0	1,189	0	0	0	0	0	109	520	500	0	3,083
Kern - Tulare WD	0	0	0	0	0	0	0	0	0	0	0	0	0
Rag Gulch WD	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale RBWSD (Direct)	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale RBWSD (via I.D. #4)	1,242	0	0	0	0	0	0	0	0	0	0	0	1,242
James-Pioneer ID	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale Ranch ID	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern River Canal & Irrigating Co.	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern River Canal	50	528	1,261	1,432	1,581	1,440	1,944	1,688	395	508	339	0	11,166
Truxtun Lakes (Direct)	0	0	0	0	0	0	0	0	0	0	0	0	0
Truxtun Lakes (via I.D. #4)	0	0	0	0	0	0	0	0	0	0	0	0	0
2800 Acre Banking	0	0	0	0	0	0	0	0	0	0	0	0	0
River and Carrier Canal Loss	1	0	65	(1)	1	(3)	(1)	(1)	0	0	(1)	8	68
TOTAL DIVERTED	2,362	544	2,648	5,228	4,562	12,076	6,093	1,839	625	1,115	1,155	108	38,355

Into Reservoir Storage	624	10	1,039	5,158	8,309	3,407	0	190	0	0	0	0	18,737
Reservoir Evaporation Loss	24	20	32	132	517	547	407	280	140	85	41	23	2,248
From Reservoir Storage	204	508	270	0	0	8,022	5,363	1,760	479	46	7	29	16,688
End of Month Reservoir Storage	1,179	661	1,398	6,424	14,216	9,054	3,284	1,434	815	684	636	584	

**CITY OF BAKERSFIELD
STATUS OF LONG TERM CONTRACTS**

Quantities in
acre-feet

NORTH KERN WATER STORAGE DISTRICT					
Year	Basic Contract Amount		Cumulative Contract Delivery		Basic Contract Balance
	Amount	Delivered	Amount	Delivered	Balance
1977	20,000	20,000	20,000	20,000	0
1978	20,000	20,000	40,000	40,000	0
1979	20,000	20,000	60,000	60,000	0
1980	20,000	20,000	80,000	80,000	0
1981	20,000	20,000	100,000	100,000	0
1982	20,000	20,000	120,000	120,000	0
1983	20,000	20,000	140,000	140,000	0
1984	20,000	20,000	160,000	160,000	0
1985	20,000	20,000	180,000	180,000	0
1986	20,000	20,000	200,000	200,000	0
1987	20,000	20,000	220,000	220,000	0
1988	20,000	20,000	240,000	240,000	0
1989	20,000	20,000	260,000	260,000	0
1990	20,000	20,000	280,000	280,000	0

CAWELO WATER DISTRICT					
Year	Basic Contract Amount		Cumulative Contract Delivery		Basic Contract Balance
	Amount	Delivered	Amount	Delivered	Balance
1977	27,000	5,024	27,000	5,024	(21,976)
1978	27,000	35,404	54,000	40,428	(13,572)
1979	27,000	36,780	81,000	77,208	(3,792)
1980	27,000	30,792	108,000	108,000	0
1981	27,000	27,000	135,000	135,000	0
1982	27,000	27,000	162,000	162,000	0
1983	27,000	27,000	189,000	189,000	0
1984	27,000	27,000	216,000	216,000	0
1985	27,000	27,000	243,000	243,000	0
1986	27,000	27,000	270,000	270,000	0
1987	27,000	27,000	297,000	297,000	0
1988	27,000	12,821	324,000	309,821	(14,179)
1989	27,000	22,460	351,000	332,281	(18,719)
1990	27,000	17,723	378,000	350,004	(27,996)

KERN-TULARE WATER DISTRICT					
Year	Basic Contract Amount		Cumulative Contract Delivery		Basic Contract Balance
	Amount	Delivered	Amount	Delivered	Balance
1977	20,000	4,673	20,000	4,673	(15,327)
1978	20,000	23,690	40,000	28,363	(11,637)
1979	20,000	24,122	60,000	52,485	(7,515)
1980	20,000	23,403	80,000	75,888	(4,112)
1981	20,000	23,700	100,000	99,588	(412)
1982	20,000	20,412	120,000	120,000	0
1983	20,000	20,000	140,000	140,000	0
1984	20,000	20,000	160,000	160,000	0
1985	20,000	20,000	180,000	180,000	0
1986	20,000	20,000	200,000	200,000	0
1987	20,000	20,000	220,000	220,000	0
1988	20,000	11,763	240,000	231,763	(8,237)
1989	20,000	16,635	260,000	248,398	(11,602)
1990	20,000	0	280,000	248,398	(31,602)

RAG GULCH WATER DISTRICT					
Year	Basic Contract Amount		Cumulative Contract Delivery		Basic Contract Balance
	Amount	Delivered	Amount	Delivered	Balance
1977	3,000	449	3,000	449	(2,551)
1978	3,000	3,550	6,000	3,999	(2,001)
1979	3,000	3,550	9,000	7,549	(1,451)
1980	3,000	3,550	12,000	11,099	(901)
1981	3,000	3,550	15,000	14,649	(351)
1982	3,000	3,351	18,000	18,000	0
1983	3,000	3,000	21,000	21,000	0
1984	3,000	3,000	24,000	24,000	0
1985	3,000	3,000	27,000	27,000	0
1986	3,000	3,000	30,000	30,000	0
1987	3,000	3,000	33,000	33,000	0
1988	3,000	1,764	36,000	34,764	(1,236)
1989	3,000	2,495	39,000	37,259	(1,741)
1990	3,000	0	42,000	37,259	(4,741)

CITY OF BAKERSFIELD
Deliveries to Long Term Contractors

Basic Contract

Year: 1990

Quantities in acre-feet

	NORTH KERN WSD		CAWELO WD		KERN-TULARE WD		RAG GULCH WD		MONTH TOTALS	
	Basic	Accum.	Basic	Accum.	Basic	Accum.	Basic	Accum.	Basic	Accum.
January	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0
March	0	0	1,189	1,189	0	0	0	0	1,189	1,189
April	3,737	3,737	1,211	2,400	0	0	0	0	4,948	6,137
May	2,903	6,640	1,892	4,292	0	0	0	0	4,795	10,932
June	10,000	16,640	1,588	5,880	0	0	0	0	11,588	22,520
July	3,360	20,000	1,668	7,548	0	0	0	0	5,028	27,548
August	0	20,000	2,747	10,295	0	0	0	0	2,747	30,295
September	0	20,000	2,250	12,545	0	0	0	0	2,250	32,545
October	0	20,000	1,840	14,385	0	0	0	0	1,840	34,385
November	0	20,000	1,775	16,160	0	0	0	0	1,775	36,160
December	0	20,000	1,563	17,723	0	0	0	0	1,563	37,723
Year Total	20,000		17,723		0		0		37,723	

Note: 1) Delivered as per terms of City of Bakersfield/Cawelo Water District letter agreement dated April 12, 1990.

City of Bakersfield Diverted to North Kern WSD (Basic Contract)												Year: 1990		
DISCHARGE IN CUBIC FEET PER SECOND (Does not include deliveries into Isabella Reservoir storage)														
DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
1	0	0	0	75	63	55	0	0	0	0	0	0	0	0
2	0	0	0	67	45	69	0	0	0	0	0	0	0	0
3	0	0	0	74	38	78	0	0	0	0	0	0	0	0
4	0	0	0	80	44	68	0	0	0	0	0	0	0	0
5	0	0	0	36	62	62	0	0	0	0	0	0	0	0
6	0	0	0	37	66	69	0	0	0	0	0	0	0	0
7	0	0	0	89	61	58	0	0	0	0	0	0	0	0
8	0	0	0	65	42	75	0	0	0	0	0	0	0	0
9	0	0	0	65	43	78	0	0	0	0	0	0	0	0
10	0	0	0	70	46	50	0	0	0	0	0	0	0	0
11	0	0	0	66	49	91	0	0	0	0	0	0	0	0
12	0	0	0	65	51	93	0	0	0	0	0	0	0	0
13	0	0	0	63	65	82	0	0	0	0	0	0	0	0
14	0	0	0	68	56	73	0	0	0	0	0	0	0	0
15	0	0	0	64	50	81	0	0	0	0	0	0	0	0
16	0	0	0	68	42	0	0	0	0	0	0	0	0	0
17	0	0	0	66	56	0	0	0	0	0	0	0	0	0
18	0	0	0	67	49	0	0	0	0	0	0	0	0	0
19	0	0	0	55	50	0	0	0	0	0	0	0	0	0
20	0	0	0	43	52	0	0	0	0	0	0	0	0	0
21	0	0	0	61	41	0	0	0	0	0	0	0	0	0
22	0	0	0	59	42	0	0	0	0	0	0	0	0	0
23	0	0	0	62	37	0	0	0	0	0	0	0	0	0
24	0	0	0	62	40	0	0	0	0	0	0	0	0	0
25	0	0	0	58	37	0	0	0	0	0	0	0	0	0
26	0	0	0	57	39	0	0	0	0	0	0	0	0	0
27	0	0	0	58	42	0	0	0	0	0	0	0	0	0
28	0	0	0	61	46	0	0	0	0	0	0	0	0	0
29	0	-	0	61	29	0	0	0	0	0	0	0	0	0
30	0	-	0	62	41	0	0	0	0	0	0	0	0	0
31	0	-	0	-	39	-	0	0	-	0	-	0	0	0
TOTAL	0	0	0	1,884	1,463	1,082	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	89	66	93	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	36	29	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	63	47	36	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	3,737	2,903	2,146	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	4,429	MAX.,	93	MIN.,	0	MEAN,	12	TOTAL AC.FT.,	8,786				

City of Bakersfield Diverted to North Kern WSD
(2800 Acre Well Water Purchase)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	13	0	0	0	0	0
2	0	0	0	0	0	0	13	0	0	0	0	0
3	0	0	0	0	0	0	13	0	0	0	0	0
4	0	0	0	0	0	0	13	0	0	0	0	0
5	0	0	0	0	0	0	13	0	0	0	0	0
6	0	0	0	0	0	0	13	0	0	0	0	0
7	0	0	0	0	0	0	13	0	0	0	0	0
8	0	0	0	0	0	0	13	0	0	0	0	0
9	0	0	0	0	0	0	12	0	0	0	0	0
10	0	0	0	0	0	0	13	0	0	0	0	0
11	0	0	0	0	0	0	13	0	0	0	0	0
12	0	0	0	0	0	0	13	0	0	0	0	0
13	0	0	0	0	0	0	10	0	0	0	0	0
14	0	0	0	0	0	0	8	0	0	0	0	0
15	0	0	0	0	0	0	9	0	0	0	0	0
16	0	0	0	0	0	18	11	0	0	0	0	0
17	0	0	0	0	0	18	11	0	0	0	0	0
18	0	0	0	0	0	18	9	0	0	0	0	0
19	0	0	0	0	0	18	9	0	0	0	0	0
20	0	0	0	0	0	18	9	0	0	0	0	0
21	0	0	0	0	0	19	9	0	0	0	0	0
22	0	0	0	0	0	18	9	0	0	0	0	0
23	0	0	0	0	0	18	10	0	0	0	0	0
24	0	0	0	0	0	18	9	0	0	0	0	0
25	0	0	0	0	0	17	10	0	0	0	0	0
26	0	0	0	0	0	18	9	0	0	0	0	0
27	0	0	0	0	0	18	9	0	0	0	0	0
28	0	0	0	0	0	18	9	0	0	0	0	0
29	0	-	0	0	0	17	10	0	0	0	0	0
30	0	-	0	0	0	18	9	0	0	0	0	0
31	0	-	0	-	0	-	10	0	-	0	-	0
TOTAL	0	0	0	0	0	269	334	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	19	13	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	8	0	0	0	0	0
MEAN	0	0	0	0	0	9	11	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	534	663	0	0	0	0	0
WHOLE YEAR:--	TOTAL,	603	MAX.,	19	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,197		

CAWELO WATER DISTRICT DIVERSION SUMMARY

Year: 1990

Quantities in acre-feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
+ Cawelo WD via Pump Station "B"	1,079	2,414	5,516	5,855	5,373	6,585	9,068	7,940	4,820	4,419	2,400	2,491	57,960
Lerdo Delivery Gate No. 8-0-10	0	0	0	0	0	174	212	20	0	0	0	0	406
Lerdo Delivery Gate No. 8-0-22	0	0	176	173	170	285	236	173	49	294	0	81	1,637
Lerdo Delivery Gate No. 8-0-288	0	0	0	0	0	0	0	0	0	0	0	0	0
Lerdo Delivery Gate No. 8-0-289	0	0	0	0	0	0	0	0	0	0	0	0	0
Lerdo Delivery Gate No. 8-0-291	12	36	36	63	28	61	69	36	14	14	20	0	389
Lerdo Delivery Gate No. 8-0-292	4	12	12	26	28	38	36	22	0	12	16	0	206
+ Total Lerdo Gate Deliveries	16	48	224	262	226	558	553	251	63	320	36	81	2,638
+ Beardstley Canal Loss	61	56	61	60	61	60	61	61	60	61	60	61	723
+ Lerdo Loss	11	25	60	63	58	75	100	84	49	50	25	66	666
+ Total Loss	72	81	121	123	119	135	161	145	109	111	85	127	1,389
= Total Diverted for Cawelo WD	1,167	2,543	5,861	6,240	5,718	7,278	9,782	8,336	4,992	4,850	2,521	2,699	61,987

Cawelo Water District Source of Supply:

+ City of Bakersfield Basic Contract	0	0	1,189	0	0	0	0	0	0	0	0	0	1,189
+ City of Bakersfield Miscellaneous	765	0	0	0	0	0	0	0	0	0	210	0	975
+ City of Bakersfield Oilfield Discharge	269	70	297	284	287	0	0	0	34	0	99	90	1,430
+ City of Bakersfield (KRCI Co.) Payback	0	0	0	0	0	0	0	0	109	520	290	0	919
+ Buena Vista WSD Exchange	0	0	502	1,845	2,122	3,004	3,931	596	0	0	0	0	12,000
+ North Kern WSD Exchange	0	0	121	1,015	76	0	0	0	0	0	0	0	1,212
+ Improvement District #4 Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Kern-Tulare WD Exchange	0	0	0	0	0	188	159	144	0	0	0	0	534
+ Rio Bravo Well Water Delivered	0	0	0	0	43	182	660	718	519	688	264	0	3,031
+ Cawelo WD Oilfield Discharge (Texaco)	133	2,473	3,752	3,096	3,190	3,904	5,032	6,878	4,330	3,642	1,658	2,609	40,697
+ via CVC Conduit "A"	133	2,473	3,752	1,889	1,306	2,322	3,370	4,142	2,110	1,830	0	1,007	24,334
- Delivered from Tupman	0	0	0	1,207	1,884	1,582	1,662	1,688	1,688	1,812	1,658	1,602	14,783
- Delivered from KCWA Wells	0	0	0	0	0	0	0	1,048	532	0	0	0	1,580
- Delivered from State Wells	0	0	0	0	0	0	0	0	0	0	0	0	0
- North Kern WSD Exchange	0	0	0	0	0	0	0	0	0	0	0	0	0
= Total Cawelo Water District Supply	1,167	2,543	5,861	6,240	5,718	7,278	9,782	8,336	4,992	4,850	2,521	2,699	61,987

Year: 1990

Cawelo Water District Total from Beardsley-Lerdo Canal System

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	33	17	74	118	85	59	160	129	110	59	73	17
2	33	33	75	120	89	58	167	129	110	60	74	17
3	33	33	58	103	70	58	165	124	112	60	74	33
4	18	34	58	105	74	58	160	140	113	59	73	33
5	17	33	62	107	70	73	162	138	112	97	77	39
6	17	33	87	80	69	75	164	140	74	97	55	75
7	17	55	83	82	80	94	161	131	78	97	54	72
8	17	55	83	78	110	92	162	123	77	99	39	74
9	17	52	81	115	108	90	160	124	78	83	37	74
10	17	53	81	140	107	93	162	135	79	83	17	72
11	17	51	80	140	124	127	144	134	95	81	17	74
12	18	55	77	119	123	144	141	135	93	80	17	62
13	17	41	99	118	123	140	139	133	106	74	38	46
14	17	39	99	118	127	147	126	143	106	73	52	41
15	18	53	108	124	85	146	118	157	106	82	53	40
16	17	51	110	114	86	146	124	175	106	82	51	41
17	21	39	111	83	85	141	156	176	102	96	53	40
18	21	38	107	85	86	144	154	144	90	95	49	42
19	17	39	107	84	85	113	189	143	90	81	50	41
20	17	38	90	143	85	110	186	142	53	81	16	37
21	17	39	89	142	86	107	187	110	54	80	17	34
22	18	53	90	140	87	145	179	110	53	81	40	33
23	17	54	104	111	87	160	183	115	54	79	37	33
24	17	55	104	107	85	158	184	116	53	82	38	34
25	17	51	104	74	102	165	164	119	54	81	40	33
26	17	52	112	70	105	165	166	117	70	74	38	37
27	17	68	112	72	104	165	168	116	91	74	42	38
28	18	68	121	82	101	163	151	143	91	74	18	37
29	17	-	122	82	100	169	146	144	54	74	16	38
30	17	-	117	90	81	165	151	158	53	53	16	37
31	18	-	150	-	74	-	153	159	-	74	-	37
TOTAL	589	1,282	2,955	3,146	2,883	3,670	4,932	4,202	2,517	2,445	1,271	1,361
MAXIMUM DAY	33	68	150	143	127	169	189	176	113	99	77	75
MINIMUM DAY	17	17	58	70	69	58	118	110	53	53	16	17
MEAN	19	46	95	105	93	122	159	136	84	79	42	44
TOTAL AC.FT.	1,167	2,543	5,861	6,240	5,718	7,278	9,782	8,336	4,992	4,850	2,521	2,699
WHOLE YEAR:-	TOTAL,	31,253	MAX.,	189	MIN.,	16	MEAN,	86	TOTAL AC.FT.,	61,987		

City of Bakersfield Diverted to Cawelo Water District
(Basic Contract)

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	15	0	0	0	0	0	0	0	0	0
23	0	0	69	0	0	0	0	0	0	0	0	0
24	0	0	61	0	0	0	0	0	0	0	0	0
25	0	0	63	0	0	0	0	0	0	0	0	0
26	0	0	75	0	0	0	0	0	0	0	0	0
27	0	0	76	0	0	0	0	0	0	0	0	0
28	0	0	42	0	0	0	0	0	0	0	0	0
29	0	-	49	0	0	0	0	0	0	0	0	0
30	0	-	72	0	0	0	0	0	0	0	0	0
31	0	-	77	-	0	-	0	0	-	0	-	0
TOTAL	0	0	599	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	77	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	19	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	1,189	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	599	MAX.,	77	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,189		

City of Bakersfield Diverted to Cawelo Water District
 (Pursuant to City of Bakersfield/CWD Letter Agreement Dated 4-12-90)
 (Basic Contract)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	32	31	19	30	54	30	30	30
2	0	0	0	0	32	31	22	27	54	30	30	30
3	0	0	0	0	32	28	24	35	52	30	30	29
4	0	0	0	0	31	25	24	40	52	29	30	30
5	0	0	0	0	32	25	24	46	53	30	30	30
6	0	0	0	0	32	28	25	46	54	30	30	30
7	0	0	0	0	32	31	28	43	52	30	30	29
8	0	0	0	0	30	28	30	47	53	30	30	30
9	0	0	0	0	25	29	30	48	53	30	30	30
10	0	0	0	0	28	28	30	50	53	30	29	30
11	0	0	0	22	31	28	28	50	54	30	30	30
12	0	0	0	28	31	30	28	47	26	30	30	29
13	0	0	0	31	31	31	26	35	16	30	29	30
14	0	0	0	29	28	31	22	38	30	30	30	30
15	0	0	0	25	28	30	25	45	30	30	30	30
16	0	0	0	29	31	30	30	53	30	30	30	29
17	0	0	0	31	31	28	30	50	30	30	30	30
18	0	0	0	32	32	28	27	31	30	30	30	30
19	0	0	0	32	32	30	25	36	29	30	30	30
20	0	0	0	32	31	27	24	47	30	30	30	29
21	0	0	0	32	32	22	27	50	30	30	29	30
22	0	0	0	32	31	23	26	52	30	30	30	30
23	0	0	0	32	31	23	27	54	30	30	30	30
24	0	0	0	32	31	20	30	55	30	30	30	30
25	0	0	0	32	31	21	30	52	30	30	30	30
26	0	0	0	32	31	24	30	48	30	29	29	29
27	0	0	0	32	31	25	30	47	30	30	30	14
28	0	0	0	32	31	24	30	46	30	30	30	0
29	0	-	-	32	31	22	30	38	29	30	30	0
30	0	-	-	32	31	20	30	46	30	30	29	0
31	0	-	0	-	31	-	30	53	-	30	-	0
TOTAL	0	0	0	611	954	801	841	1,385	1,134	928	895	788
MAXIMUM DAY	0	0	0	32	32	31	30	55	54	30	30	30
MINIMUM DAY	0	0	0	0	25	20	19	27	16	29	29	0
MEAN	0	0	0	20	31	27	27	45	38	30	30	25
TOTAL AC.FT.	0	0	0	1,211	1,892	1,588	1,668	2,747	2,250	1,840	1,775	1,563
WHOLE YEAR:-	TOTAL,	8,337	MAX.,	55	MIN.,	0	MEAN,	23	TOTAL AC.FT.,	16,534		

City of Bakersfield Diverted to Cawelo Water District
(Miscellaneous)

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	27	0	0	0	0	0	0	0	0	0	0	0
2	27	0	0	0	0	0	0	0	0	0	0	0
3	27	0	0	0	0	0	0	0	0	0	0	0
4	12	0	0	0	0	0	0	0	0	0	0	0
5	11	0	0	0	0	0	0	0	0	0	0	0
6	11	0	0	0	0	0	0	0	0	0	0	0
7	12	0	0	0	0	0	0	0	0	0	0	0
8	3	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	12	0	0	0	0	0	0	0	0	0	0	0
14	12	0	0	0	0	0	0	0	0	0	0	0
15	13	0	0	0	0	0	0	0	0	0	0	0
16	12	0	0	0	0	0	0	0	0	0	0	0
17	15	0	0	0	0	0	0	0	0	0	0	0
18	16	0	0	0	0	0	0	0	0	0	0	0
19	12	0	0	0	0	0	0	0	0	0	9	0
20	14	0	0	0	0	0	0	0	0	0	0	0
21	14	0	0	0	0	0	0	0	0	0	0	0
22	15	0	0	0	0	0	0	0	0	0	19	0
23	15	0	0	0	0	0	0	0	0	0	20	0
24	15	0	0	0	0	0	0	0	0	0	19	0
25	13	0	0	0	0	0	0	0	0	0	19	0
26	12	0	0	0	0	0	0	0	0	0	20	0
27	11	0	0	0	0	0	0	0	0	0	0	0
28	13	0	0	0	0	0	0	0	0	0	0	0
29	12	-	0	0	0	0	0	0	0	0	0	0
30	14	-	0	0	0	0	0	0	0	0	0	0
31	16	-	0	-	0	-	0	0	-	0	-	0
TOTAL	386	0	0	0	0	0	0	0	0	0	106	0
MAXIMUM DAY	27	0	0	0	0	0	0	0	0	0	20	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	12	0	0	0	0	0	0	0	0	0	4	0
TOTAL AC.FT.	765	0	0	0	0	0	0	0	0	0	210	0
WHOLE YEAR:-	TOTAL,	492	MAX.,	27	MIN.,	0	MEAN,	1	TOTAL AC.FT.,	975		

City of Bakersfield Diverted to Cawelo Water District
 (Per Terms of City/Cawelo WD Letter Agreement Dated 11-29-89) Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	16	8	0
2	0	0	0	0	0	0	0	0	0	13	12	0
3	0	0	0	0	0	0	0	0	0	12	12	0
4	0	0	0	0	0	0	0	0	0	12	11	0
5	0	0	0	0	0	0	0	0	0	5	12	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	13	9	0
11	0	0	0	0	0	0	0	0	0	16	8	0
12	0	0	0	0	0	0	0	0	0	9	6	0
13	0	0	0	0	0	0	0	0	0	0	3	0
14	0	0	0	0	0	0	0	0	0	0	7	0
15	0	0	0	0	0	0	0	0	0	0	8	0
16	0	0	0	0	0	0	0	0	0	0	19	0
17	0	0	0	0	0	0	0	0	0	0	16	0
18	0	0	0	0	0	0	0	0	0	7	12	0
19	0	0	0	0	0	0	0	0	0	14	3	0
20	0	0	0	0	0	0	0	0	0	17	0	0
21	0	0	0	0	0	0	0	0	0	17	0	0
22	0	0	0	0	0	0	0	0	0	10	0	0
23	0	0	0	0	0	0	0	0	0	12	0	0
24	0	0	0	0	0	0	0	0	0	12	0	0
25	0	0	0	0	0	0	0	0	0	10	0	0
26	0	0	0	0	0	0	0	0	0	11	0	0
27	0	0	0	0	0	0	0	0	9	11	0	0
28	0	0	0	0	0	0	0	0	12	11	0	0
29	0	-	0	0	0	0	0	0	19	11	0	0
30	0	-	0	0	0	0	0	0	15	12	0	0
31	0	-	0	-	0	-	0	0	-	11	-	0
TOTAL	0	0	0	0	0	0	0	0	55	262	146	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	19	17	19	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	2	8	5	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	109	520	290	0
WHOLE YEAR:-	TOTAL,	463	MAX.,	19	MIN.,	0	MEAN,	1	TOTAL AC.FT.,	919		

Year: 1990

City of Bakersfield Diverted to Cawelo Water District
(Non-Kern River)

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6	1	4	4	5	0	0	0	0	0	0	3
2	6	1	5	4	5	0	0	0	0	0	0	3
3	6	1	5	4	5	0	0	0	0	0	0	3
4	6	1	6	5	5	0	0	0	0	0	0	3
5	6	1	5	5	5	0	0	0	0	0	0	3
6	6	0	6	5	5	0	0	0	0	0	0	3
7	5	0	6	5	5	0	0	0	0	0	0	1
8	2	0	6	5	4	0	0	0	0	0	0	1
9	1	0	6	5	5	0	0	0	0	0	0	1
10	2	0	6	5	5	0	0	0	0	0	0	0
11	5	0	6	5	5	0	0	0	0	0	0	1
12	6	0	6	5	5	0	0	0	0	0	0	2
13	5	0	5	5	5	0	0	0	0	0	0	2
14	5	0	6	4	5	0	0	0	5	0	0	1
15	5	0	4	4	5	0	0	0	6	0	0	1
16	5	0	4	5	4	0	0	0	6	0	0	1
17	6	0	4	5	5	0	0	0	0	0	5	1
18	5	0	4	5	4	0	0	0	0	0	4	2
19	5	0	4	5	5	0	0	0	0	0	2	2
20	3	0	4	5	5	0	0	0	0	0	4	1
21	3	0	4	5	5	0	0	0	0	0	3	1
22	3	0	4	4	4	0	0	0	0	0	4	1
23	2	3	4	4	5	0	0	0	0	0	2	1
24	2	3	4	5	4	0	0	0	0	0	4	1
25	4	6	4	5	4	0	0	0	0	0	4	1
26	5	6	4	5	4	0	0	0	0	0	4	1
27	6	7	4	5	4	0	0	0	0	0	4	1
28	5	5	5	5	4	0	0	0	0	0	4	1
29	5	-	5	5	4	0	0	0	0	0	3	1
30	3	-	5	5	5	0	0	0	0	0	3	1
31	2	-	5	-	5	-	0	0	-	0	-	1
TOTAL	136	35	150	143	145	0	0	0	17	0	50	46
MAXIMUM DAY	6	7	6	5	5	0	0	0	6	0	5	3
MINIMUM DAY	1	0	4	4	4	0	0	0	0	0	0	0
MEAN	4	1	5	5	5	0	0	0	1	0	2	1
TOTAL AC.FT.	269	70	297	284	287	0	0	0	34	0	99	90
WHOLE YEAR--	TOTAL,	722	MAX.,	7	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,430		

Year: 1990

Buena Vista WSD Diverted to Cawelo WD

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	20	30	24	62	17	0	0	0	0
2	0	0	0	26	33	23	65	15	0	0	0	0
3	0	0	0	29	31	23	67	16	0	0	0	0
4	0	0	0	33	34	23	65	16	0	0	0	0
5	0	0	0	34	31	39	61	15	0	0	0	0
6	0	0	0	35	32	41	62	16	0	0	0	0
7	0	0	0	39	31	52	65	16	0	0	0	0
8	0	0	0	36	30	53	65	14	0	0	0	0
9	0	0	0	36	32	53	63	18	0	0	0	0
10	0	0	0	30	32	53	70	17	0	0	0	0
11	0	0	0	31	30	50	65	14	0	0	0	0
12	0	0	0	31	34	51	64	13	0	0	0	0
13	0	0	0	23	36	49	63	14	0	0	0	0
14	0	0	0	31	35	50	67	13	0	0	0	0
15	0	0	0	22	32	50	67	14	0	0	0	0
16	0	0	0	31	35	77	66	14	0	0	0	0
17	0	0	0	33	36	73	63	15	0	0	0	0
18	0	0	0	31	37	76	65	15	0	0	0	0
19	0	0	0	32	36	60	62	14	0	0	0	0
20	0	0	0	32	36	56	63	14	0	0	0	0
21	0	0	0	33	37	54	63	0	0	0	0	0
22	0	0	0	31	37	57	63	0	0	0	0	0
23	0	0	0	34	38	55	60	0	0	0	0	0
24	0	0	0	33	36	54	62	0	0	0	0	0
25	0	0	0	31	38	57	66	0	0	0	0	0
26	0	0	0	30	35	47	67	0	0	0	0	0
27	0	0	0	28	37	47	64	0	0	0	0	0
28	0	0	0	29	37	55	62	0	0	0	0	0
29	0	-	0	33	39	58	62	0	0	0	0	0
30	0	-	0	33	39	55	62	0	0	0	0	0
31	0	-	0	-	34	-	61	0	-	0	-	0
TOTAL	0	0	253	930	1,070	1,515	1,982	300	0	0	0	0
MAXIMUM DAY	0	0	32	39	39	77	70	18	0	0	0	0
MINIMUM DAY	0	0	0	20	30	23	60	0	0	0	0	0
MEAN	0	0	8	31	35	51	64	10	0	0	0	0
TOTAL AC.FT.	0	0	502	1,845	2,122	3,004	3,931	596	0	0	0	0
WHOLE YEAR:-	TOTAL,	6,050	MAX.,	77	MIN.,	0	MEAN,	17	TOTAL AC.FT.,	12,000		

Year: 1990

Total Diverted via
Cross Valley Canal Conduit "A"

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	35	112	0	31	32	84	100	138	34	74	14
2	0	51	113	96	44	32	89	102	138	36	50	14
3	0	51	77	96	56	31	86	96	140	59	50	30
4	0	52	76	96	55	32	81	112	141	58	50	30
5	0	51	95	121	45	31	86	110	140	102	53	36
6	0	73	111	100	32	38	87	113	88	118	57	72
7	0	95	109	45	54	59	80	104	92	118	65	71
8	12	90	109	0	87	85	81	95	81	130	50	73
9	16	87	113	27	93	106	83	95	77	114	43	73
10	15	88	133	105	68	99	83	107	77	91	6	72
11	12	86	122	56	86	124	69	105	108	64	6	73
12	12	90	115	51	108	141	67	106	128	87	6	60
13	0	101	124	68	78	143	67	105	116	80	28	44
14	0	99	125	68	98	170	45	115	115	79	35	40
15	0	93	133	98	52	143	38	128	114	98	33	39
16	0	91	135	115	95	100	44	147	114	98	30	40
17	0	49	131	72	45	100	79	147	116	110	30	39
18	0	48	127	67	58	100	77	115	104	114	31	40
19	0	49	119	86	44	50	113	114	108	89	34	39
20	0	48	86	168	44	50	109	114	71	89	12	36
21	0	54	85	72	63	50	109	96	62	88	14	33
22	0	68	71	42	87	85	101	162	59	89	17	32
23	0	80	0	52	93	88	108	170	60	63	15	32
24	0	80	0	32	94	87	108	170	59	79	15	33
25	0	81	0	32	104	92	87	170	60	93	17	32
26	0	82	0	32	81	105	90	157	88	75	14	36
27	0	98	0	32	76	105	92	170	98	84	35	37
28	0	113	42	32	105	96	74	170	81	84	14	36
29	0	-	42	32	112	96	69	161	29	94	13	37
30	0	-	0	32	32	96	75	170	30	49	13	36
31	0	-	24	-	32	-	76	170	-	70	-	36
TOTAL	67	2,083	2,529	1,925	2,152	2,566	2,537	3,996	2,832	2,636	910	1,315
MAXIMUM DAY	16	113	135	168	112	170	113	170	141	130	74	73
MINIMUM DAY	0	0	0	0	31	31	38	95	29	34	6	14
MEAN	2	74	82	64	69	86	82	129	94	85	30	42
TOTAL AC.FT.	133	4,131	5,016	3,818	4,268	5,090	5,032	7,926	5,617	5,228	1,805	2,609
WHOLE YEAR:-	TOTAL,	25,548	MAX.,	170	MIN.,	0	MEAN,	70	TOTAL AC.FT.,	50,673		

**RECAPITULATION OF CITY OF BAKERSFIELD DIVERSIONS FOR
KERN-TULARE AND RAG GULCH WATER DISTRICTS**

Year: 1990

Quantities in acre-feet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
+ Total Basic Contract Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Total Misc. Quantity Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Total Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0

+ via Calloway Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
+ River Transportation Loss/Spreading	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Carrier Canal Recharge	0	0	0	0	0	0	0	0	0	0	0	0	0
+ via Kern Delta Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
+ via Cawelo Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Total Diverted to I.D. #4	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0

+ via Arvin-Edison Turnout	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Canal Transportation Loss	0	0	0	0	0	0	0	0	0	0	0	0	0
= Total Diverted to Arvin-Edison T.O.	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0

+ Via Cawelo Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
- Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
= Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0

Total Flow via the Rosedale Channel at Head (All Sources)
(Diverted from Kern River Channel)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	0	0	0	0	0	0	0	0	0	0	0
					MIN.,		MEAN,			TOTAL AC.FT.,		
					0		0			0		0

ROSEDALE RIO BRAVO WATER STORAGE DISTRICT
 Hydrographic and Accounting Report by City of Bakersfield

Year: 1990

Quantities in acre-feet

1	2	3	4	5		6		7		8		9	10
				(d)		(e)		(f)					
(a) Friant-Kern Inflow	(b) Friant-Kern Delivered	(c) River Canal Transportation Charge on Column 2	Total Kern River Delivered	Basic Contract		Miscellaneous		Mandatory Release		Other			
				No Charge (1st 4000)	acre-feet Sold at \$1.00	acre-feet Sold at \$6.00	acre-feet Sold at \$21.00	Delivered					
January	0	0	0	0	0	0	0	0	0	0	0	0	
February	0	0	0	0	0	0	0	0	0	0	0	0	
March	0	0	0	0	0	0	0	0	0	0	0	0	
April	0	0	0	0	0	0	0	0	0	0	0	0	
May	0	0	0	0	0	0	0	0	0	0	0	0	
June	0	0	0	0	0	0	0	0	0	0	0	0	
July	0	0	0	0	0	0	0	0	0	0	0	0	
August	0	0	0	0	0	0	0	0	0	0	0	0	
September	0	0	0	0	0	0	0	0	0	0	0	0	
October	0	0	0	0	0	0	0	0	0	0	0	0	
November	0	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	
				3.636 = Current Escalator = 3.636		4,500		1989					
				\$0.00 = Totals = \$0.00		7,845		1988		Preceding Four			
				(per 1961 Agreement)		6,000		1987		Years			
						56,590		1986					
						74,935		Five Year Totals					
						14,987		Five Year Averages					
								Current Escalator					
								Current Price per acre-foot					
								Five Year Average Sales					
						\$0.00							
								1991 Payment					

- Notes :
- (a) As charged RRBWSD by U.S.B.R.
 - (b) Column 1 less transportation losses.
 - (c) \$0.10 per acre-foot escalated annually (31.6 = 1-82 base index).
 - (d) \$1.00 per acre-foot escalated annually (31.6 = 1-82 base index) after the first 4,000 AcFt of each successive 10,000 acre-feet delivered.
 - (e) Subject to annual escalation per 1976 agreement (62.8 = 1-82 base index).
 - (f) Delivered during periods of Kern River Mandatory Release when designated by U.S. Army Corps of Engineers.

STATUS OF CONTRACT

per terms of
ROSEDALE RIO BRAVO WATER STORAGE DISTRICT

Service Agreement, dated August 31, 1961.

Quantities in acre-feet

Year	TOTAL DELIVERED	FRIANT-KERN DELIVERED	TOTAL KERN RIVER DELIVERED	(1)	KERN RIVER BASIC CONTRACT OBLIGATION	(2)	END of YEAR
				KERN RIVER BASIC CONTRACT DELIVERED		CARRY FORWARD OVER (UNDER)	CONTRACT BALANCE (3)
							(4) 60,000
1976	0	0	0	0	10,000	(10,000)	50,000
1977	2,199	0	2,199	2,199	10,000	(7,801)	42,199
1978	76,365	4,371	71,994	10,000	10,000	0	42,199
1979	14,568	9,921	4,647	4,647	10,000	(5,353)	36,846
1980	70,790	4,167	66,623	10,000	10,000	0	36,846
1981	773	0	773	773	10,000	(9,227)	27,619
1982	88,374	40,595	47,779	10,000	10,000	0	27,619
1983	134,534	1,440	133,094	10,000	10,000	0	27,619
1984	38,854	0	38,854	10,000	10,000	0	27,619
1985	20,694	0	20,694	0	10,000	(10,000)	17,619
1986	87,761	5,209	82,552	20,000	10,000	10,000	27,619
1987	6,000	0	6,000	0	10,000	(10,000)	17,619
1988	7,845	0	7,845	0	10,000	(10,000)	7,619
1989	4,500	0	4,500	0	10,000	(10,000)	(2,381)
1990	0	0	0	0	10,000	(10,000)	(12,381)

- (1) Not less than 5,000 acre-feet for any consecutive 5-Year period.
- (2) Limit 30,000 acre-feet during any One year.
- (3) Gross limit of 60,000 acre-feet.
- (4) Pursuant to Article 3.2 of 1976 Agreement No. 76-80; City of Bakersfield carryover credit was 60,000 acre-feet as of January 1, 1976.

CITY OF BAKERSFIELD
STATUS OF MISCELLANEOUS WATER DELIVERIES
TO ROSEDALE RIO BRAVO WATER STORAGE DISTRICT

Year: 1990

Pursuant to June 6, 1976 Agreement No. 76-80

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
City Entitlement + or - Release	1,230	46	3,417	10,386	12,871	6,927	0	0	146	1,069	1,148	79	37,319
Lake Ming	16	16	44	60	77	105	127	121	91	65	42	26	790
North Kern Water Storage District	0	0	0	3,737	2,903	10,000	3,360	0	0	0	0	0	20,000
Cawelo Water District	0	0	1,189	1,211	1,892	1,588	1,668	2,747	2,359	2,360	2,065	1,563	18,642
Kern-Tulare Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
Rag Gulch Water District	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale Rio Bravo WSD	0	0	0	0	0	0	0	0	0	0	0	0	0
Kern River Canal & Irrigating Co.	50	528	1,261	1,432	1,581	1,440	1,944	1,688	395	508	339	0	11,166
First Point Passing Second Point	0	0	0	0	0	0	0	0	0	0	0	0	0
Isabella Reservoir Loss	24	20	32	132	517	547	407	280	140	85	41	23	2,248
River Transportation Loss	1	0	65	(1)	1	(3)	(1)	(1)	0	0	(1)	8	68
Total Basic Commitments	91	564	2,591	6,571	6,971	13,677	7,505	4,835	2,985	3,018	2,486	1,620	52,914

Total City Miscellaneous Water.....	0
Rosedale Rio Bravo WSD 1/3 Share.....	0

Misc. Water Delivered to RRBWSD	0	0	0	0	0	0	0	0	0	0	0	0	0
Del. under Art. 11, Sec. 2.1 (X)(7)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Misc. Delivered to RRBWSD	0	0	0	0	0	0	0	0	0	0	0	0	0

Over (Under) City Miscellaneous Water Obligation.....	0
Prior Year Miscellaneous Water Delivery Balance.....	(14,874)
Cumulative Miscellaneous Water Delivery Balance.....	(14,874)

STATUS OF CONTRACT

ROSEDALE RIO BRAVO WATER STORAGE DISTRICT

**Cumulative Miscellaneous Water Balance
Pursuant to June 6, 1976 Agreement No. 76-80**

Quantities in acre-feet

Year	(A) TOTAL CITY MISCELLANEOUS WATER	(B) RRBWS 1/3 SHARE OF MISC.	(C) MISC. WATER DELIVERED TO RRBWS (1)	(D) OVER (UNDER) 1/3 SHARE	(E) END of YEAR CUMULATIVE MISC. WATER BALANCE
					0
1977	0	0	0	0	0
1978	75,473	25,158	29,405	4,247	4,247
1979	34,885	11,628	0	(11,628)	(7,381)
1980	81,572	27,191	28,246	1,055	(6,326)
1981	1,634	545	0	(545)	(6,871)
1982	184,335	61,445	37,779	(23,666)	(30,537)
1983	64,686	21,562	12,292	(9,270)	(39,807)
1984	56,816	18,939	20,856	1,917	(37,890)
1985	50,537	16,846	20,694	3,848	(34,042)
1986	161,307	53,769	56,590	2,821	(31,221)
1987	0	0	6,000	6,000	(25,221)
1988	2,157	719	7,845	7,126	(18,095)
1989	3,838	1,279	4,500	3,221	(14,874)
1990	0	0	0	0	(14,874)

Notes:

- (1) Includes water delivered pursuant to Article II, Section 2.1 (i) (7) of Agreement No. 76-80, "Failure to Accept Water".
- Column (B) = Column (A) x 1/3.
- Column (D) = Column (C) minus Column (B).

**KERN RIVER CANAL & IRRIGATING COMPANY
CITY OF BAKERSFIELD**

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Kern River Entitlement	0	0	0	0	0	0	0	0	0	0	0	0	0
Release	0	0	0	0	0	0	0	0	0	0	0	0	0
ENTITLEMENT + OR - RELEASE	=	0	0	0	0	0	0	0	0	0	0	0	0
Oilfield Discharge	0	61	0	0	0	303	361	361	317	350	180	22	1,955
Other	50	768	1,940	1,432	1,581	1,440	1,944	1,688	395	508	339	0	12,085
Into Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
From Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
To NKWSD in Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
DIVERTED AT HEAD	=	50	1,940	1,432	1,581	1,743	2,305	2,049	712	858	519	22	14,040
Irrigation Deliveries	40	740	1,715	1,264	1,439	1,566	2,077	1,832	582	765	466	13	12,499
NKWSD at Seventh Standard Ln.	0	0	0	0	0	0	0	0	0	0	0	0	0
Spreading Deliveries	0	0	0	0	0	0	0	0	0	0	0	0	0
Canal Loss	10	89	225	168	142	177	228	217	130	93	53	9	1,541
Irrigation Delivery Percentage	=	80%	89%	88%	91%	90%	90%	89%	82%	89%	90%	59%	89%

Into Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
Isabella Evaporation Loss	0	0	0	0	0	0	0	0	0	0	0	0	0
From Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer in Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
End of Month Isabella Storage	0	0	0	0	0	0	0	0	0	0	0	0	0

SOUTH FORK DIVERSION RIGHT SUMMARY

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Kern River Entitlement +	0	12	0	0	8	2	0	0	0	0	0	0	22
Release + or -	27	0	0	40	10	0	0	0	0	0	0	0	77
Entitlement + or - Release =	27	12	0	40	18	2	0	0	0	0	0	0	99
Into Isabella Storage -	27	12	0	0	0	0	0	0	0	0	0	0	39
From Isabella Storage +	0	0	91	0	18	224	163	103	13	0	0	0	612
Other + or -	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Deliveries =	0	0	91	40	36	226	163	103	13	0	0	0	672
Old South Fork	0	0	0	0	0	0	0	0	0	0	0	0	0
Panama Ranch	0	0	91	40	36	226	163	103	13	0	0	0	672
Into Isabella Storage	27	12	0	0	0	0	0	0	0	0	0	0	39
From Isabella Storage	0	0	91	0	18	224	163	103	13	0	0	0	612
Transfer in Storage	0	0	0	0	0	0	0	0	0	0	0	0	0
End of Month Isabella Storage	600	612	521	521	503	279	116	13	0	0	0	0	0

CITY OF BAKERSFIELD
 RECAPITULATION OF WATER SPREADING BY SOURCE
 2,800 ACRE RECHARGE FACILITY

Quantities in acre-feet

Calendar Year	BANKING					OVERDRAFT CORRECTION					Grand Total
	Kern River	Friant-Kern	State Water Project	Other	Totals	Kern River	Friant-Kern	State Water Project	Other	Totals	
1977	0	0	0	0	0	0	0	0	0	0	0
1978	134,971	0	0	0	134,971	0	0	0	0	0	134,971
1979	4,505	9,913	0	0	14,418	6,089	888	52,099	0	59,076	73,494
1980	113,379	0	8,029	0	121,408	0	0	0	0	0	121,408
1981	2,603	0	49,377	0	51,980	0	0	7,141	0	7,141	59,121
1982	50,242	18,057	8,345	0	76,644	2,649	6,835	12,748	0	22,232	98,876
1983	110,970	2,239	171	0	113,380	0	0	0	0	0	113,380
1984	14,449	1,609	0	0	16,058	0	0	0	0	0	16,058
1985	331	71	15,055	0	15,457	0	0	0	0	0	15,457
1986	93,311	36,792	22,766	262	153,131	0	0	0	0	0	153,131
1987	77	0	7,379	32	7,488	0	0	0	0	0	7,488
1988	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0
TOTALS	524,838	68,681	111,122	294	704,935	8,738	7,723	71,988	0	88,449	793,384

CITY OF BAKERSFIELD
RECAPITULATION OF WATER SPREADING BY ENTITY
2,800 ACRE RECHARGE FACILITY
(Does not reflect water extracted or sold)

Quantities in acre-feet

BANKING ENTITIES

Calendar Year	City of Bakersfield	Olcese W.D.	Buena Vista W.S.D.	K.C.W.A.	Total Banking	Overdraft Correction	Grand Total
1977	0	0	0	0	0	0	0
1978	104,587	24,328	6,056	0	134,971	0	134,971
1979	4,505	0	9,913	0	14,418	59,076	73,494
1980	68,804	52,604	0	0	121,408	0	121,408
1981	2,603	4,465	0	44,912	51,980	7,141	59,121
1982	37,913	14,266	24,465	0	76,644	22,232	98,876
1983	113,380	0	0	0	113,380	0	113,380
1984	16,058	0	0	0	16,058	0	16,058
1985	402	0	0	15,055	15,457	0	15,457
1986	64,168	56,197	10,000	22,766	153,131	0	153,131
1987	109	0	0	7,379	7,488	0	7,488
1988	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0
TOTALS	412,529	151,860	50,434	90,112	704,935	88,449	793,384

City of Bakersfield
 2800 Acre Well Water Production
 (Kern River Banked Supply --- Conveyed via Kern River Canal)
 Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	62	26	35	0	0	0	0
2	0	0	0	0	0	62	26	33	0	0	0	0
3	0	0	0	0	0	59	26	34	0	0	0	0
4	0	0	0	0	0	57	26	35	0	0	0	0
5	0	0	0	0	0	61	26	35	0	0	0	0
6	0	0	0	0	0	62	26	33	0	0	0	0
7	0	0	0	0	0	62	26	42	0	0	0	0
8	0	0	0	0	0	62	26	52	0	0	0	0
9	0	0	0	0	0	35	25	52	0	0	0	0
10	0	0	0	0	0	33	26	52	0	0	0	0
11	0	0	0	0	0	13	26	52	0	0	0	0
12	0	0	0	0	0	13	26	52	0	0	0	0
13	0	0	0	0	0	13	23	52	0	0	0	0
14	0	0	0	0	0	13	21	52	0	0	0	0
15	0	0	0	0	0	13	22	52	0	0	0	0
16	0	0	0	0	0	31	24	52	0	0	0	0
17	0	0	0	0	0	31	24	52	0	0	0	0
18	0	0	0	0	0	31	22	52	0	0	0	0
19	0	0	0	0	0	31	22	52	0	0	0	0
20	0	0	0	0	0	31	22	49	0	0	0	0
21	0	0	0	0	0	32	22	46	0	0	0	0
22	0	0	0	0	37	31	22	30	0	0	0	0
23	0	0	0	0	66	31	23	0	0	0	0	0
24	0	0	0	0	64	31	22	0	0	0	0	0
25	0	0	0	0	61	30	23	0	0	0	0	0
26	0	0	0	0	61	31	22	0	0	0	0	0
27	0	0	0	0	62	31	22	0	0	0	0	0
28	0	0	0	0	63	31	22	0	0	0	0	0
29	0	-	0	0	63	30	23	0	0	0	0	0
30	0	-	0	0	63	31	22	0	0	0	0	0
31	0	-	0	-	63	-	23	0	-	0	-	0
TOTAL	0	0	0	0	603	1,084	737	996	0	0	0	0
MAXIMUM DAY	0	0	0	0	66	62	26	52	0	0	0	0
MINIMUM DAY	0	0	0	0	0	13	21	0	0	0	0	0
MEAN	0	0	0	0	19	36	24	32	0	0	0	0
TOTAL AC.FT.	0	0	0	0	1,196	2,151	1,462	1,975	0	0	0	0
WHOLE YEAR:-	TOTAL,	3,420	MAX.,	66	MIN.,	0	MEAN,	9	TOTAL AC.FT.,	6,784		

City of Bakersfield
 2800 Acre Well Water Production
 (Kern River Banked Supply --- Conveyed via Cross Valley Canal)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	32	31	19	30	54	30	30	30
2	0	0	0	0	32	31	22	27	54	30	30	30
3	0	0	0	0	32	28	24	35	52	30	30	29
4	0	0	0	0	31	25	24	40	52	29	30	30
5	0	0	0	0	32	25	24	46	53	30	30	30
6	0	0	0	0	32	28	25	46	54	30	30	30
7	0	0	0	0	32	31	28	43	52	30	30	29
8	0	0	0	0	30	28	30	47	53	30	30	30
9	0	0	0	0	25	29	30	48	53	30	30	30
10	0	0	0	0	28	28	30	50	53	30	29	30
11	0	0	0	22	31	28	28	50	54	30	30	30
12	0	0	0	28	31	30	28	47	26	30	30	29
13	0	0	0	31	31	31	26	35	16	30	29	30
14	0	0	0	29	28	31	22	38	30	30	30	30
15	0	0	0	25	28	30	25	45	30	30	30	30
16	0	0	0	29	31	30	30	53	30	30	30	29
17	0	0	0	31	31	28	30	50	30	30	30	30
18	0	0	0	32	32	28	27	31	30	30	30	30
19	0	0	0	32	32	30	25	36	29	30	30	30
20	0	0	0	32	31	27	24	47	30	30	30	29
21	0	0	0	32	32	22	27	50	30	30	29	30
22	0	0	0	32	31	23	26	52	30	30	30	30
23	0	0	0	32	31	23	27	54	30	30	30	30
24	0	0	0	32	31	20	30	55	30	30	30	30
25	0	0	0	32	31	21	30	52	30	30	30	30
26	0	0	0	32	31	24	30	48	30	29	29	29
27	0	0	0	32	31	25	30	47	30	30	30	14
28	0	0	0	32	31	24	30	46	30	30	30	0
29	0	-	0	32	31	22	30	38	29	30	30	0
30	0	-	0	32	31	20	30	46	30	30	29	0
31	0	-	0	-	31	-	30	53	-	30	-	0
TOTAL	0	0	0	611	954	801	841	1,385	1,134	928	895	788
MAXIMUM DAY	0	0	0	32	32	31	30	55	54	30	30	30
MINIMUM DAY	0	0	0	0	25	20	19	27	16	29	29	0
MEAN	0	0	0	20	31	27	27	45	38	30	30	25
TOTAL AC.FT.	0	0	0	1,211	1,892	1,588	1,668	2,747	2,250	1,840	1,775	1,563
WHOLE YEAR:-	TOTAL,	8,337	MAX.,	55	MIN.,	0	MEAN,	23	TOTAL AC.FT.,	16,534		

Olcese Water District
 2800 Acre Well Water Production
 (Kern River Banked Supply -- Conveyed via Kern River Canal)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	10	18	0	0	0	0
2	0	0	0	0	0	0	11	16	0	0	0	0
3	0	0	0	0	0	0	10	16	0	0	0	0
4	0	0	0	0	0	0	11	18	0	0	0	0
5	0	0	0	0	0	0	10	17	0	0	0	0
6	0	0	0	0	0	0	10	16	0	0	0	0
7	0	0	0	0	0	0	10	7	0	0	0	0
8	0	0	0	0	0	0	10	0	0	0	0	0
9	0	0	0	0	0	2	10	0	0	0	0	0
10	0	0	0	0	0	5	10	0	0	0	0	0
11	0	0	0	0	0	24	10	0	0	0	0	0
12	0	0	0	0	0	24	10	0	0	0	0	0
13	0	0	0	0	0	24	8	0	0	0	0	0
14	0	0	0	0	0	24	7	0	0	0	0	0
15	0	0	0	0	0	24	8	0	0	0	0	0
16	0	0	0	0	0	6	9	0	0	0	0	0
17	0	0	0	0	0	6	8	0	0	0	0	0
18	0	0	0	0	0	6	7	0	0	0	0	0
19	0	0	0	0	0	6	8	0	0	0	0	0
20	0	0	0	0	0	6	7	0	0	0	0	0
21	0	0	0	0	0	5	8	0	0	0	0	0
22	0	0	0	0	0	6	8	0	0	0	0	0
23	0	0	0	0	0	6	7	0	0	0	0	0
24	0	0	0	0	0	6	8	0	0	0	0	0
25	0	0	0	0	0	6	7	0	0	0	0	0
26	0	0	0	0	0	6	8	0	0	0	0	0
27	0	0	0	0	0	5	31	0	0	0	0	0
28	0	0	0	0	0	6	31	0	0	0	0	0
29	0	-	0	0	0	6	30	0	0	0	0	0
30	0	-	0	0	0	6	31	0	0	0	0	0
31	0	-	0	-	0	-	30	0	-	0	-	0
TOTAL	0	0	0	0	0	215	383	108	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	24	31	18	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	7	0	0	0	0	0
MEAN	0	0	0	0	0	7	12	3	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	426	760	214	0	0	0	0
WHOLE YEAR:--	TOTAL,	706	MAX.,	31	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,400		

Buena Vista Water Storage District
 2800 Acre Well Water Production
 (Kern River Banked Supply --- Conveyed via Kern River Canal)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	24	0	0	0	0	0
2	0	0	0	0	0	0	23	0	0	0	0	0
3	0	0	0	0	0	0	24	0	0	0	0	0
4	0	0	0	0	0	0	23	0	0	0	0	0
5	0	0	0	0	0	0	24	0	0	0	0	0
6	0	0	0	0	0	0	23	0	0	0	0	0
7	0	0	0	0	0	0	23	0	0	0	0	0
8	0	0	0	0	0	0	23	0	0	0	0	0
9	0	0	0	0	0	25	24	0	0	0	0	0
10	0	0	0	0	0	24	23	0	0	0	0	0
11	0	0	0	0	0	25	23	0	0	0	0	0
12	0	0	0	0	0	24	23	0	0	0	0	0
13	0	0	0	0	0	24	23	0	0	0	0	0
14	0	0	0	0	0	24	23	0	0	0	0	0
15	0	0	0	0	0	24	23	0	0	0	0	0
16	0	0	0	0	0	24	23	0	0	0	0	0
17	0	0	0	0	0	24	23	0	0	0	0	0
18	0	0	0	0	0	24	24	0	0	0	0	0
19	0	0	0	0	0	24	23	0	0	0	0	0
20	0	0	0	0	0	24	24	0	0	0	0	0
21	0	0	0	0	0	24	23	0	0	0	0	0
22	0	0	0	0	0	24	23	0	0	0	0	0
23	0	0	0	0	0	24	23	0	0	0	0	0
24	0	0	0	0	0	24	23	0	0	0	0	0
25	0	0	0	0	0	24	23	0	0	0	0	0
26	0	0	0	0	0	23	23	0	0	0	0	0
27	0	0	0	0	0	24	0	0	0	0	0	0
28	0	0	0	0	0	23	0	0	0	0	0	0
29	0	-	0	0	0	24	0	0	0	0	0	0
30	0	-	0	0	0	23	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	527	604	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	25	24	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	18	19	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	1,045	1,197	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	1,131	MAX.,	25	MIN.,	0	MEAN,	3	TOTAL AC.FT.,	2,242		

CITY OF BAKERSFIELD
RECAPITULATION OF BANKING, EXTRACTION AND STORAGE
2,800 ACRE RECHARGE FACILITY

UNIT: CITY OF BAKERSFIELD

Quantities in acre-feet

Calendar Year	BANKING					EXTRACTION					GROUNDWATER STORAGE (End of Year)							
	Kern	F-Kern	S.W.P.	Other Source	Via Transfer	Total	Kern	F-Kern	S.W.P.	Other Source	Via Transfer	Total	Kern	F-Kern	S.W.P.	Other Source	Total	
1977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	104,587	0	0	0	0	104,587	0	0	0	0	0	0	104,587	0	0	0	0	104,587
1979	4,505	0	0	0	0	4,505	0	0	0	0	0	0	109,092	0	0	0	0	109,092
1980	68,804	0	0	0	0	68,804	0	0	0	13,772	13,772	13,772	164,124	0	0	0	0	164,124
1981	2,603	0	0	0	0	2,603	0	0	0	100,837	100,837	100,837	65,890	0	0	0	0	65,890
1982	35,377	2,536	0	0	0	37,913	0	0	0	0	0	0	101,267	2,536	0	0	0	103,803
1983	110,970	2,239	171	0	0	113,380	0	0	0	0	0	0	212,237	4,775	171	0	0	217,183
1984	14,449	1,609	0	0	0	16,058	472	0	0	0	472	472	226,214	6,384	171	0	0	232,769
1985	331	71	0	0	0	402	1,615	0	0	0	1,615	1,615	224,930	6,455	171	0	0	231,556
1986	27,114	36,792	0	262	0	64,168	0	0	0	0	0	0	252,044	43,247	171	262	295,724	
1987	77	0	0	32	0	109	656	0	0	0	656	656	251,465	43,247	171	294	295,177	
1988	0	0	0	0	0	0	1,932	0	0	3,500	5,432	5,432	246,033	43,247	171	294	289,745	
1989	0	0	0	0	0	0	2,565	0	0	0	2,565	2,565	243,468	43,247	171	0	286,886	
1990	0	0	0	0	0	0	23,318	0	0	0	23,318	23,318	220,150	43,247	171	0	263,568	
TOTALS	368,817	43,247	171	294	0	412,529	30,558	0	0	294	118,109	148,961	220,150	43,247	171	0	0	263,568

CITY OF BAKERSFIELD
 RECAPITULATION OF BANKING, EXTRACTION AND STORAGE
 2,800 ACRE RECHARGE FACILITY

UNIT: OLCESE WATER DISTRICT

Quantities in acre-feet

Calendar Year	BANKING				EXTRACTION				GROUNDWATER STORAGE (End of Year)						
	Kern	F-Kern	S.W.P.	Other Via Transfer	Total	Kern	F-Kern	S.W.P.	Other Via Transfer	Total	Kern	F-Kern	S.W.P.	Other	Total
1977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	24,328	0	0	0	24,328	0	0	0	0	0	24,328	0	0	0	24,328
1979	0	0	0	0	0	0	0	0	0	0	24,328	0	0	0	24,328
1980	44,575	0	8,029	0	52,604	0	0	0	0	0	68,903	0	8,029	0	76,932
1981	0	0	4,465	0	4,465	0	0	0	0	0	68,903	0	12,494	0	81,397
1982	9,432	0	4,834	0	14,266	0	0	0	0	0	78,335	0	17,328	0	95,663
1983	0	0	0	0	0	0	0	0	0	0	78,335	0	17,328	0	95,663
1984	0	0	0	0	0	0	0	0	0	0	78,335	0	17,328	0	95,663
1985	0	0	0	0	0	0	0	0	0	0	78,335	0	17,328	0	95,663
1986	56,197	0	0	0	56,197	0	0	0	0	0	134,532	0	17,328	0	151,860
1987	0	0	0	5,344	5,344	0	0	0	0	0	139,876	0	17,328	0	157,204
1988	0	0	0	3,214	3,214	0	0	0	0	0	143,090	0	17,328	0	160,418
1989	0	0	0	0	0	873	0	0	0	873	142,217	0	17,328	0	159,545
1990	0	0	0	0	0	1,400	0	0	98,005	99,405	42,812	0	17,328	0	60,140
TOTALS	134,532	0	17,328	0	8,558	160,418	2,273	0	0	98,005	100,278	0	0	0	100,278

CITY OF BAKERSFIELD
 RECAPITULATION OF BANKING, EXTRACTION AND STORAGE
 2,800 ACRE RECHARGE FACILITY

UNIT: BUENA VISTA WATER STORAGE DISTRICT

Quantities in acre-feet

Calendar Year	BANKING				EXTRACTION				GROUNDWATER STORAGE (End of Year)						
	Kern	F-Kern	S.W.P.	Other Via Source Transfer	Total	Kern	F-Kern	S.W.P.	Other Via Source Transfer	Total	Kern	F-Kern	S.W.P.	Other	Total
1977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	6,056	0	0	0	6,056	0	0	0	0	0	6,056	0	0	0	6,056
1979	0	9,913	0	0	9,913	0	0	0	0	0	6,056	9,913	0	0	15,969
1980	0	0	0	0	0	0	0	0	0	0	6,056	9,913	0	0	15,969
1981	0	0	0	0	0	0	0	0	0	0	6,056	9,913	0	0	15,969
1982	5,433	15,521	3,511	0	24,465	0	0	0	0	0	11,489	25,434	3,511	0	40,434
1983	0	0	0	0	0	0	0	0	0	0	11,489	25,434	3,511	0	40,434
1984	0	0	0	0	0	0	0	0	0	0	11,489	25,434	3,511	0	40,434
1985	0	0	0	0	0	0	0	0	0	0	11,489	25,434	3,511	0	40,434
1986	10,000	0	0	0	10,000	0	0	0	0	0	21,489	25,434	3,511	0	50,434
1987	0	0	0	0	0	656	0	0	5,344	6,000	15,489	25,434	3,511	0	44,434
1988	0	0	0	0	0	1,786	0	0	3,214	5,000	10,489	25,434	3,511	0	39,434
1989	0	0	0	0	0	3,138	0	0	0	3,138	7,351	25,434	3,511	0	36,296
1990	0	0	0	0	0	2,242	0	0	0	2,242	5,109	25,434	3,511	0	34,054
TOTALS	21,489	25,434	3,511	0	50,434	7,822	0	0	8,558	16,380					

CITY OF BAKERSFIELD
 RECAPITULATION OF BANKING, EXTRACTION AND STORAGE
 2,800 ACRE RECHARGE FACILITY

UNIT: KERN COUNTY WATER AGENCY

Quantities in acre-feet

Calendar Year	BANKING				EXTRACTION				GROUNDWATER STORAGE (End of Year)						
	Kern	F-Kern	S.W.P.	Other Via Source Transfer	Total	Kern	F-Kern	S.W.P.	Other Via Source Transfer	Total	Kern	F-Kern	S.W.P.	Other Source	Total
1977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	44,912	0	44,912	0	0	0	0	0	0	0	44,912	0	44,912
1982	0	0	0	0	0	0	0	0	0	0	0	0	44,912	0	44,912
1983	0	0	0	0	0	0	0	0	0	0	0	0	44,912	0	44,912
1984	0	0	0	0	0	0	0	0	0	0	0	0	44,912	0	44,912
1985	0	0	15,055	0	15,055	0	0	0	0	0	0	0	59,967	0	59,967
1986	0	0	22,766	0	22,766	0	0	0	0	0	0	0	82,733	0	82,733
1987	0	0	7,379	0	7,379	0	0	0	0	0	0	0	90,112	0	90,112
1988	0	0	0	3,500	3,500	0	0	0	0	0	3,500	0	90,112	0	93,612
1989	0	0	0	0	0	0	0	1,086	0	1,086	3,500	0	89,026	0	92,526
1990	0	0	0	0	0	0	0	0	0	0	3,500	0	89,026	0	92,526
TOTALS	0	0	90,112	0	93,612	0	0	1,086	0	1,086	0	0	0	0	1,086

NORTH KERN WATER STORAGE DISTRICT

NORTH KERN WATER STORAGE DISTRICT

Year: 1990

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
NKWSD River Entitlement	0	0	0	99	442	251	0	0	0	0	0	0	792
Release	+ 3,599	0	426	990	0	0	0	0	0	0	192	0	5,207
ENTITLEMENT + OR - RELEASE	= 3,599	0	426	1,089	442	251	0	0	0	0	192	0	5,999
From KRC & Irr. Company	0	0	0	0	0	0	0	0	0	0	0	0	0
From City of Bakersfield	+ 288	0	89	3,737	2,903	10,534	4,023	0	0	0	268	71	21,913
From Buena Vista WSD	+ 0	0	0	20	8	226	0	0	0	0	0	0	254
From Kern Delta WD	+ 0	0	0	1,061	821	673	400	353	153	428	585	0	4,474
From Isabella Reservoir Storage	+ 478	614	4,402	0	0	3,190	11,209	4,939	0	0	0	0	24,832
To City of Bakersfield	- 1,552	0	0	0	0	0	0	0	0	0	0	0	1,552
To Cawelo Water District	- 0	0	121	1,015	76	0	0	0	0	0	0	0	1,212
To La Hacienda, Inc.	- 21	0	0	0	0	0	0	0	0	0	0	0	21
Into Isabella Reservoir Storage	- 709	0	0	52	246	7,946	3,078	0	0	0	0	0	12,031
Transfer in Storage	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Other	+ 0	0	0	0	0	0	77	0	0	0	0	0	77
TOTAL DIVERTED FROM RIVER	= 2,083	614	4,796	4,840	3,852	6,928	12,631	5,292	153	428	1,045	71	42,733
Loss to Seventh Standard Line	- 112	56	61	60	61	60	61	61	64	61	84	112	853
Oilfield Discharge	+ 452	225	510	480	492	474	498	500	478	494	466	268	5,337
Oilfield Mutual Well Production	+ 0	0	0	0	0	164	383	392	348	264	79	0	1,630
Private Well Production	+ 0	0	0	0	184	748	1,551	1,190	543	500	136	0	4,852
NKWSD Well Production	+ 659	6,826	9,797	8,994	9,573	9,444	8,687	7,985	6,330	7,141	1,529	290	77,255
Poso Creek Natural Flow	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Semi-Tropic WSD	- 0	0	0	0	0	0	0	0	0	0	0	0	0
Other	- 0	1,418	585	722	1,078	1,186	0	1,048	1,287	1,586	147	0	9,057
TOTAL DISTRICT SUPPLY	= 3,082	9,027	15,627	14,976	15,118	18,884	23,699	16,346	9,075	10,352	3,318	517	140,011
Class 1 Irrigation Deliveries	+ 1,849	7,565	13,107	12,577	13,157	17,698	21,801	14,509	6,980	7,678	2,088	492	119,501
Class 2 Irrigation Deliveries	+ 368	207	566	752	265	254	654	502	81	16	0	0	3,665
TOTAL IRRIGATION USE	= 2,217	7,772	13,673	13,329	13,422	17,952	22,455	15,011	7,061	7,694	2,088	492	123,166
District Spreading Ponds (Kern)	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
District Spreading Ponds (Other)	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Poso Creek Spreading (Kern)	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Poso Creek Spreading (Other)	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DISTRICT SPREADING	= 0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DISTRICT USE	2,217	7,772	13,673	13,329	13,422	17,952	22,455	15,011	7,061	7,694	2,088	492	123,166
Total NKWSD Canal Loss	865	1,255	1,954	1,647	1,696	932	1,234	1,335	2,014	2,658	1,230	25	16,845
Into Reservoir Storage	709	0	0	52	246	7,946	3,078	0	0	0	0	0	12,031
Reservoir Evaporation Loss	385	382	662	871	1,087	1,694	1,864	1,297	1,105	891	448	266	10,952
From Reservoir Storage	478	614	4,402	0	0	3,190	11,209	4,939	0	0	0	0	24,832
Transfer in Storage	0	0	0	0	0	7,854	3,360	0	0	0	0	0	11,214
End of Month Reservoir Storage	30,163	29,167	24,103	23,284	22,443	25,505	15,510	9,274	8,169	7,278	6,830	6,564	

Total Flow via the Beardsley Canal
(At Head of Lined Section)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	113	9	40	198	110	147	252	250	13	46	49	19
2	126	10	43	144	95	167	277	228	13	60	52	17
3	101	10	47	145	93	173	277	181	12	18	62	0
4	83	10	57	134	100	169	274	168	12	19	56	0
5	70	10	58	85	119	166	282	155	11	19	29	0
6	57	6	66	87	132	178	291	175	10	17	9	0
7	47	6	68	146	133	180	264	214	12	16	12	0
8	16	7	63	198	121	178	266	228	7	14	15	0
9	17	8	64	196	135	169	285	208	4	14	19	0
10	45	9	66	204	169	164	266	205	9	19	47	0
11	58	9	88	189	154	161	263	156	2	35	52	0
12	55	9	100	179	127	157	276	141	0	19	64	0
13	47	9	92	116	162	159	276	162	0	8	57	0
14	51	6	75	141	148	154	295	165	0	7	65	0
15	43	7	79	148	129	168	322	163	0	9	71	0
16	45	8	81	127	111	200	336	146	7	9	19	0
17	46	21	93	130	130	189	353	120	6	11	20	0
18	41	27	88	127	111	210	391	107	11	16	19	0
19	32	27	92	115	111	229	386	119	12	19	19	0
20	24	29	108	104	113	213	380	129	11	30	20	0
21	24	45	137	149	108	215	341	107	9	28	19	0
22	20	39	171	170	111	227	314	48	8	36	19	0
23	19	15	253	137	116	253	302	54	9	57	20	0
24	19	35	279	171	117	250	299	41	8	47	19	0
25	35	42	281	192	119	261	290	32	0	31	19	0
26	44	60	258	179	129	237	290	26	0	36	20	0
27	45	56	218	178	131	210	325	30	13	19	19	0
28	44	47	220	175	135	213	331	35	18	19	20	0
29	38	-	228	182	138	211	301	23	49	19	19	0
30	37	-	231	158	138	220	314	40	65	18	20	0
31	19	-	223	-	124	-	291	36	-	19	-	0
TOTAL	1,461	576	3,967	4,604	3,869	5,828	9,410	3,892	331	734	950	36
MAXIMUM DAY	126	60	281	204	169	261	391	250	65	60	71	19
MINIMUM DAY	16	6	40	85	93	147	252	23	0	7	9	0
MEAN	47	21	128	153	125	194	304	126	11	24	32	1
TOTAL AC.FT.	2,898	1,142	7,869	9,132	7,674	11,560	18,665	7,720	657	1,456	1,884	71
WHOLE YEAR:-	TOTAL,	35,658	MAX.,	391	MIN.,	0	MEAN,	98	TOTAL AC.FT.,	70,728		

**NORTH KERN WATER STORAGE DISTRICT
BEARDSLEY CANAL DIVERSION SUMMARY**

Quantities in acre-feet

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
+ Kern River	2,898	1,142	7,869	9,132	7,631	11,372	18,506	7,576	657	1,456	1,884	71	70,194
+ Rio Bravo Well Water	0	0	0	0	43	188	159	144	0	0	0	0	534
+ Oilfield Discharge	721	356	807	764	779	959	1,519	1,579	1,348	1,532	1,009	380	11,753
+ C.V.C. Conduit "A"	133	4,131	5,016	3,818	4,268	5,090	5,032	7,926	5,617	5,228	1,805	2,609	50,673
+ TOTAL BEARDSLEY CANAL SUPPLY =	3,752	5,629	13,692	13,714	12,721	17,609	25,216	17,225	7,622	8,216	4,698	3,060	133,154
+ KRC & Irr. Co. # 1 Lateral	0	0	0	0	0	0	0	0	0	0	0	0	0
+ KRC & Irr. Co. # 2 Lateral	0	0	439	338	301	176	287	385	10	0	0	0	1,936
+ KRC & Irr. Co. # 4 Lateral	0	276	531	136	186	607	667	543	60	71	25	0	3,102
+ KRC & Irr. Co. # 5 Lateral	0	236	664	457	651	492	806	906	557	202	220	0	5,191
+ KRC & Irr. Co. Bidart Boosters	40	261	243	438	375	403	479	148	28	524	298	12	3,189
+ KRC & Irr. Co. via 1-0-30	0	0	0	0	0	0	0	0	0	0	0	0	0
+ KRC & Irr. Co. via 1-0-80	0	0	2	3	7	5	5	6	1	0	0	0	29
+ Lined Section Loss	10	56	61	60	61	60	61	61	56	61	36	10	593
- TOTAL KRC & IRR. CO. DIVERTED =	50	829	1,940	1,432	1,581	1,743	2,305	2,049	712	858	519	22	14,040
- Kern River Supply	50	528	1,261	1,432	1,581	1,440	1,944	1,688	395	508	339	0	11,166
- Oilfield Discharge Supply	0	61	0	0	0	303	361	361	317	350	180	22	1,955
= C.V.C. Conduit "A" Supply	0	240	679	0	0	0	0	0	0	0	0	0	919
+ Cawelo WD via Pump Station "B"	1,079	2,414	5,516	5,855	5,373	6,585	9,068	7,940	4,820	4,419	2,400	2,491	57,960
+ Cawelo WD Lerdo Gate Deliveries	16	48	224	262	226	558	553	251	63	320	36	81	2,638
+ Lined Section Loss	61	56	61	60	61	60	61	61	60	61	60	61	723
+ Lerdo Canal Loss	11	25	60	63	58	75	100	84	49	50	25	66	666
- TOTAL CAWELO WD DIVERTED =	1,167	2,543	5,861	6,240	5,718	7,278	9,782	8,336	4,992	4,850	2,521	2,699	61,987
- Kern River Supply	765	0	1,812	2,860	2,198	3,004	3,931	596	109	520	500	0	16,295
- Rio Bravo Well Water	0	0	0	0	43	188	159	144	0	0	0	0	534
- Oilfield Discharge Supply	269	70	297	284	287	182	660	718	553	688	363	90	4,461
= C.V.C. Conduit "A" Supply	133	2,473	3,752	3,096	3,190	3,904	5,032	6,878	4,330	3,642	1,658	2,609	40,697
- Rosedale Ranch ID Diverted	0	0	0	0	0	0	0	0	0	0	0	0	0
- Lined Section Loss: NKWSD	112	56	61	60	61	60	61	61	64	61	84	112	853
= NKWSD FROM LERDO CANAL	2,423	2,201	5,830	5,982	5,361	8,528	13,068	6,779	1,854	2,447	1,574	227	56,274
- Kern River Supply	2,083	614	4,796	4,840	3,852	6,928	12,631	5,292	153	428	1,045	71	42,733
- Oilfield Discharge Supply	452	225	510	480	492	474	498	500	478	494	466	268	5,337
= C.V.C. Conduit "A" Supply	0	1,418	585	722	1,078	1,186	0	1,048	1,287	1,586	147	0	9,057

Year: 1990

Lerdo Canal at Seventh Standard Line (Total Flow)

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	120	36	121	192	137	160	328	330	158	92	129	40
2	133	52	126	230	135	180	348	310	158	107	113	38
3	108	52	96	233	138	191	346	273	160	84	123	36
4	91	53	108	224	146	180	337	277	159	83	116	35
5	81	53	127	202	158	171	358	265	154	126	92	41
6	69	73	154	183	162	192	379	283	101	137	70	79
7	58	94	156	185	184	214	350	298	110	137	80	77
8	30	89	155	175	203	249	356	298	99	149	61	79
9	34	87	155	203	210	262	361	270	93	133	53	79
10	64	88	175	291	219	258	330	287	93	122	50	77
11	80	86	189	226	225	285	310	251	126	114	56	79
12	79	90	193	209	213	303	317	247	141	114	68	64
13	58	101	198	165	226	293	317	268	130	93	82	47
14	62	98	181	190	227	311	328	274	132	92	103	41
15	53	92	188	226	161	300	332	282	132	116	111	40
16	55	90	192	228	184	290	357	282	133	116	58	41
17	58	71	203	182	155	276	412	264	129	128	62	40
18	52	78	196	177	156	303	450	227	117	138	62	42
19	42	80	191	186	145	257	480	239	127	121	64	41
20	30	71	176	256	147	236	475	231	84	135	41	37
21	31	77	200	207	154	232	432	184	73	132	40	34
22	25	88	222	201	178	276	407	191	69	134	44	33
23	22	82	227	174	187	325	401	203	72	131	42	33
24	22	85	247	189	191	324	396	190	69	136	42	34
25	43	97	252	211	200	345	358	192	69	133	44	33
26	54	122	243	199	190	329	358	178	102	121	42	37
27	57	141	213	201	190	298	404	195	124	113	66	38
28	54	138	259	199	223	293	387	201	111	113	42	37
29	48	-	264	207	223	296	358	182	90	123	39	38
30	43	-	220	181	147	310	372	207	107	76	40	37
31	23	-	236	-	141	-	345	210	-	99	-	37
TOTAL	1,779	2,364	5,863	6,132	5,555	7,939	11,489	7,589	3,422	3,648	2,035	1,444
MAXIMUM DAY	133	141	264	291	227	345	480	330	160	149	129	79
MINIMUM DAY	22	36	96	165	135	160	310	178	69	76	39	33
MEAN	57	84	189	204	179	265	371	245	114	118	68	47
TOTAL AC.FT.	3,529	4,688	11,630	12,162	11,018	15,746	22,789	15,054	6,786	7,236	4,035	2,865
WHOLE YEAR:-	TOTAL,	59,259	MAX.,	480	MIN.,	22	MEAN,	162	TOTAL AC.FT.,	117,538		

**NORTH KERN WATER STORAGE DISTRICT
LERDO CANAL DIVERSION SUMMARY**

Quantities in acre-feet

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Beardsley Canal Supply +	3,752	5,629	13,692	13,714	12,721	17,609	25,216	17,225	7,622	8,216	4,698	3,060	133,154
+ KRC & Irr. Co. Laterals	0	512	1,634	931	1,138	1,275	1,760	1,834	627	273	245	0	10,229
+ KRC & Irr. Co. Boosters	40	261	245	441	382	408	484	154	29	524	238	12	3,218
+ Lined Section Loss: KRC & Irr. Co.	10	56	61	60	61	60	61	61	56	61	36	10	593
= KRC & Irr. Co. from Beardsley	50	829	1,940	1,432	1,581	1,743	2,305	2,049	712	858	519	22	14,040
Rosedale Ranch ID via 1-1-0	-	0	0	0	0	0	0	0	0	0	0	0	0
NKWSD via 1-1-0 Lateral	-	0	0	0	0	0	0	0	0	0	0	0	0
Other from Beardsley	-	0	0	0	0	0	0	0	0	0	0	0	0
Lined Section Loss: Cawelo WD	-	61	61	60	61	60	61	61	60	61	60	61	723
Lined Section Loss: NKWSD	-	112	61	60	61	60	61	61	64	61	84	112	853
Lerdo Canal Total Flow =	3,529	4,688	11,630	12,162	11,018	15,746	22,789	15,054	6,786	7,236	4,035	2,865	117,538
KRC & Irr. Co. via 8-1-0	-	0	0	0	0	0	0	0	0	0	0	0	0
City via 8-1-0	-	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale Ranch ID via 8-1-0	-	0	0	0	0	0	0	0	0	0	0	0	0
+ Cawelo WD Delivered at Sta. "B"	1,079	2,414	5,516	5,855	5,373	6,585	9,068	7,940	4,820	4,419	2,400	2,491	57,960
+ Cawelo WD 8-0 Deliveries	16	48	224	262	226	558	553	251	63	320	36	81	2,638
+ Lerdo Loss: to Station "B"	11	24	55	58	54	66	91	79	48	44	24	64	618
+ Lerdo Loss: 8-0 Deliveries	0	1	5	5	4	9	9	5	1	6	1	2	48
= Cawelo WD Total from Lerdo	1,106	2,487	5,800	6,180	5,657	7,218	9,721	8,275	4,932	4,789	2,461	2,638	61,264

North Kern WSD from Lerdo =	2,423	2,201	5,830	5,982	5,361	8,528	13,068	6,779	1,854	2,447	1,574	227	56,274
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Year: 1990

Total Flow via the Calloway Canal Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26	21	0	0	0	0	0	0	0	0	0	0
2	10	21	0	0	0	0	0	0	0	0	0	0
3	21	22	0	0	0	0	0	0	0	0	0	0
4	33	23	0	0	0	0	0	0	0	0	0	0
5	34	22	0	0	0	0	0	0	0	0	0	0
6	34	22	0	0	0	0	0	0	0	0	0	0
7	26	19	0	0	0	0	0	0	0	0	0	0
8	0	20	0	0	0	0	0	0	0	0	0	0
9	0	20	0	0	0	0	0	0	0	0	0	0
10	0	22	0	0	0	0	0	0	0	0	0	0
11	0	23	0	0	0	0	0	0	0	0	0	0
12	0	24	0	0	0	0	0	0	0	0	0	0
13	0	20	0	15	0	0	0	0	0	0	0	0
14	20	23	0	17	0	0	0	0	0	0	0	0
15	35	25	0	20	0	0	0	0	0	0	0	0
16	23	26	0	19	0	0	0	0	0	0	0	0
17	22	25	0	21	0	0	0	0	0	0	0	0
18	25	24	0	21	0	0	0	0	0	0	0	0
19	23	19	0	37	0	0	0	0	0	0	0	0
20	30	25	0	38	0	0	0	0	0	0	0	0
21	29	26	0	37	0	0	0	0	0	0	0	0
22	31	23	0	22	0	0	0	0	0	0	0	0
23	29	21	0	25	0	0	0	0	0	0	0	0
24	28	24	0	22	0	0	0	0	0	0	0	0
25	27	18	0	33	0	0	0	0	0	0	0	0
26	29	0	0	33	0	0	0	0	0	0	0	0
27	32	0	0	31	0	0	0	0	0	0	0	0
28	28	0	0	30	0	0	0	0	0	0	0	0
29	24	-	0	25	0	0	0	0	0	0	0	0
30	26	-	0	0	0	0	0	0	0	0	0	0
31	23	-	0	-	0	-	0	0	-	0	-	0
TOTAL	668	558	0	446	0	0	0	0	0	0	0	0
MAXIMUM DAY	35	26	0	38	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	22	20	0	15	0	0	0	0	0	0	0	0
TOTAL AC.FT.	1,325	1,107	0	885	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	1,672	MAX.,	38	MIN.,	0	MEAN,	5	TOTAL AC.FT.,	3,317		

**NORTH KERN WATER STORAGE DISTRICT
CALLOWAY CANAL DIVERSION SUMMARY**

Quantities in acre-feet

Year: 1990

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
FLOW AT HEADWORKS	+ 1,325	1,107	0	885	0	0	0	0	0	0	0	0	3,317
KCWA Armco Turnout	- 1,087	976	0	693	0	0	0	0	0	0	0	0	2,756
KCWA Armco Turnout (Reverse Flow)	+ 0	0	0	0	0	0	0	0	389	450	190	0	1,029
Seepage Loss	- 222	131	0	192	0	0	0	0	389	450	190	0	1,574
FLOW AT MEASURING STATION	= 16	0	0	0	0	0	0	0	0	0	0	0	16
CVC Inflow to Calloway	+ 48	0	0	0	0	0	0	0	0	0	0	0	48
Seepage Loss	- 64	0	0	0	0	0	0	0	0	0	0	0	64
FLOW AT STANDARD WEIR	= 0	0	0	0	0	0	0	0	0	0	0	0	0
Bartell Spreading	- 0	0	0	0	0	0	0	0	0	0	0	0	0
Friant-Kern Inflow	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
KRC & Irr. Co. Calloway Del.	- 0	0	0	0	0	0	0	0	0	0	0	0	0
KRC & Irr. Co. 1-1-0 Inflow	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Seepage Loss	- 0	0	0	0	0	0	0	0	0	0	0	0	0
FLOW AT LABORER WEIR	= 0	0	0	0	0	0	0	0	0	0	0	0	0
KRC & Irr. Co. Calloway Del.	- 0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale Ranch ID at Headworks	- 0	0	0	0	0	0	0	0	0	0	0	0	0
Seepage Loss	- 0	0	0	0	0	0	0	0	0	0	0	0	0
NKWSID 8-1-0 Inflow	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
FLOW AT SEVENTH STANDARD LINE for Rosedale Ranch ID for North Kern WSD	= 0	0	0	0	0	0	0	0	0	0	0	0	0

KERN COUNTY WATER AGENCY:

Operating Loss	+ 240	155	0	209	0	0	0	0	389	450	190	0	1,633
Turnout #4 to River	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
ID #4 Treatment Plant	+ 1,069	952	0	676	0	0	0	0	0	0	0	0	2,697
Spreading Below Measuring Sta.	+ 64	0	0	0	0	0	0	0	0	0	0	0	64
TOTAL DIVERTED	= 1,373	1,107	0	885	0	0	0	0	389	450	190	0	4,394

KERN RIVER CANAL & IRRIGATING CO.:

Calloway Irrigation Deliveries	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Loss/ Spreading	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DIVERTED	= 0	0	0	0	0	0	0	0	0	0	0	0	0

ROSEDALE RANCH ID:

Flow at Headworks	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Flow at Seventh Standard Line	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Assigned Loss	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DIVERTED	= 0	0	0	0	0	0	0	0	0	0	0	0	0

NORTH KERN WATER STORAGE DISTRICT:

Flow at Seventh Standard Line	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
Total Loss	+ 0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DIVERTED	= 0	0	0	0	0	0	0	0	0	0	0	0	0

North Kern Water Storage District
Class 1 Irrigation Deliveries

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21	89	223	216	161	190	268	356	152	107	108	8
2	56	94	213	267	175	207	345	340	138	102	119	8
3	44	105	202	274	210	181	349	304	144	106	76	8
4	46	106	187	258	204	217	365	288	154	121	67	9
5	45	109	218	240	190	264	358	253	148	113	106	9
6	40	113	205	236	192	297	351	294	148	105	73	9
7	37	111	220	211	234	279	339	282	141	104	80	10
8	41	109	230	195	210	303	315	314	108	134	70	14
9	37	110	239	227	238	332	338	277	119	139	52	12
10	35	104	234	249	231	324	336	287	106	139	50	15
11	39	101	210	267	242	325	343	236	133	160	40	18
12	28	128	231	253	222	341	369	227	168	122	56	15
13	25	148	227	184	222	323	345	260	156	109	30	16
14	25	134	215	151	239	325	351	253	131	78	30	11
15	16	156	205	136	234	318	358	265	136	120	14	11
16	17	138	207	244	239	295	388	263	135	139	9	11
17	17	135	211	269	220	310	384	247	115	126	5	11
18	18	128	204	273	210	287	397	219	111	162	5	19
19	19	134	213	240	189	303	403	172	105	157	9	14
20	24	137	202	231	188	312	368	208	116	135	20	10
21	14	154	214	180	217	332	362	204	62	132	6	10
22	20	158	206	170	234	319	358	200	69	157	0	0
23	17	187	195	177	221	332	370	223	59	152	0	0
24	33	165	200	176	229	329	380	199	89	153	0	0
25	32	164	182	183	239	354	368	171	116	141	0	0
26	27	206	203	188	220	324	358	148	115	125	5	0
27	26	196	221	185	201	302	362	182	106	105	5	0
28	11	195	215	164	198	320	345	198	108	98	5	0
29	30	-	226	141	208	303	324	153	73	108	8	0
30	40	-	222	156	211	275	351	145	58	114	4	0
31	52	-	228	-	206	-	343	147	-	108	-	0
TOTAL	932	3,814	6,608	6,341	6,634	8,923	10,991	7,315	3,519	3,871	1,052	248
MAXIMUM DAY	56	206	239	274	242	354	403	356	168	162	119	19
MINIMUM DAY	11	89	182	136	161	181	268	145	58	78	0	0
MEAN	30	136	213	211	214	297	355	236	117	125	35	8
TOTAL AC.FT.	1,849	7,565	13,107	12,577	13,157	17,698	21,801	14,509	6,980	7,678	2,088	492
WHOLE YEAR:-	TOTAL,	60,248	MAX.,	403	MIN.,	0	MEAN,	165	TOTAL AC.FT.,	119,501		

North Kern Water Storage District
Class 2 Irrigation Deliveries

DISCHARGE IN CUBIC FEET PER SECOND

Year: 1990

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	16	3	6	5	5	0	16	10	2	0	0	0
2	16	3	5	5	4	0	9	10	0	0	0	0
3	17	4	6	6	5	0	9	12	0	0	0	0
4	16	3	7	12	4	0	9	9	0	0	0	0
5	17	4	9	10	5	0	10	14	0	0	0	0
6	12	2	6	4	4	0	10	12	4	0	0	0
7	12	4	6	12	3	0	11	12	0	0	0	0
8	12	2	6	10	4	0	11	9	0	0	0	0
9	12	4	6	10	3	0	10	9	0	0	0	0
10	12	4	6	13	5	0	11	14	0	0	0	0
11	12	0	0	13	5	0	10	14	3	0	0	0
12	12	4	8	19	5	0	13	15	2	0	0	0
13	0	4	8	18	5	0	19	8	4	0	0	0
14	0	4	12	16	5	5	17	14	2	0	0	0
15	2	4	11	11	5	8	17	13	3	0	0	0
16	3	6	10	17	6	8	16	11	4	0	0	0
17	4	4	7	17	4	8	16	2	0	0	0	0
18	3	1	3	18	5	8	14	2	0	0	0	0
19	3	5	3	27	5	10	14	5	0	0	0	0
20	0	5	9	28	4	9	7	9	0	1	0	0
21	0	6	17	25	5	7	7	9	0	2	0	0
22	0	6	16	13	6	7	6	9	2	3	0	0
23	0	1	16	11	5	7	6	9	3	2	0	0
24	0	1	15	11	4	7	10	5	2	0	0	0
25	0	0	11	10	4	8	10	5	3	0	0	0
26	5	7	11	10	4	6	10	5	2	0	0	0
27	0	7	10	9	4	8	7	2	3	0	0	0
28	0	7	11	10	6	5	8	5	2	0	0	0
29	0	-	17	5	5	5	8	0	0	0	0	0
30	0	-	15	4	0	12	2	0	0	0	0	0
31	0	-	12	-	0	-	7	0	-	0	-	0
TOTAL	186	105	285	379	134	128	330	253	41	8	0	0
MAXIMUM DAY	17	7	17	28	6	12	19	15	4	3	0	0
MINIMUM DAY	0	0	0	4	0	0	2	0	0	0	0	0
MEAN	6	4	9	13	4	4	11	8	1	0	0	0
TOTAL AC.FT.	368	207	566	752	265	254	654	502	81	16	0	0
WHOLE YEAR:-	TOTAL,	1,849	MAX.,	28	MIN.,	0	MEAN,	5	TOTAL AC.FT.,	3,665		

Year: 1990

Poso Creek Natural Flow as Measured at Highway #99

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	0	MAX.,	0	MIN.,	0	MEAN,	0	TOTAL AC.FT.,	0	0	0

Year: 1990

Total Flow via the Rosedale Ranch I.D. Headgate

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	-	0	0	0	0	0	0	0	0	0	0
30	0	-	0	0	0	0	0	0	0	0	0	0
31	0	-	0	-	0	-	0	0	-	0	-	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	0	0	0	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	0	MAX.,	0	MIN.,	0	MEAN,	0	TOTAL AC.FT.,	0	0	0

NORTH KERN WATER STORAGE DISTRICT
STATUS OF EXCHANGE

Quantities in acre-feet

Year: 1990

	CAWELO WD		KERN-TULARE WD		SHAFTER-WASCO ID		IMPROVEMENT DISTRICT NO. 4		PARAMOUNT FARMING COMPANY		ROSEDALE RANCH ID		LA HACIENDA, INC.		BUENA VISTA WSD	
	to	from	to	from	to	from	to	from	to	from	to	from	to	from	to	from
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	1,418	0	0	0	0	0	0	0	0
March	121	0	0	0	0	0	0	588	0	0	0	0	0	0	0	0
April	1,015	0	0	0	0	0	0	726	0	0	0	0	0	0	0	20
May	76	0	0	0	0	0	0	1,085	0	0	0	0	0	0	0	8
June	0	0	0	0	0	0	0	1,357	0	0	0	0	0	0	0	226
July	0	0	0	0	0	0	0	383	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	1,445	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	1,660	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	1,890	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	233	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yearly Status	1,212	0	0	0	613	0	0	10,785	0	0	0	0	0	21	0	254
Overall Status	1,311	0	0	0	613	0	2,737	2,035	3,497	34,624	4,040	0	0	0	0	0

NKWSD/IMPROVEMENT DISTRICT #4 EXCHANGE SUMMARY

Block	Date of Agreement	NKWSD ID #4		Balance
		NKWSD	to NKWSD	
A	12-13-85	21,635	21,635	0
B	12-08-87	13,350	13,350	0
C	09-09-88	12,163	7,796	4,367
D	03-03-89	403	403	0
E	11-29-89	1,500	1,500	0
F	06-06-90	0	1,630	(1,630)
To Date Totals		49,051	46,314	2,737

Year: 1990

Improvement District No. 4 Exchange Payback to North Kern WSD

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	19	15	0	0	0	0	0	42	0	20	0
2	0	19	15	6	0	0	0	0	42	0	0	0
3	0	19	5	26	22	0	0	0	42	18	0	0
4	0	19	5	29	20	0	0	0	40	18	0	0
5	0	19	20	53	11	0	0	0	36	23	0	0
6	0	40	20	60	0	7	0	0	21	34	9	0
7	0	40	20	7	10	20	0	0	26	34	20	0
8	0	35	20	0	11	49	0	0	16	44	16	0
9	0	35	25	0	22	72	0	0	9	44	9	0
10	0	35	45	0	0	62	0	0	8	33	0	0
11	0	35	35	0	0	51	0	0	25	11	0	0
12	0	35	35	0	24	51	0	0	42	28	0	0
13	0	60	20	0	0	55	0	0	18	13	0	0
14	0	60	5	0	11	76	0	0	21	13	0	0
15	0	40	5	0	4	50	0	0	21	28	0	0
16	0	40	5	37	48	35	0	0	21	28	0	0
17	0	10	0	27	1	35	0	0	21	26	0	0
18	0	10	0	18	13	35	0	0	21	37	0	0
19	0	10	0	39	0	0	0	0	31	34	0	0
20	0	10	0	62	0	0	0	0	25	37	0	0
21	0	15	0	0	19	0	0	0	13	37	0	0
22	0	15	0	0	41	0	0	66	10	30	0	0
23	0	15	0	0	49	0	0	69	12	8	0	0
24	0	15	0	0	51	0	0	70	10	19	0	0
25	0	15	0	0	47	0	0	68	9	34	0	0
26	0	15	0	0	18	0	0	57	26	24	0	0
27	0	15	0	0	16	0	0	70	27	33	0	0
28	0	20	0	0	48	0	0	41	14	33	0	0
29	0	-	0	0	58	0	0	31	0	43	0	0
30	0	-	0	0	0	0	0	27	0	17	0	0
31	0	-	0	-	0	-	0	29	-	19	-	0
TOTAL	0	715	295	364	544	598	0	528	649	800	74	0
MAXIMUM DAY	0	60	45	62	58	76	0	70	42	44	20	0
MINIMUM DAY	0	10	0	0	0	0	0	0	0	0	0	0
MEAN	0	26	10	12	18	20	0	17	22	26	2	0
AC.FT.	0	1,418	585	722	1,078	1,186	0	1,048	1,287	1,586	147	0
ASSIGNED LOSS	0	0	3	4	7	7	0	5	25	40	7	0
TOTAL AC.FT.	0	1,418	588	726	1,085	1,193	0	1,053	1,312	1,626	154	0
WHOLE YEAR:-	TOTAL,	4,567	MAX.,	76	MIN.,	0	MEAN,	13	TOTAL AC.FT.,	9,155		

Groundwater Extracted from I.D. #4 and Delivered to North Kern WSD
(Per terms of KCWA/NKWS Exchange Agreement dated June 6, 1990)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	6	7	6	4	3	0
2	0	0	0	0	0	0	6	6	6	4	3	0
3	0	0	0	0	0	0	6	7	6	5	4	0
4	0	0	0	0	0	0	7	6	7	4	3	0
5	0	0	0	0	0	0	6	6	6	4	3	0
6	0	0	0	0	0	0	6	7	7	5	4	0
7	0	0	0	0	0	0	6	6	6	4	3	0
8	0	0	0	0	0	0	6	6	7	4	3	0
9	0	0	0	0	0	0	6	7	6	5	4	0
10	0	0	0	0	0	0	6	6	6	4	3	0
11	0	0	0	0	0	0	7	6	7	4	3	0
12	0	0	0	0	0	0	6	7	7	5	4	0
13	0	0	0	0	0	0	6	6	6	4	0	0
14	0	0	0	0	0	0	6	6	6	4	0	0
15	0	0	0	0	0	0	7	7	7	4	0	0
16	0	0	0	0	0	5	6	6	6	4	0	0
17	0	0	0	0	0	6	6	6	6	4	0	0
18	0	0	0	0	0	5	6	7	6	5	0	0
19	0	0	0	0	0	6	7	6	6	4	0	0
20	0	0	0	0	0	5	6	6	6	4	0	0
21	0	0	0	0	0	6	6	7	5	5	0	0
22	0	0	0	0	0	5	6	6	5	4	0	0
23	0	0	0	0	0	6	7	6	5	4	0	0
24	0	0	0	0	0	5	6	7	5	5	0	0
25	0	0	0	0	0	6	6	6	5	4	0	0
26	0	0	0	0	0	5	6	6	5	4	0	0
27	0	0	0	0	0	6	7	7	5	5	0	0
28	0	0	0	0	0	5	6	6	5	4	0	0
29	0	-	0	0	0	6	6	6	5	4	0	0
30	0	-	0	0	0	6	6	7	5	5	0	0
31	0	-	0	-	0	-	7	7	-	4	-	0
TOTAL	0	0	0	0	0	83	193	198	176	133	40	0
MAXIMUM DAY	0	0	0	0	0	6	7	7	7	5	4	0
MINIMUM DAY	0	0	0	0	0	0	6	6	5	4	0	0
MEAN	0	0	0	0	0	3	6	6	6	4	1	0
TOTAL AC.FT.	0	0	0	0	0	164	383	392	348	264	79	0
WHOLE YEAR:-	TOTAL,	823	MAX.,	7	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,630		

North Kern WSD Exchange Water Diverted to Cawelo Water District
(Pursuant to NKWSD/CWD Exchange Agreement Dated 4-11-90)

Year: 1990

DISCHARGE IN CUBIC FEET PER SECOND

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	94	19	0	0	0	0	0	0	0
2	0	0	0	0	7	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	37	0	0	0	0	0	0	0	0
9	0	0	0	47	0	0	0	0	0	0	0	0
10	0	0	0	0	2	0	0	0	0	0	0	0
11	0	0	0	48	3	0	0	0	0	0	0	0
12	0	0	0	32	0	0	0	0	0	0	0	0
13	0	0	0	22	4	0	0	0	0	0	0	0
14	0	0	0	15	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	32	0	0	0	0	0	0	0	0
22	0	0	0	63	0	0	0	0	0	0	0	0
23	0	0	0	21	0	0	0	0	0	0	0	0
24	0	0	11	37	0	0	0	0	0	0	0	0
25	0	0	10	6	0	0	0	0	0	0	0	0
26	0	0	3	3	0	0	0	0	0	0	0	0
27	0	0	0	7	0	0	0	0	0	0	0	0
28	0	0	0	16	0	0	0	0	0	0	0	0
29	0	-	0	12	0	0	0	0	0	0	0	0
30	0	-	17	20	3	0	0	0	0	0	0	0
31	0	-	20	-	0	-	0	0	-	0	-	0
TOTAL	0	0	61	512	38	0	0	0	0	0	0	0
MAXIMUM DAY	0	0	20	94	19	0	0	0	0	0	0	0
MINIMUM DAY	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	2	17	1	0	0	0	0	0	0	0
TOTAL AC.FT.	0	0	121	1,015	76	0	0	0	0	0	0	0
WHOLE YEAR:-	TOTAL,	611	MAX.,	94	MIN.,	0	MEAN,	2	TOTAL AC.FT.,	1,212		

WATER EXCHANGE BETWEEN
NORTH KERN WSD and CITY OF BAKERSFIELD
THREE YEAR RECAPITULATION

Quantities in acre-feet

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1988													
NKWSD to CITY	476	0	0	0	0	0	0	92	37	1,257	5,504	1,013	8,379
CITY to NKWSD	131	0	0	1,341	282	0	0	0	0	123	0	0	1,877
Other Purchase Rate	0	0	0	0	0	0	0	0	0	0	0	0	0
CITY Debit to NKWSD	24,735	24,735	24,735	23,394	23,112	23,112	23,112	23,204	23,241	24,375	29,879	30,892	

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1989													
NKWSD to CITY	76	0	19	666	1,270	0	0	0	195	443	1,735	1,444	5,848
CITY to NKWSD	0	0	1,341	190	36	0	1,801	0	0	419	80	10	3,877
Other Purchase Rate	0	0	0	0	0	0	0	0	0	0	0	0	0
CITY Debit to NKWSD	30,968	30,968	29,646	30,122	31,356	31,356	29,555	29,555	29,750	29,774	31,429	32,863	

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1990													
NKWSD to CITY	1,552	0	0	0	0	0	0	0	0	0	0	0	1,552
CITY to NKWSD	288	0	89	0	0	0	0	0	0	0	268	71	716
Other Purchase Rate	0	0	0	0	0	0	0	0	0	0	0	0	0
CITY Debit to NKWSD	34,127	34,127	34,038	34,038	34,038	34,038	34,038	34,038	34,038	34,038	33,770	33,699	

COST ALLOCATION AND WATERMASTER SUMMARIES

CARRIER CANAL SYSTEM - ALLOCATION
Utilization of Water - Preceding Five Years

Year: 1990

Quantities in acre-feet

	1986					1987					1988					1989					1990					Five Year Total		Allocation Percentage	
TOTAL CARRIER CANAL FLOW (1)	315,226					68,984					44,972					46,492					11,375					487,049		100.00%	
Stine Canal Total Diverted (2)	52,925					11,463					7,553					10,913					0					82,854		17.01%	
Buena Vista Canal Total Diverted (2)	51,761					26,648					18,551					21,844					11,350					130,154		26.72%	
KERN DELTA WATER DISTRICT TOTAL DIVERTED FROM CARRIER CANAL	104,686					38,111					26,104					32,757					11,350					213,008		43.73%	
KERN RIVER CONDUIT (City of Bakersfield)	210,540					30,873					18,868					13,735					25					274,041		56.27%	

Notes: (1) Sum of Carrier canal flow at Oak St. and River canal inflow.
(2) Sum of headgate diversion and pro-rated share of Carrier canal loss.

CALLOWAY AND BEARDSLEY CANALS

Allocation of Joint Accounts

1990

CALLOWAY CANAL USED

Preceding Ten Years

Year	Diverted from River				TOTAL
	NKWSD	CITY	Subtotal	I.D. #4	
1981	1,575	6,970	8,545	-	8,545
1982	108,213	21,457	129,670	37,494	167,164
1983	132,111	21,645	153,756	31,708	185,464
1984	10,478	4,607	15,085	16,534	31,619
1985	9,550	4	9,554	27,827	37,381
1986	110,443	33,807	144,250	63,711	207,961
1987	1,900	0	1,900	27,183	29,083
1988	0	0	0	26,406	26,406
1989	0	0	0	17,669	17,669
1990	0	0	0	3,317	3,317
Total	374,270	88,490	462,760	251,849	714,609
Percent	80.88%	19.12%	100.00%		

Quantities in acre-feet

BEARDSLEY CANAL USED

Preceding Five Years

Year	Diverted via Beardsley Canal		TOTAL
	NKWSD	CITY	
1986	222,907	21,501	244,408
1987	125,018	16,041	141,059
1988	87,281	12,416	99,697
1989	70,197	16,892	87,089
1990	57,127	15,470	72,597
Total	562,530	82,320	644,850
Percent	87.23%	12.77%	100.00%

Note: I.D. #4 included within City capacity prior to 1982.
(NKWSD-City-I.D. #4 Agreement dated April 28, 1982.)

HYDROGRAPHIC SUMMARY
UTILIZATION OF WATER - FIRST POINT GROUP - PRECEDING FIVE YEARS

Year: 1990

Quantities in acre-feet

Canal	1986	1987	1988	1989	1990	Five Year Total		Percentage
Kern Island	139,292	130,693	123,466	145,657	114,497	653,605		29.40%
Eastside	20,575	17,226	15,455	17,285	12,012	82,553		3.71%
Buena Vista	44,892	16,602	11,571	13,805	2,354	89,224		4.01%
Stine	35,118	11,532	7,349	10,892	0	64,891		2.92%
Farmers	23,349	8,619	4,606	7,171	34	43,779		1.97%
Subtotal Kern Delta WD	263,226	184,672	162,447	194,810	128,897	934,052		42.01%
City of Bakersfield	242,101	38,704	21,018	32,390	16,829	351,042		15.79%
K.R.C. & I. Co. (Beardsley)	15,079	11,699	8,145	12,780	11,166	58,869		2.65%
Central - I.D. #4 (Calloway)	93,289	26,870	26,406	17,669	3,317	167,551		7.54%
James	25,434	0	0	0	0	25,434		1.14%
Pioneer	55,164	6	0	0	0	55,170		2.48%
Subtotal City of Bakersfield	431,067	77,279	55,569	62,839	31,312	658,066		29.60%
North Kern WSD	331,692	121,237	75,710	59,688	42,733	631,060		28.39%
Total First Point Group	1,025,985	383,188	293,726	317,337	202,942	2,223,178		100.00%
South Fork	1,822	1,056	760	1,133	672			
First Point passing 2nd Point	4,262	0	0	0	0			
River Loss and Spreading	78,454	27,310	33,493	23,234	15,887			
Flow Above First Point	804	924	867	934	904			
Total 1st Point Group Diverted	1,111,327	412,478	328,846	342,638	220,405			

- Note:

ALL FIGURES REFLECT
GROSS DIVERSIONS...

**KERN RIVER WATERMASTER
ISABELLA RESERVOIR INTER-DISTRICT RENTAL CHARGES**

-- Pursuant to paragraph 9e, pages 10 and 11 of
Kern River Water Rights and Storage Agreement,
dated December 31, 1962

COMPUTED YEAR: 1990

Year	Acre-Foot Days of Irrigation Storage			Isabella O&M Charges (2)
	NKWSD (1)	BVWSD	Total A.F.D.	
1986	83,751,813	38,737,544	122,489,357	\$159,115
1987	44,313,663	20,507,368	64,821,031	\$159,115
1988	21,158,075	8,796,656	29,954,731	(3) \$ 5,936
1989	20,511,780	9,907,397	30,419,177	\$194,006
1990	9,463,145	5,039,885	14,503,030	(4) \$108,642
5-Year Totals	179,198,476	82,988,850	262,187,326	\$626,814

- Interest/Rental Charge on Storage Purchase..... \$1,143,250
(Paragraph 9e, pages 10 and 11)

- Total 5-Year Operation & Interest Charge..... \$1,770,064

Total 5-Year Cost	\$1,770,064	\$0.0067511
----- =	----- =	-----
Total 5-Year Use	262,187,326	Rental Charge Per Acre-Foot Day

TOTAL 1990 HACIENDA WD Acre-Foot Storage Days = 141,217

TOTAL 1990 HACIENDA WD Share of 1990 Storage Costs = \$953.37

(1) Includes Hacienda Water District Storage when such storage occurs...

(2) \$ 32,603 per year through 1973; \$ 66,038 per year 1974 through 1978;
\$ 91,598 per year 1979 through 1983; \$159,115 per year 1984 through
1988; \$151,324 per year 1989 through 1993... (includes contract
administration charges by the U.S.B.R.)

(3) Reflects downward adjustment of 1988 Isabella Reservoir O&M Charges...
(Reconciliation between Corps of Engineers and Kern River Watermaster
for overcharges incurred by Watermaster during the period of 1982-1987)

(4) Reflects adjustment of Isabella Reservoir O&M Charges for years 1989-1990
pursuant to Corps of Engineers revised billing dated July 1, 1990...

**KERN COUNTY RECREATION POOL REPORT
FROM THE KERN RIVER WATERMASTER**

Year: 1990

Quantities in acre-feet
except where noted...

	Total Storage in Reservoir	Total Water Surface Area (Acres)	Area Attributable to Rec. Pool (Acres)	County of Kern	
				Total Reservoir Loss	Ming Lake Net Inflow Recreation Pool Loss
End of Previous Year	85,978	3,773	1,005		
January	85,263	3,751	1,010	667	16 175
February	81,570	3,635	1,030	649	16 180
March	78,275	3,530	1,045	1,148	44 335
April	83,957	3,710	1,015	1,755	60 508
May	94,204	4,025	965	2,705	77 692
June	89,693	3,888	985	3,713	105 883
July	67,775	3,182	1,110	3,993	127 1,172
August	51,515	2,605	1,240	2,872	121 1,192
September	48,758	2,502	1,270	2,035	91 1,012
October	46,859	2,430	1,290	1,609	65 837
November	46,303	2,408	1,295	797	42 424
December	46,014	2,397	1,300	480	26 262
ISABELLA RESERVOIR RECREATION POOL:			TOTALS	22,423	790 7,672

15,125 S.F.D.

30,000 ACRE- FEET

NOTE: Storage & Area quantities reflect last day of month

REPORT OF THE KERN RIVER WATERMASTER

SUMMARY OF KERN RIVER RUNOFF (Monthly, To Date & Current Year)

Quantities in acre-feet

Year: 1990

	CALENDAR			YEAR		
	FIRST REGULATED	POINT NATURAL		NKWSD	BVWSD	HWD
JANUARY	12,926	12,916		12,916	0	0
To Date	12,926	12,916		12,916	0	0
FEBRUARY	16,124	13,127		13,127	0	0
MARCH	29,050	26,043		26,043	0	0
	25,071	23,048		21,570	1,478	0
	54,121	49,091		47,613	1,478	0
APRIL	24,422	32,019		27,517	4,502	0
	78,543	81,110		75,130	5,980	0
MAY	25,454	38,600		32,189	6,411	0
	103,997	119,710		107,319	12,391	0
JUNE	30,030	29,345		25,666	3,679	0
	134,027	149,055		132,985	16,070	0
JULY	31,129	13,380		13,380	0	0
	165,156	162,435		146,365	16,070	0
AUGUST	21,519	8,386		8,386	0	0
	186,675	170,821		154,751	16,070	0
SEPTEMBER	6,885	6,428		6,428	0	0
	193,560	177,249		161,179	16,070	0
OCTOBER	8,979	8,834		8,834	0	0
	202,539	186,083		170,013	16,070	0
NOVEMBER	8,037	8,340		8,340	0	0
	210,576	194,423		178,353	16,070	0
DECEMBER	8,925	9,148		9,148	0	0
Year	219,501	203,571		187,501	16,070	0

1894 to 1990 Mean April-July Runoff = 469,186 acre-feet (100% of Average)
 1990 April-July Runoff = 113,344 acre-feet (24% of Average)

	WATER			YEAR		
	FIRST REGULATED	POINT NATURAL		NKWSD	BVWSD	HWD
OCTOBER	12,773	10,824		10,824	0	0
To Date	12,773	10,824		10,824	0	0
NOVEMBER	10,788	10,707		10,707	0	0
	23,561	21,531		21,531	0	0
DECEMBER	13,739	10,949		10,949	0	0
	37,300	32,480		32,480	0	0
JANUARY	12,926	12,916		12,916	0	0
	50,226	45,396		45,396	0	0
FEBRUARY	16,124	13,127		13,127	0	0
	66,350	58,523		58,523	0	0
MARCH	25,071	23,048		21,570	1,478	0
	91,421	81,571		80,093	1,478	0
APRIL	24,422	32,019		27,517	4,502	0
	115,843	113,590		107,610	5,980	0
MAY	25,454	38,600		32,189	6,411	0
	141,297	152,190		139,799	12,391	0
JUNE	30,030	29,345		25,666	3,679	0
	171,327	181,535		165,465	16,070	0
JULY	31,129	13,380		13,380	0	0
	202,456	194,915		178,845	16,070	0
AUGUST	21,519	8,386		8,386	0	0
	223,975	203,301		187,231	16,070	0
SEPTEMBER	6,885	6,428		6,428	0	0
Year	230,860	209,729		193,659	16,070	0

1894 to 1990 Mean March-October Runoff = 601,269 acre-feet (100% of Average)
 1990 March-October Runoff = 160,040 acre-feet (27% of Average)

DAY	ELEVATION (FEET)	ISABELLA RESERVOIR		LOSS	FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST PT. ABOVE 1ST PT.	CHANGE IN STORAGE+ LOSS+1ST POINT+FLOW	COMPUTED 1ST POINT NATURAL FLOW	MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS AT 2ND PT.	FRONT-KERN INFLOW DRY
		MIDNIGHT STORAGE	S.F.D.						Recreation Pool + Dead Storage	IRRIGATION		
End of Previous Month	2543.11	85,978	43,347	***	***	***	157	***	43,347	28,129	***	***
1	2543.09	85,902	43,309	24	190	2	178	178	43,309	28,091	6	0
2	2543.11	85,978	43,347	3	188	1	230	212	43,329	28,111	1	0
3	2543.10	85,940	43,328	5	187	2	175	198	43,333	28,115	1	0
4	2543.10	85,940	43,328	6	181	2	189	175	43,319	28,101	2	0
5	2543.09	85,902	43,309	5	174	1	161	182	43,321	28,103	1	0
6	2543.10	85,940	43,328	6	170	2	197	180	43,323	28,105	2	0
7	2543.10	85,940	43,328	19	161	1	181	199	43,341	28,123	5	0
8	2543.12	86,015	43,366	19	162	0	219	191	43,351	28,133	5	0
9	2543.12	86,015	43,366	11	161	0	172	191	43,370	28,152	3	0
10	2543.11	85,978	43,347	13	187	1	182	188	43,357	28,139	3	0
11	2543.11	85,978	43,347	13	198	0	211	198	43,344	28,126	3	0
12	2543.11	85,978	43,347	9	191	0	200	229	43,373	28,155	2	0
13	2543.15	86,129	43,423	3	197	0	276	250	43,423	28,205	1	0
14	2543.16	86,167	43,443	7	252	0	279	279	43,443	28,225	2	0
15	2543.12	86,015	43,366	9	268	1	201	228	43,393	28,175	2	0
16	2543.12	86,015	43,366	3	278	1	282	238	43,349	28,131	1	0
17	2543.10	85,940	43,328	3	265	1	231	259	43,339	28,121	1	0
18	2543.10	85,940	43,328	9	255	1	265	239	43,313	28,095	2	0
19	2543.10	85,940	43,328	5	215	0	220	225	43,318	28,100	1	0
20	2543.09	85,902	43,309	4	203	1	189	207	43,317	28,099	1	0
21	2543.09	85,902	43,309	11	200	0	211	205	43,311	28,093	3	0
22	2543.10	85,940	43,328	8	189	0	216	217	43,331	28,113	2	0
23	2543.12	86,015	43,366	7	180	0	225	219	43,363	28,145	2	0
24	2543.14	86,091	43,404	13	165	0	216	205	43,390	28,172	3	0
25	2543.12	86,015	43,366	19	193	1	175	200	43,377	28,159	5	0
26	2543.10	85,940	43,328	22	226	0	210	195	43,324	28,106	5	0
27	2543.06	85,789	43,252	19	256	0	199	205	43,254	28,036	5	0
28	2543.02	85,638	43,176	24	259	0	207	208	43,179	27,961	6	0
29	2542.98	85,488	43,100	28	266	0	218	210	43,096	27,877	8	0
30	2542.95	85,376	43,044	7	252	1	204	209	43,044	27,826	2	0
31	2542.92	85,263	42,987	2	248	0	193	193	42,987	27,769	1	0
TOTAL SECOND FOOT DAYS				336	6,517	19	6,512	6,512	*****	*****	88	0
TOTAL ACRE-FEET				667	12,926	37	12,916	12,916	85,263	55,079	175	0

Date: FEBRUARY 21, 1990

By: *[Signature]*

MONTH DAY(S) PAGE NO. TITLE OF COLUMN COMMENT

January

None

SNOW SURVEY DATA FOR KERN RIVER BASIN

Date: February 1, 1990

SNOW COURSE	SNOW SENSOR	CALIF. NUMBER	ELEV. IN FEET	APRIL 1ST AVERAGE WATER CONTENT	DATE MEASURED	SNOW DEPTH IN INCHES	DENSITY (%)	WATER CONTENT IN INCHES	% OF APRIL 1ST AVERAGE	MEASURED BY
	U. Tyndall	516	11,450	27.7						
Bighorn Plateau		250	11,350	22.4	1-26	17.8	21%	3.7	17%	DMR
Cottonwood Pass		251	11,050	14.1	1-31	13.5	21%	2.9	21%	DMR
Siberian Pass		252	10,900	18.8	1-24	15.5	25%	3.9	21%	DMR
Crabtree Meadow		253	10,700	19.3	1-27	20.8	22%	4.6	24%	DMR
	Crabtree	253	10,700	19.8	1-27			3.8	19%	
Guyot Flat		254	10,650	20.4	1-25	21.1	22%	4.6	23%	DMR
Tyndall Creek		255	10,650	18.8	1-26	20.4	24%	4.8	26%	DMR
Sandy Meadow		275	10,650	18.7	1-27	17.0	20%	3.4	18%	DMR
	Chagoopa	514	10,300	21.8	1-25	22.0	14%	3.0	14%	SNUP
Big Whitney Mea.		257	9,750	17.0	1-31	17.0	21%	3.6	21%	DMR
Rock Creek		256	9,600	17.6	1-28	19.2	20%	3.8	22%	DMR
	Pascoe	569	9,130	24.9	1-31			6.4	26%	CMRD
Round Meadow		258	9,000	26.5	1-31	24.9	22%	5.5	21%	CMRD
	Tunnel Guard	830	8,960	15.6	1-30			2.7	17%	DMR
	Wet Meadow	518	8,950	30.3						
Ramshaw Meadow		259	8,700	12.3	1-30	13.8	16%	2.2	18%	DMR
L. Whitney Mea.		260	8,500	14.6	1-29	18.2	19%	3.4	23%	DMR
Casa Vieja Mea.		262	8,400	20.7	2-01	25.9	22%	5.6	27%	CMRD
	Casa Vieja	262	8,400	20.7						
Quinn Ranger Sta.		264	8,350	20.9						
Bonita Meadows		261	8,300	15.0	2-02	20.2	25%	5.0	33%	CMRD
Beach Meadows		265	7,650	9.9	1-31	15.1	16%	2.4	24%	CMRD
	Beach	265	7,650	11.0	1-31			1.8	16%	CMRD

CALIFORNIA COOPERATIVE SNOW SURVEYS FORECAST as of FEBRUARY 1, 1990 for KERN RIVER INFLOW TO ISABELLA RESERVOIR...
 April-July = 175,000 acre-feet (36% of Average) *** Water Year = 280,000 acre-feet (37% of Average)
 80 Percent Probability Range (Actual runoff should fall within the stated limits eight times out of ten)....
 April-July = 110,000 ac.ft. to 390,000 ac.ft. *** Water Year = 190,000 ac.ft. to 580,000 ac.ft.

DAY	ISABELLA RESERVOIR		CHANGE IN STORAGE		COMPUTED 1ST POINT NATURAL FLOW		MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS AT 2ND PT.		FRONT-KERN INFLOW DAY
	ELEVATION (FEET)	MIDNIGHT STORAGE S.F.D.	LOSS	FIRST POINT REGULATED FLOW ABOVE 1ST PT.	LOSS+1ST POINT+FLOW ABOVE 1ST PT.	1ST POINT NATURAL FLOW	Recreation Pool + Dead Storage = 15,218 S.F.D. (30,184 ACFT)	TOTAL IRRIGATION	RECREATION POOL LOSS	2ND POINT GROUP FLOW AT 2ND PT.	
End of Previous Month	2542.92	85,263	42,987	***	193	***	42,987	27,769	***	***	***
1	2542.88	85,113	42,911	11	203	203	42,911	27,893	3	0	1
2	2542.86	85,038	42,873	9	246	229	42,856	27,638	2	0	2
3	2542.81	84,851	42,779	11	196	218	42,784	27,566	3	0	3
4	2542.77	84,701	42,703	7	281	211	42,708	27,488	2	0	4
5	2542.74	84,590	42,647	3	224	213	42,639	27,421	1	0	5
6	2542.70	84,441	42,572	12	202	211	42,573	27,355	3	0	6
7	2542.67	84,329	42,516	7	204	204	42,515	27,297	2	0	7
8	2542.66	84,291	42,497	11	205	203	42,494	27,276	3	0	8
9	2542.65	84,254	42,478	11	197	199	42,477	27,259	3	0	9
10	2542.64	84,217	42,459	9	195	202	42,465	27,247	2	0	10
11	2542.63	84,180	42,441	16	213	199	42,433	27,215	4	0	11
12	2542.58	83,994	42,347	29	189	197	42,347	27,129	8	0	12
13	2542.54	83,845	42,272	10	187	190	42,275	27,057	3	0	13
14	2542.50	83,698	42,198	10	193	192	42,200	26,982	3	0	14
15	2542.46	83,550	42,123	10	197	204	42,132	26,914	3	0	15
16	2542.43	83,439	42,067	10	222	229	42,083	26,865	3	0	16
17	2542.41	83,365	42,030	7	269	268	42,045	26,827	2	0	17
18	2542.42	83,402	42,049	11	312	272	42,024	26,806	3	0	18
19	2542.39	83,291	41,993	8	283	253	41,967	26,769	2	0	19
20	2542.31	82,996	41,844	10	352	251	41,875	26,657	3	0	20
21	2542.27	82,849	41,770	5	372	254	41,751	26,533	1	0	21
22	2542.21	82,629	41,659	10	346	242	41,637	26,419	3	0	22
23	2542.16	82,446	41,567	16	253	246	41,613	26,395	4	0	23
24	2542.12	82,299	41,492	15	374	263	41,466	26,268	4	0	24
25	2542.06	82,080	41,382	13	391	330	41,411	26,193	4	0	25
26	2542.01	81,897	41,290	26	445	313	41,252	26,034	7	0	26
27	2541.95	81,679	41,180	16	358	303	41,180	25,962	5	0	27
28	2541.92	81,570	41,125	16	358	319	41,125	25,907	5	0	28
29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	29
30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	30
31	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	31
TOTAL SECOND FOOT DAYS			327	8,129	24	6,618	*****	*****	91	0	0
TOTAL ACRE-FEET			649	16,124	48	13,127	81,570	51,386	180	0	0

By: *[Signature]* Date: MARCH 14, 1990

WATERMASTER NOTES *** KERN RIVER BULLETIN

COMMENT
=====

TITLE OF COLUMN
=====

PAGE NO.
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DAY(S)
=====

MONTH
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Delivered as per terms of BUENA VISTA WATER STORAGE DISTRICT/
Olcese Water District letter agreement dated February 22, 1990.

BWMSD FLOW ABOVE FIRST POINT -
OLCESE WD - 2800 ACRE WELL EXCHANGE

2

21

February

Date: March 1, 1990

SNOW SURVEY DATA FOR KERN RIVER BASIN

SNOW COURSE	CALIF. NUMBER	ELEV. IN FEET	APRIL 1ST AVERAGE WATER CONTENT	DATE MEASURED	SNOW DEPTH IN INCHES	DENSITY (%)	WATER CONTENT IN INCHES	% OF APRIL 1ST AVERAGE	MEASURED BY
Bighorn Plateau	250	11,350	22.4	1-26	17.8	21%	3.7	17%	DMR
				3-01	30.8	36%	11.2	50%	DMR
Cottonwood Pass	251	11,050	14.1	1-31	13.5	21%	2.9	21%	DMR
				2-26	15.5	40%	6.2	44%	DMR
Siberian Pass	252	10,900	18.8	1-24	15.5	25%	3.9	21%	DMR
				2-27	24.1	36%	8.6	46%	DMR
Crabtree Meadow	253	10,700	19.3	1-27	20.8	22%	4.6	24%	DMR
				3-01	27.8	36%	9.9	51%	DMR
Guyot Flat	254	10,650	20.4	1-25	21.1	22%	4.6	23%	DMR
				2-28	29.7	34%	10.1	50%	DMR
Tyndall Creek	255	10,650	18.8	1-26	20.4	24%	4.8	26%	DMR
				3-02	28.5	34%	9.7	52%	DMR
Sandy Meadow	275	10,650	18.7	1-27	17.0	20%	3.4	18%	DMR
				3-01	23.4	40%	9.3	50%	DMR
Big Whitney Meadow	257	9,750	17.0	1-31	17.0	21%	3.6	21%	DMR
				2-25	26.9	36%	9.7	57%	DMR
Rock Creek	256	9,600	17.6	1-28	19.2	20%	3.8	22%	DMR
				2-28	27.3	37%	10.2	58%	DMR
Round Meadow	258	9,000	26.5	1-31	24.9	22%	5.5	21%	CMRD
				2-28	39.9	32%	12.7	48%	CMRD
Ramshaw Meadow	259	8,700	12.3	1-30	13.8	16%	2.2	18%	DMR
				3-04	18.2	45%	8.1	66%	DMR
Little Whitney Meadow	260	8,500	14.6	1-29	18.2	19%	3.4	23%	DMR
				3-03	24.2	38%	9.1	62%	DMR
Casa Vieja Meadow	262	8,400	20.7	2-01	25.9	22%	5.6	27%	CMRD
				3-01	40.2	25%	10.2	49%	CMRD
Quinn Ranger Station	264	8,350	20.9	3-01	28.0	29%	8.2	39%	SNMP
Bonita Meadows	261	8,300	15.0	2-02	20.2	25%	5.0	33%	CMRD
Beach Meadows	265	7,650	9.9	1-31	15.1	16%	2.4	24%	CMRD
				2-28	17.3	33%	5.7	58%	CMRD

CALIFORNIA COOPERATIVE SNOW SURVEYS FORECAST as of MARCH 1, 1990 for KERN RIVER INFLOW TO ISABELLA RESERVOIR...
 April-July = 180,000 acre-feet (37% of Average) *** Water Year = 285,000 acre-feet (38% of Average)
 80 Percent Probability Range (Actual runoff should fall within the stated limits eight times out of ten)....
 April-July = 130,000 ac.ft. to 370,000 ac.ft. *** Water Year = 210,000 ac.ft. to 510,000 ac.ft.

DAY	ELEVATION (FEET)	ISABELLA		RESERVOIR		FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST PT.	CHANGE IN STORAGE		COMPUTED 1ST POINT NATURAL FLOW	MEAN STORAGE		FRONT-KERN INFLOW DRY
		MIDNIGHT	STORBE	S.F.D.	LOSS			STORAGE + LOSS	POINT + FLOW ABOVE 1ST PT.		RECREATION Pool + Dead Storage = 15,218 S.F.D. (30,184 ACFT)	TOTAL IRRIGATION		KERN COUNTY RECREATION POOL LOSS AT 2ND PT.	2ND POINT GROUP FLOW
End of Previous Month	2541.92	81,570	41,125	41,125	***	***	***	319	***	***	41,125	25,907	***
1	2541.87	81,388	41,033	13	363	2	286	289	41,036	25,818	4	0	0
2	2541.82	81,207	40,942	12	372	2	295	301	40,951	25,733	3	0	0
3	2541.80	81,134	40,905	15	343	1	322	322	40,914	25,696	4	0	0
4	2541.78	81,062	40,869	21	363	2	350	338	40,866	25,648	6	0	0
5	2541.73	80,882	40,778	6	425	2	342	332	40,765	25,547	2	0	0
6	2541.65	80,593	40,632	10	438	2	304	318	40,633	25,415	3	0	0
7	2541.55	80,232	40,450	18	470	1	307	310	40,454	25,236	5	0	0
8	2541.45	79,874	40,270	15	483	2	320	322	40,276	25,058	4	0	0
9	2541.35	79,516	40,089	12	505	2	338	332	40,089	24,871	3	0	0
10	2541.27	79,231	39,946	13	466	2	338	339	39,947	24,729	4	0	0
11	2541.20	78,983	39,821	8	458	1	342	336	39,816	24,598	2	0	0
12	2541.14	78,770	39,713	8	426	2	328	331	39,711	24,493	2	0	0
13	2541.09	78,592	39,623	11	399	2	322	302	39,601	24,383	3	0	0
14	2541.02	78,345	39,499	15	364	2	257	304	39,524	24,306	4	0	0
15	2540.98	78,204	39,428	15	386	1	331	311	39,433	24,215	4	0	0
16	2540.96	78,133	39,392	22	358	2	346	340	39,391	24,173	7	0	0
17	2540.94	78,063	39,357	24	352	2	343	340	39,353	24,135	7	0	0
18	2540.93	78,028	39,339	18	329	2	331	349	39,353	24,135	5	0	0
19	2540.92	77,992	39,321	27	361	2	372	353	39,316	24,098	8	0	0
20	2540.90	77,922	39,286	18	372	2	357	382	39,306	24,088	5	0	0
21	2540.88	77,852	39,250	28	423	2	417	402	39,255	24,037	8	0	0
22	2540.87	77,816	39,232	22	425	3	432	425	39,230	24,012	7	0	0
23	2540.85	77,746	39,197	27	431	2	425	441	39,211	23,993	8	0	0
24	2540.86	77,781	39,215	26	419	2	465	458	39,222	24,004	8	0	0
25	2540.88	77,852	39,250	30	417	3	485	488	39,260	24,042	9	0	0
26	2540.92	77,992	39,321	26	415	2	514	500	39,317	24,099	8	0	0
27	2540.95	78,098	39,374	25	420	2	500	503	39,373	24,155	7	0	0
28	2540.98	78,204	39,428	22	415	3	494	490	39,423	24,205	7	0	0
29	2541.00	78,275	39,464	23	416	2	477	475	39,457	24,239	7	0	0
30	2541.01	78,309	39,481	26	410	2	455	462	39,481	24,263	8	0	0
31	2541.00	78,275	39,464	23	416	3	425	425	39,464	24,246	7	0	0
TOTAL SECOND FOOT DAYS			579	12,640	62	11,620	11,620	169	0	0			
TOTAL ACRE-FEET		1,148	25,071	124	23,048	23,048	78,275	48,091	0	0			

By: *[Signature]* Date: April 12, 1990

NORTH KERN WATER STORAGE DISTRICT BUENA VISTA WATER STORAGE DISTRICT HACIENDA WATER DISTRICT

DAY	FLOW ABOVE FIRST POINT				FLOW ABOVE FIRST POINT				FLOW ABOVE FIRST POINT				RESERVOIR				ENTITLEMENT				RESERVOIR													
	ENT'L AT 1ST POINT	La LAKE INC.	La LAKE INC.	La LAKE INC.	ENT'L AT 1ST POINT	La LAKE INC.	La LAKE INC.	La LAKE INC.	ENT'L AT 1ST POINT	La LAKE INC.	La LAKE INC.	La LAKE INC.	LOSS	STORAGE	CONTRIBUTED BY: NWISD	CONTRIBUTED BY: BMSD	LOSS	STORAGE	CONTRIBUTED BY: NWISD	CONTRIBUTED BY: BMSD	LOSS	STORAGE	CONTRIBUTED BY: NWISD	CONTRIBUTED BY: BMSD	LOSS	STORAGE	CONTRIBUTED BY: NWISD	CONTRIBUTED BY: BMSD	LOSS	STORAGE				
End of Previous Month	**	**	***	***	**	**	**	**	**	**	**	**	***	8,002	**	**	**	8,002	**	**	**	***	270	**	**	***	270	**	**	***	270			
1	286	337	1	0	9	17,574	3	0	26	0	0	0	4	7,974	0	0	4	7,974	0	0	0	0	0	0	0	0	0	0	0	0	270			
2	301	346	0	0	8	17,521	0	0	26	0	0	0	4	7,942	0	0	4	7,942	0	0	0	0	0	0	0	0	0	0	0	0	270			
3	315	323	0	0	11	17,502	7	0	20	0	0	0	4	7,924	0	0	4	7,924	0	0	0	0	0	0	0	0	0	0	0	0	270			
4	326	336	1	0	15	17,476	12	0	27	0	0	0	6	7,902	0	0	6	7,902	0	0	0	0	0	0	0	0	0	0	0	0	270			
5	322	392	0	0	4	17,402	10	0	33	0	0	0	2	7,875	0	0	2	7,875	0	0	0	0	0	0	0	0	0	0	0	0	270			
6	312	408	1	0	7	17,298	6	0	30	0	0	0	3	7,847	0	0	3	7,847	0	0	0	0	0	0	0	0	0	0	0	0	270			
7	307	439	0	0	13	17,153	3	0	31	0	0	0	5	7,813	0	0	5	7,813	0	0	0	0	0	0	0	0	0	0	0	0	270			
8	315	450	1	0	11	17,006	7	0	33	0	0	0	4	7,782	0	0	4	7,782	0	0	0	0	0	0	0	0	0	0	0	0	270			
9	322	471	0	0	8	16,849	10	0	34	0	0	0	4	7,752	0	0	4	7,752	0	0	0	0	0	0	0	0	0	0	0	0	270			
10	327	438	1	0	9	16,728	12	0	28	0	0	0	4	7,731	0	0	4	7,731	0	0	0	0	0	0	0	0	0	0	0	0	270			
11	325	428	0	0	6	16,619	11	0	30	0	0	0	2	7,709	0	0	2	7,709	0	0	0	0	0	0	0	0	0	0	0	0	270			
12	321	387	1	0	6	16,546	10	0	39	0	0	0	2	7,677	0	0	2	7,677	0	0	0	0	0	0	0	0	0	0	0	0	270			
13	301	328	0	0	8	16,511	1	0	71	0	0	0	3	7,602	0	0	3	7,602	0	0	0	0	0	0	0	0	0	0	0	0	270			
14	303	300	1	0	11	16,502	1	0	64	0	0	0	4	7,534	0	0	4	7,534	0	0	0	0	0	0	0	0	0	0	0	0	270			
15	308	345	0	0	11	16,454	3	0	41	0	0	0	4	7,491	0	0	4	7,491	0	0	0	0	0	0	0	0	0	0	0	0	270			
16	327	316	1	0	16	16,448	13	0	42	0	0	0	6	7,455	0	0	6	7,455	0	0	0	0	0	0	0	0	0	0	0	0	270			
17	327	318	1	0	17	16,440	13	0	34	0	0	0	7	7,425	0	0	7	7,425	0	0	0	0	0	0	0	0	0	0	0	0	270			
18	333	311	1	0	13	16,448	16	0	18	0	0	0	5	7,417	0	0	5	7,417	0	0	0	0	0	0	0	0	0	0	0	0	270			
19	336	345	1	0	19	16,419	17	0	16	0	0	0	8	7,409	0	0	8	7,409	0	0	0	0	0	0	0	0	0	0	0	0	270			
20	356	356	1	0	13	16,405	26	0	16	0	0	0	5	7,413	0	0	5	7,413	0	0	0	0	0	0	0	0	0	0	0	0	270			
21	370	410	1	0	20	16,344	32	0	13	0	0	0	8	7,423	0	0	8	7,423	0	0	0	0	0	0	0	0	0	0	0	0	270			
22	385	414	1	0	16	16,298	40	0	11	0	0	0	6	7,444	0	0	6	7,444	0	0	0	0	0	0	0	0	0	0	0	0	270			
23	396	390	1	0	19	16,284	45	31	10	0	0	0	8	7,439	0	0	8	7,439	0	0	0	0	0	0	0	0	0	0	0	0	270			
24	408	382	1	0	18	16,291	50	28	9	0	0	0	8	7,443	0	0	8	7,443	0	0	0	0	0	0	0	0	0	0	0	0	270			
25	428	381	1	0	21	16,316	60	27	9	0	0	0	9	7,456	0	0	9	7,456	0	0	0	0	0	0	0	0	0	0	0	0	270			
26	436	379	1	0	18	16,354	64	30	6	0	0	0	1	7,475	0	0	1	7,475	0	0	0	0	0	0	0	0	0	0	0	0	270			
27	438	382	1	0	18	16,391	65	32	6	0	0	0	7	7,494	0	0	7	7,494	0	0	0	0	0	0	0	0	0	0	0	0	270			
28	430	379	1	0	16	16,425	60	32	4	0	0	0	6	7,510	0	0	6	7,510	0	0	0	0	0	0	0	0	0	0	0	0	270			
29	419	379	1	0	16	16,448	56	26	11	0	0	0	7	7,521	0	0	7	7,521	0	0	0	0	0	0	0	0	0	0	0	0	270			
30	410	375	1	0	18	16,464	52	23	12	0	0	0	8	7,529	0	0	8	7,529	0	0	0	0	0	0	0	0	0	0	0	0	270			
31	385	380	1	0	16	16,452	40	24	12	0	0	0	7	7,524	0	0	7	7,524	0	0	0	0	0	0	0	0	0	0	0	0	270			
S.F.D.	10,875	11,625	22	0	411	16,452	745	253	762	0	0	0	168	7,524	0	0	168	7,524	0	0	0	0	0	0	0	0	0	0	0	0	270			
AC.F.T.	21,570	23,058	44	0	815	32,631	1,478	502	1,511	0	0	0	333	14,324	0	0	333	14,324	0	0	0	0	0	0	0	0	0	0	0	0	536			
TOTAL ACRE-FOOT STORAGE DAYS																	467,964																	15,602

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH
=====

DAY(S)
=====

PAGE NO.
=====

TITLE OF COLUMN
=====

March

None

Date: April 1, 1990

SNOW SURVEY DATA FOR KERN RIVER BASIN

SNOW COURSE	CALIF. NUMBER	ELEV. IN FEET	APRIL 1ST AVERAGE WATER CONTENT	DATE MEASURED	SNOW DEPTH IN INCHES	DENSITY (g)	WATER CONTENT IN INCHES	% OF APRIL 1ST AVERAGE	MEASURED BY
Bighorn Plateau	250	11,350	22.4	1-26	17.8	21%	3.7	17%	DMR
				3-01	30.8	36%	11.2	50%	DMR
				3-26	23.7	32%	7.5	34%	DMR
Cottonwood Pass	251	11,050	14.1	1-31	13.5	21%	2.9	21%	DMR
				2-26	13.5	40%	6.2	44%	DMR
				3-31	6.6	23%	1.9	13%	DMR
Siberian Pass	252	10,900	18.8	1-24	15.5	25%	3.9	21%	DMR
				2-27	24.1	36%	8.6	46%	DMR
				3-23	20.1	30%	6.1	32%	DMR
Crabtree Meadow	253	10,700	19.3	1-27	20.8	22%	4.5	24%	DMR
				3-01	27.8	36%	9.9	51%	DMR
				3-27	16.7	40%	6.6	34%	DMR
Guyot Flat	254	10,650	20.4	1-25	21.1	22%	4.6	23%	DMR
				2-28	29.7	34%	10.1	50%	DMR
				3-27	22.0	33%	7.2	35%	DMR
Tyndall Creek	255	10,650	18.8	1-26	20.4	24%	4.8	26%	DMR
				3-02	28.5	34%	9.7	52%	DMR
				3-26	23.6	33%	7.9	42%	DMR
Sandy Meadow	275	10,650	18.7	1-27	17.0	20%	3.4	18%	DMR
				3-01	23.4	40%	9.3	50%	DMR
				3-25	14.5	34%	4.9	26%	DMR
Big Whitney Meadow	257	9,750	17.0	1-31	17.0	21%	3.5	21%	DMR
				2-25	26.9	36%	9.7	57%	DMR
				3-30	15.6	40%	6.2	36%	DMR
Rock Creek	256	9,600	17.6	1-28	19.2	20%	3.8	22%	DMR
				2-28	27.3	37%	10.2	58%	DMR
				3-27	11.5	35%	4.0	23%	DMR
Round Meadow	258	9,000	26.5	1-31	24.9	22%	5.5	21%	DMR
				2-28	39.9	32%	12.7	48%	DMR
				4-02	25.3	39%	9.9	37%	DMR
Ramshaw Meadow	259	8,700	12.3	1-30	13.8	16%	2.2	18%	DMR
				3-04	18.2	45%	8.1	66%	DMR
				3-29	2.9	31%	0.9	7%	DMR
Little Whitney Meadow	260	8,500	14.6	1-29	18.2	19%	3.4	23%	DMR
				3-03	24.2	38%	9.1	62%	DMR
				3-28	6.3	25%	2.2	15%	DMR
Casa Vieja Meadow	262	8,400	20.7	2-01	23.9	22%	5.6	27%	DMR
				3-01	40.2	25%	10.2	49%	DMR
				3-31	28.0	29%	8.2	39%	DMR
Quinn Ranger Station	264	8,350	20.9	3-31	11.7	42%	4.9	23%	SKNP
				2-02	20.2	25%	5.0	23%	DMR
				4-02	3.8	42%	1.6	11%	DMR
Bonita Meadows	261	8,300	15.0	1-31	15.1	15%	2.4	24%	DMR
				2-28	17.3	33%	5.7	58%	DMR
				3-28	17.3	33%	5.7	58%	DMR

CALIFORNIA COOPERATIVE SNOW SURVEYS FORECAST as of APRIL 1, 1990 for KERN RIVER INFLOW TO ISABELLA RESERVOIR...
 April-July = 130,000 acre-feet (26% of Average) *** Water Year = 250,000 acre-feet (29% of Average)
 80 Percent Probability Range (Actual runoff should fall within the stated limits eight times out of ten)....
 April-July = 90,000 ac. ft. to 220,000 ac. ft. *** Water Year = 175,000 ac. ft. to 320,000 ac. ft.

DAY	ELEVATION (FEET)	ISOBELLA RESERVOIR		LOSS S.F.D.	FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST PT. ABOVE 1ST PT.	CHANGE IN STORAGE+LOSS+1ST POINT+FLOW ABOVE 1ST PT.	COMPUTED 1ST POINT NATURAL FLOW	MEAN STORAGE		FRONT-KERN INFLOW DAY
		MIDNIGHT ACRE-FEET	STORAGE						RECREATION POOL + DEAD STORAGE = 15,218 S.F.D. (30,184 ACFT)	COUNTY RECREATION POOL LOSS AT 2ND PT.	
End of Previous Month	2541.00	78,275	39,464	***	***	***	425	***	39,464	24,246	***
1	2540.99	78,239	39,446	31	402	3	418	420	39,448	24,230	9
2	2540.99	78,239	39,446	23	398	2	423	418	39,443	24,225	7
3	2540.98	78,204	39,428	27	403	3	415	435	39,445	24,227	8
4	2541.00	78,275	39,464	15	412	3	466	443	39,458	24,240	4
5	2541.00	78,275	39,464	27	419	3	449	442	39,451	24,233	8
6	2540.98	78,204	39,428	28	417	2	411	437	39,441	24,223	8
7	2540.98	78,204	39,428	23	425	3	451	429	39,419	24,201	7
8	2540.97	78,169	39,410	24	416	3	425	432	39,408	24,190	7
9	2540.96	78,133	39,392	24	413	2	421	427	39,396	24,178	7
10	2540.95	78,098	39,374	35	415	3	435	436	39,379	24,161	10
11	2540.95	78,098	39,374	36	412	3	451	470	39,398	24,180	11
12	2540.99	78,239	39,446	36	413	2	523	521	39,468	24,250	11
13	2541.07	78,521	39,588	39	406	3	590	586	39,606	24,388	12
14	2541.18	78,912	39,785	32	412	3	644	637	39,796	24,578	9
15	2541.31	79,374	40,018	33	407	3	676	699	40,052	24,834	10
16	2541.50	80,054	40,361	26	407	2	778	689	40,306	25,088	8
17	2541.60	80,412	40,541	17	415	3	615	665	40,536	25,318	5
18	2541.69	80,737	40,705	26	409	3	602	590	40,688	25,470	7
19	2541.75	80,954	40,814	31	410	2	582	570	40,815	25,597	9
20	2541.81	81,170	40,923	31	413	3	556	556	40,924	25,706	9
21	2541.87	81,388	41,033	31	415	3	559	531	41,006	25,788	9
22	2541.89	81,461	41,070	33	407	2	479	509	41,073	25,855	9
23	2541.92	81,570	41,125	16	416	3	490	526	41,164	25,946	5
24	2542.01	81,897	41,290	25	416	3	609	540	41,260	26,042	7
25	2542.05	82,043	41,363	35	409	3	520	543	41,356	26,138	10
26	2542.08	82,153	41,419	35	406	2	499	525	41,438	26,220	10
27	2542.14	82,372	41,529	40	402	3	553	583	41,576	26,358	11
28	2542.27	82,649	41,770	45	405	3	694	658	41,781	26,563	12
29	2542.42	83,402	42,049	40	405	2	725	715	42,049	26,831	11
30	2542.57	83,957	42,328	21	408	3	711	711	42,328	27,110	6
31	*****										
TOTAL SECOND FOOT DAYS		885	12,313	81	16,143	16,143	256	0	0	0	0
TOTAL ACRE-FEET		1,755	24,422	161	32,019	32,019	83,957	53,773	508	0	0

By:  Date: MAY 8, 1990

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH	DAY(S)	PAGE NO.	TITLE OF COLUMN	COMMENT
April	10	2	BWMS FLOW - VIA NWMSD	Delivered pursuant to terms of BUENA VISTA WATER STORAGE DISTRICT/ North Kern Water Storage District exchange agreement dated March 19, 1990.

KERN RIVER BASIN - HISTORICAL SNOW COURSE DATA
APRIL 1ST WATER CONTENT IN INCHES

YEAR	BIGHORN PLATEAU	COTTONWOOD PASS	SIBERTON PASS	CROSBY MEADOW	SUNOT FLAT	SONDY MEADOWS	TYNDALL CREEK	BIG WHITNEY MEADOW	ROCK CREEK	ROUND MEADOW	RAMSHAW MEADOWS	LITTLE WHITNEY MEADOW	CRSA VIEJA MEADOWS	QUINN RANGER STATION	BONITA MEADOWS	BEACH MEADOWS	BASIN WIDE AVERAGE	A-J RUNOFF IN PERCENT OF AVERAGE
1948		3.8	6.6	9.1	12.8	12.0	12.7	4.9	9.8	18.5	4.4	5.2	10.6	14.6	10.5	6.8	8.6	514
1949	13.2	5.8	18.5	17.8	16.8	18.8	16.8	16.1	16.9	30.2	9.4	10.8	15.0	20.1	15.0	10.3	13.1	444
1950	21.0	8.3	12.5	9.7	10.5	11.8	10.5	9.7	7.5	4.3	0.0	0.0	0.0	17.6	0.0	7.1	16.6	634
1951	17.3	32.2	35.0	35.3	34.2	37.7	34.2	35.3	35.3	53.9	30.9	33.2	44.9	49.1	32.5	25.2	37.1	554
1952	43.2	9.4	14.1	12.7	12.9	14.2	12.3	12.3	12.1	18.4	6.3	9.2	11.7	17.4	8.2	5.3	12.1	2374
1953	16.8	11.8	18.0	16.8	18.7	18.0	18.3	15.7	18.3	29.2	12.2	8.0	23.5	21.3	13.4	10.1	17.8	734
1954	22.0	8.1	11.5	13.4	13.1	15.3	13.1	10.7	13.3	14.9	7.0	8.0	11.3	13.5	6.5	3.3	11.1	484
1955	14.7	12.6	26.7	28.7	25.1	27.9	24.3	21.7	23.0	22.3	9.0	13.5	15.1	12.8	8.9	0.0	18.9	1114
1956	33.3	11.7	14.1	11.8	10.5	12.6	11.2	11.5	10.9	14.7	6.8	7.1	30.9	14.4	6.3	0.0	10.5	624
1957	14.3	20.5	25.0	23.5	24.5	21.5	24.0	22.7	23.7	39.2	17.0	21.2	30.9	—	26.6	21.6	24.8	1764
1958	25.9	5.7	9.7	9.0	7.3	9.7	9.2	8.4	8.7	6.0	3.6	6.8	8.4	5.7	1.8	0.0	7.0	284
1959	10.3	4.7	9.4	9.4	7.9	7.8	9.5	9.4	6.5	20.2	2.0	2.5	9.1	11.9	6.9	2.7	8.4	364
1960	6.0	3.8	6.0	7.1	4.5	4.5	4.3	6.3	4.8	12.8	0.0	0.0	6.0	1.6	2.1	0.0	4.6	184
1961	5.0	27.0	31.8	33.7	32.6	35.5	31.4	30.7	30.5	40.5	—	—	32.1	35.3	27.6	21.3	32.0	1094
1962	37.4	17.5	16.1	17.1	17.2	18.4	17.2	17.0	13.5	12.6	—	—	11.0	5.6	5.7	1.0	13.5	1014
1963	19.7	1.5	3.9	6.1	5.4	6.1	4.8	4.3	5.8	15.1	8.6	11.4	8.1	10.8	5.2	2.7	6.1	394
1964	5.1	13.1	16.4	20.1	19.8	18.0	17.8	13.7	15.0	23.2	5.3	6.9	17.0	16.5	10.3	4.7	16.0	974
1965	25.8	7.1	14.0	12.9	13.2	15.3	13.2	11.6	10.9	19.4	13.5	20.3	14.2	10.6	10.9	4.0	11.5	464
1966	37.1	25.2	32.9	32.2	30.6	35.8	30.0	30.3	30.4	19.4	7.6	6.2	27.8	—	14.5	3.0	25.5	1934
1967	14.1	8.9	12.6	12.3	11.8	14.0	11.6	12.6	11.1	17.5	38.1	46.1	12.9	9.7	8.6	4.1	11.0	534
1968	55.3	41.1	48.4	48.5	46.3	50.6	48.6	45.0	45.8	69.8	4.5	7.2	61.4	59.8	50.2	36.8	49.5	3704
1969	17.0	9.1	12.6	16.4	15.1	14.7	14.5	11.4	12.5	16.7	3.3	5.5	13.4	15.9	6.1	4.1	11.8	684
1970	15.7	5.7	12.6	16.4	15.5	14.7	13.1	10.8	11.1	21.2	0.0	0.0	14.0	2.2	9.4	3.4	11.2	274
1971	7.6	2.5	6.6	6.3	5.2	7.6	3.4	4.1	4.1	4.6	0.0	0.0	3.4	40.8	0.0	0.0	3.7	1534
1972	33.6	24.4	30.0	31.7	31.3	33.7	31.8	27.2	30.4	42.7	24.1	28.2	31.7	40.8	28.1	22.3	30.8	1534
1973	18.9	9.7	15.0	20.5	19.0	22.6	20.4	19.1	16.1	29.8	14.3	14.8	21.2	22.0	—	10.1	13.4	1134
1974	25.4	13.2	20.6	16.9	16.2	17.6	15.1	15.9	16.1	26.8	11.6	14.0	20.7	22.3	—	10.3	16.5	824
1975	18.9	4.4	5.8	3.3	3.3	5.4	4.7	5.5	3.6	11.9	0.9	0.0	7.2	6.3	2.2	2.2	4.8	234
1976	5.9	4.4	4.0	3.3	3.2	4.8	3.5	4.9	3.1	10.8	2.1	0.0	—	2.0	3.6	0.0	3.7	204
1977	5.0	3.5	4.0	4.7	4.7	4.8	4.6	3.7	3.6	4.8	31.9	37.5	41.1	43.7	6.7	0.0	3.7	204
1978	43.1	40.1	40.1	39.7	41.7	41.7	40.6	37.3	39.6	46.8	12.6	14.2	41.1	43.7	32.2	23.6	38.7	2314
1979	19.9	13.2	17.5	18.2	17.7	17.5	18.8	14.7	14.2	25.0	21.2	27.4	—	—	18.2	14.9	16.9	894
1980	40.9	29.4	34.4	34.3	34.5	34.5	35.7	29.5	33.5	23.3	12.6	27.4	30.0	36.7	18.7	16.2	30.2	2104
1981	22.4	11.8	13.0	14.0	14.1	14.8	15.8	10.9	12.8	17.4	8.6	9.6	14.6	15.7	12.3	7.5	13.0	534
1982	15.3	17.4	24.6	23.2	24.3	24.3	26.3	20.3	23.7	31.0	15.2	19.0	29.2	—	23.0	11.6	23.0	1684
1983	48.9	34.9	45.0	45.3	46.9	49.2	43.7	38.6	44.7	63.4	33.2	37.6	48.1	52.1	42.2	30.6	44.0	3274
1984	21.9	9.7	15.4	20.1	17.6	18.1	17.0	12.9	13.8	15.7	2.1	2.6	9.4	9.4	17.7	10.8	18.3	894
1985	18.6	17.2	20.5	17.2	16.3	17.6	15.5	19.0	18.9	26.2	14.6	13.0	23.5	19.1	17.3	11.6	18.3	904
1986	45.1	34.1	39.3	38.6	37.3	38.6	35.1	34.8	36.5	44.2	22.8	25.4	35.0	29.8	21.3	11.5	32.6	1874
1987	11.3	7.6	8.9	9.3	9.2	11.5	11.0	7.8	8.1	15.8	6.3	8.3	9.8	17.3	9.0	0.0	9.5	454
1988	9.5	5.3	7.8	8.8	8.9	8.9	9.0	4.0	6.3	7.2	0.0	0.0	2.7	2.4	0.4	0.0	5.1	344
1989	15.3	10.2	13.0	12.3	13.3	15.7	11.0	14.4	14.1	21.7	7.3	11.5	17.2	12.9	14.6	5.2	13.1	504
1990	7.6	1.9	6.1	6.6	4.9	7.2	7.9	6.2	4.0	9.9	0.9	2.2	—	4.9	1.6	0.0	4.8	—
MAXIMUM	55.3	41.1	48.4	48.5	50.6	46.9	48.6	45.0	45.8	69.8	38.1	46.1	61.4	59.8	50.2	36.8	49.5	—
MINIMUM	5.0	1.5	3.9	3.3	4.8	3.2	3.4	4.0	3.1	4.3	0.0	0.0	0.0	1.6	0.0	0.0	3.7	—
AVERAGE	21.9	13.9	18.3	18.3	20.0	18.3	18.3	16.6	17.2	24.3	10.8	12.9	19.5	18.4	13.5	8.3	16.9	1004

(1948-1990)

DAY	ELEVATION (FEET)	ISABELLA RESERVOIR		LOSS	FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST POINT	RIO BRAVO WELL	CHANGE IN STORAGE+LOSS		COMPUTED 1ST NATURAL FLOW	MEAN STORAGE		KERN COUNTY RECREATION POOL + DEAD STORAGE = 15,218 S.F.D. (30,184 ACF1)	KERN COUNTY RECREATION POOL LOSS	2ND POINT GROUP FLOW AT 2ND PT.	FRONT-KERN INFLOW DAY
		MIDNIGHT	STORAGE					MIDNIGHT	STORAGE		+1ST POINT	+FLOW ABOVE 1ST PT. -RIO BRAVO WELL					RECREATION POOL + DEAD STORAGE	TOTAL IRRIGATION
End of Previous Month	2542.57	83,957	42,328	***	***	***	***	711	***	***	42,328	27,110	***	***	***	***
1	2542.66	84,291	42,497	33	401	4	0	607	607	607	42,497	27,279	9	0	0	1
2	2542.72	84,515	42,610	36	406	3	0	558	558	558	42,610	27,392	10	0	0	2
3	2542.77	84,701	42,703	44	404	4	0	545	554	554	42,712	27,494	12	0	0	3
4	2542.83	84,925	42,816	45	411	3	0	572	586	586	42,839	27,621	12	0	0	4
5	2542.93	85,300	43,005	45	403	4	0	641	638	638	43,025	27,807	12	0	0	5
6	2543.06	85,789	43,252	48	404	3	0	702	722	722	43,292	28,074	13	0	0	6
7	2543.25	86,507	43,614	56	402	4	0	824	797	797	43,627	28,409	15	0	0	7
8	2543.46	87,306	44,017	56	401	4	0	864	845	845	44,011	28,793	15	0	0	8
9	2543.66	88,071	44,402	54	403	3	0	845	829	829	44,380	29,162	14	0	0	9
10	2543.83	88,725	44,732	39	405	4	0	778	800	800	44,732	29,514	10	0	0	10
11	2544.00	89,383	45,064	45	398	3	0	778	732	732	45,018	29,800	11	0	0	11
12	2544.09	89,732	45,240	50	411	4	0	641	695	695	45,248	30,030	13	0	0	12
13	2544.19	90,122	45,437	47	419	4	0	667	640	640	45,418	30,200	12	0	0	13
14	2544.26	90,395	45,574	56	414	3	0	610	638	638	45,583	30,365	14	0	0	14
15	2544.35	90,747	45,752	50	406	4	0	638	613	613	45,736	30,518	13	0	0	15
16	2544.42	91,022	45,890	38	412	3	0	591	587	587	45,870	30,652	9	0	0	16
17	2544.45	91,140	45,950	51	416	4	0	531	573	573	45,972	30,754	13	0	0	17
18	2544.51	91,376	46,069	51	422	4	0	596	544	544	46,039	30,821	13	0	0	18
19	2544.53	91,455	46,109	38	422	4	0	504	545	545	46,120	30,902	9	0	0	19
20	2544.56	91,573	46,168	47	424	4	0	534	509	509	46,154	30,936	12	0	0	20
21	2544.57	91,613	46,188	45	419	4	0	488	533	533	46,219	31,001	11	0	0	21
22	2544.62	91,810	46,288	51	423	4	0	578	524	524	46,265	31,047	13	0	0	22
23	2544.64	91,889	46,327	43	421	4	0	507	560	560	46,357	31,139	11	0	0	23
24	2544.70	92,127	46,447	51	421	4	2	594	564	564	46,447	31,229	13	0	0	24
25	2544.76	92,364	46,567	47	424	4	3	592	563	563	46,538	31,320	12	0	0	25
26	2544.78	92,444	46,607	43	420	4	3	504	533	533	46,607	31,389	11	0	0	26
27	2544.80	92,523	46,647	26	422	4	3	489	489	489	46,647	31,429	6	0	0	27
28	2544.89	92,882	46,828	23	426	4	3	631	631	631	46,828	31,610	6	0	0	28
29	2545.03	93,440	47,109	34	429	5	3	746	746	746	47,109	31,891	8	0	0	29
30	2545.13	93,842	47,312	47	429	4	2	681	681	681	47,312	32,094	11	0	0	30
31	2545.22	94,204	47,495	25	415	5	3	625	625	625	47,495	32,277	6	0	0	31
TOTAL	SECOND FOOT DRY			1,364	12,833	119	22	19,461	19,461	19,461	*****	*****	349	0	0	0
TOTAL	ACRE-FEET			2,705	25,454	236	43	38,500	38,500	38,500	94,204	64,020	692	0	0	0

By:  Date: JUNE 8, 1990

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH	DAY(S)	PAGE NO.	TITLE OF COLUMN	COMMENT
May	24	1	RIO BRAVO WELL	Reflects pumping of well water into Kern River channel for conveyance downstream of First Point of Measurement pursuant to Kern River Watermaster/Michel Enterprises letter agreement dated May 24, 1990.

BAKERSFIELD, CALIFORNIA TEMPERATURE NORMALS AND EXTREMES

Date	JUNE				JULY				AUGUST																									
	MAXIMUM		MINIMUM		MAXIMUM		MINIMUM		MAXIMUM		MINIMUM		NORMALS																					
	High	Low																																
1 110	1970	65	1953	75	1970	48	1967	88	61	75	115	1950	85	1976	80	1977	57	1943	97	68	82	112	1979	86	1985	80	1977	58	1989	99	70	84	1	
2 109	1970	76	1971	78	1960	51	1966	89	61	75	114	1950	83	1983	76	1977	56	1975	97	68	83	109	1979	86	1976	79	1945	60	1989	99	70	84	2	
3 109	1972	76	1980	78	1970	50	1943	89	61	75	111	1945	85	1978	79	1970	58	1963	97	69	83	112	1938	81	1953	80	1973	56	1953	98	70	84	3	
4 107	1957	78	1988	77	1960	51	1943	89	62	75	109	1970	82	1955	80	1970	56	1955	97	69	83	107	1938	85	1953	82	1961	57	1956	98	70	84	4	
5 108	1981	73	1988	74	1977	50	1939	89	62	76	110	1970	80	1961	81	1970	53	1948	98	69	83	107	1978	85	1957	80	1978	57	1956	98	70	84	5	
6 107	1978	72	1963	78	1977	47	1988	90	62	76	110	1940	85	1955	80	1950	55	1948	98	69	84	109	1978	86	1957	85	1978	59	1957	98	70	84	6	
7 109	1977	74	1950	79	1977	47	1950	90	62	76	110	1941	85	1983	81	1968	58	1955	98	69	84	109	1978	86	1976	83	1978	60	1988	98	70	84	7	
8 107	1973	65	1965	75	1977	45	1988	90	62	76	110	1941	85	1983	78	1968	54	1983	98	70	84	111	1978	89	1976	85	1978	60	1957	98	69	84	8	
9 108	1973	72	1954	78	1973	50	1988	90	63	77	111	1941	83	1980	77	1975	57	1983	99	70	84	112	1981	86	1949	86	1978	60	1944	97	69	83	9	
10 107	1975	73	1976	74	1975	45	1954	91	63	77	108	1961	88	1955	78	1973	59	1955	99	70	84	108	1970	83	1949	86	1978	58	1949	97	69	83	10	
11 109	1979	73	1963	75	1975	52	1954	91	63	77	110	1961	85	1974	78	1973	58	1974	99	70	85	111	1940	84	1949	83	1978	59	1949	97	69	83	11	
12 110	1979	74	1952	75	1979	47	1952	91	63	77	109	1967	87	1966	79	1967	58	1976	99	70	85	109	1940	86	1949	81	1971	59	1949	97	69	83	12	
13 106	1940	76	1967	76	1975	50	1984	91	64	78	110	1964	89	1962	80	1967	57	1956	99	70	85	108	1944	81	1968	80	1971	58	1945	97	69	83	13	
14 111	1961	70	1962	78	1975	51	1952	92	64	78	110	1972	90	1966	81	1972	60	1966	99	70	85	110	1939	80	1968	79	1967	56	1954	97	69	83	14	
15 113	1961	74	1944	80	1966	51	1965	92	64	78	113	1972	87	1958	83	1972	59	1946	99	70	85	108	1967	82	1972	79	1973	56	1987	97	69	83	15	
16 113	1961	74	1944	78	1982	52	1944	92	64	78	108	1948	84	1958	81	1972	59	1958	99	70	85	106	1939	82	1976	79	1941	56	1954	96	68	82	16	
17 109	1961	78	1979	79	1982	49	1939	93	65	79	109	1949	82	1987	80	1984	58	1987	99	71	85	106	1966	83	1968	79	1967	58	1954	96	68	82	17	
18 106	1945	82	1986	73	1963	53	1944	93	65	79	108	1988	82	1987	78	1988	52	1987	99	71	85	110	1942	84	1976	78	1966	59	1989	96	68	82	18	
19 107	1947	80	1975	75	1988	55	1944	93	65	79	110	1960	82	1983	79	1961	56	1987	100	71	85	109	1950	78	1959	79	1961	56	1938	96	68	82	19	
20 108	1973	82	1944	74	1970	55	1944	93	66	80	112	1938	84	1973	80	1969	55	1987	100	71	85	108	1950	80	1960	77	1961	53	1959	96	68	82	20	
21 109	1970	75	1965	79	1961	53	1944	94	66	80	112	1938	82	1984	80	1969	53	1987	100	71	85	106	1969	82	1983	78	1982	55	1947	95	68	82	21	
23 110	1977	78	1963	81	1977	55	1955	94	66	80	113	1938	88	1984	82	1988	56	1987	100	71	85	106	1974	82	1963	79	1967	55	1943	95	68	81	23	
24 109	1964	80	1950	79	1977	55	1943	95	66	80	112	1942	89	1987	82	1974	60	1987	100	71	85	106	1974	82	1963	79	1967	57	1943	95	68	81	24	
25 112	1957	80	1965	84	1961	51	1943	95	67	81	111	1942	84	1984	84	1974	60	1983	99	71	85	103	1974	85	1954	79	1967	57	1943	95	67	81	25	
26 109	1979	75	1965	80	1977	52	1965	95	67	81	112	1980	84	1965	83	1974	59	1947	99	71	85	105	1988	81	1954	79	1967	52	1942	95	67	81	26	
27 109	1976	82	1941	80	1973	54	1955	95	67	81	110	1980	85	1965	83	1980	60	1965	99	71	85	109	1944	84	1975	74	1972	56	1954	95	67	81	27	
28 114	1976	79	1963	81	1973	53	1983	96	67	82	111	1980	85	1941	83	1980	59	1941	99	71	85	109	1944	82	1953	78	1972	56	1942	94	67	81	28	
29 108	1956	81	1970	76	1956	54	1989	96	68	82	109	1980	87	1965	82	1980	60	1940	99	70	85	107	1981	79	1953	74	1972	55	1942	94	67	81	29	
30 111	1950	79	1982	77	1950	56	1952	96	68	82	108	1943	82	1965	82	1980	59	1987	99	70	85	108	1988	80	1957	76	1988	54	1957	94	67	80	30	
31											110	1943	85	1985	79	1977	60	1989	99	70	85	111	1967	79	1964	78	1967	55	1941	94	67	80	31	
Month	114	1976	65	1965	84	1961	45	1988	92.2	64.3	78.3	115	1950	80	1961	84	1974	52	1987	98.8	70.1	84.5	112	1981	77	1959	86	1978	52	1942	96.4	68.5	82.4	Month

DAY	ELEVATION (FEET)	ISABELLA		RESERVOIR		LOSS	FIRST POINT REGULATED FLOW	FLOW ABOVE	BRAVO WELL	CHANGE IN STORAGE-LOSS		COMPUTED NATURAL FLOW	MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS	2ND POINT GROUP FLOW AT 2ND PT.	FRONT-KERN INFLOW DRY	
		MITONIGHT	STORAGE	S.F.D.	MITONIGHT					STORAGE	Recreation Pool + Dead Storage = 15,218 S.F.D. (30,184 ACF)		TOTAL IRRIGATION					
1	2545.22	94,204	47,495	47,495	47,495	47,495	625	546	3	546	546	47,556	32,338	11	0	0	1	
2	2545.25	94,325	47,556	47,556	47,556	47,556	439	513	3	513	512	47,555	32,337	12	0	0	2	
3	2545.24	94,284	47,535	47,535	47,535	47,535	466	510	4	510	538	47,562	32,344	15	0	0	3	
4	2545.27	94,404	47,595	47,595	47,595	47,595	463	592	3	592	593	47,623	32,405	16	0	0	4	
5	2545.34	94,687	47,738	47,738	47,738	47,738	457	675	3	675	669	47,760	32,542	17	0	0	5	
6	2545.44	95,092	47,942	47,942	47,942	47,942	472	741	3	741	724	47,947	32,729	15	0	0	6	
7	2545.55	95,538	48,167	48,167	48,167	48,167	472	757	3	757	748	48,163	32,945	14	0	0	7	
8	2545.65	95,945	48,372	48,372	48,372	48,372	474	744	3	744	743	48,367	33,149	15	0	0	8	
9	2545.76	96,394	48,599	48,599	48,599	48,599	478	729	3	729	734	48,599	33,381	5	0	0	9	
10	2545.90	96,968	48,888	48,888	48,888	48,888	474	827	3	827	827	48,888	33,670	14	0	0	10	
11	2545.98	97,297	49,054	49,054	49,054	49,054	470	711	4	711	711	49,054	33,836	17	0	0	11	
12	2546.01	97,420	49,116	49,116	49,116	49,116	467	596	3	596	574	49,094	33,876	15	0	0	12	
13	2546.01	97,420	49,116	49,116	49,116	49,116	464	530	3	530	529	49,093	33,875	15	0	0	13	
14	2545.98	97,297	49,054	49,054	49,054	49,054	464	460	3	460	466	49,037	33,819	13	0	0	14	
15	2545.93	97,091	48,950	48,950	48,950	48,950	465	408	3	408	440	48,965	33,747	10	0	0	15	
16	2545.89	96,927	48,867	48,867	48,867	48,867	486	452	4	452	420	48,850	33,632	11	0	0	16	
17	2545.82	96,640	48,723	48,723	48,723	48,723	477	401	3	401	418	48,723	33,505	15	0	0	17	
18	2545.75	96,354	48,579	48,579	48,579	48,579	480	401	3	401	394	48,572	33,354	15	0	0	18	
19	2545.66	96,086	48,393	48,393	48,393	48,393	501	381	3	381	387	48,392	33,174	15	0	0	19	
20	2545.55	95,538	48,167	48,167	48,167	48,167	537	378	4	378	384	48,172	32,954	15	0	0	20	
21	2545.42	95,011	47,901	47,901	47,901	47,901	588	392	3	392	385	47,899	32,681	16	0	0	21	
22	2545.27	94,404	47,595	47,595	47,595	47,595	616	384	3	384	394	47,603	32,385	17	0	0	22	
23	2545.12	93,801	47,291	47,291	47,291	47,291	640	406	3	406	395	47,288	32,070	16	0	0	23	
24	2544.97	93,201	46,989	46,989	46,989	46,989	628	394	3	394	390	46,982	31,764	16	0	0	24	
25	2544.81	92,563	46,667	46,667	46,667	46,667	615	371	3	371	359	46,648	31,430	19	0	0	25	
26	2544.64	91,889	46,327	46,327	46,327	46,327	570	313	3	313	341	46,336	31,118	20	0	0	26	
27	2544.52	91,415	46,088	46,088	46,088	46,088	497	340	3	340	305	46,062	30,844	20	0	0	27	
28	2544.37	90,826	45,791	45,791	45,791	45,791	484	261	3	261	303	45,807	30,589	18	0	0	28	
29	2544.23	90,278	45,515	45,515	45,515	45,515	524	309	4	309	293	45,515	30,297	15	0	0	29	
30	2544.08	89,693	45,220	45,220	45,220	45,220	513	273	3	273	273	45,220	30,002	13	0	0	30	
31	*****																	
TOTAL SECOND FOOT DAYS		1,872	15,140	15,140	15,140	15,140	153	95	14,795	14,795	14,795	14,795	14,795	445	0	0	0	
TOTAL ACRE-FEET		3,713	30,030	30,030	30,030	30,030	304	188	89,693	89,693	89,693	89,693	89,693	883	0	0	0	

By: *[Signature]* Date: JULY 10, 1990

NORTH KERN WATER STORAGE DISTRICT BUENA VISTA WATER STORAGE DISTRICT HACIENDA WATER DISTRICT

DAY	ENT'L FLOW AT 1ST POINT	FLOW ABOVE FIRST POINT		RESERVOIR		ENTITLEMENT		RESERVOIR		CONTRIBUTED BY:		RESERVOIR		RESERVOIR		LOSS	STORAGE	DAY																			
		La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.	La LAKE HACIENDA MINS INC.	La HACIENDA INC.																						
End of Previous Month	**	**	***	***	**	**	**	**	**	**	**	**	**	**	**	**	**	***	270																		
1	468	397	0	32	21,926	78	24	0	18	0	0	3	0	13	10,142	0	0	0	270																		
2	445	411	2	36	21,925	67	23	0	25	0	0	3	0	16	10,142	0	0	0	270																		
3	462	417	1	45	21,928	76	23	0	26	0	0	4	0	19	10,146	0	0	0	270																		
4	500	414	2	47	21,968	93	23	0	26	0	0	3	0	20	10,167	0	0	0	270																		
5	552	410	1	51	22,061	117	39	0	8	0	0	4	0	22	10,211	0	0	0	270																		
6	599	420	2	44	22,187	135	41	0	11	0	0	3	0	19	10,272	0	0	0	270																		
7	606	420	1	41	22,334	142	52	0	0	0	0	3	0	18	10,341	0	0	0	270																		
8	602	421	2	44	22,472	141	53	0	0	0	0	3	0	19	10,407	0	0	0	270																		
9	596	425	1	15	22,630	138	53	0	0	0	0	4	0	7	10,481	0	0	0	270																		
10	659	421	2	43	22,826	168	53	0	0	0	0	3	0	19	10,574	0	0	0	270																		
11	580	420	1	52	22,937	131	50	0	0	0	0	4	0	22	10,629	0	0	0	270																		
12	487	416	2	46	22,963	87	51	0	0	0	0	3	0	19	10,643	0	0	0	270																		
13	456	415	1	45	22,961	73	49	0	0	0	0	4	0	19	10,644	0	0	0	270																		
14	413	414	2	39	22,922	53	50	0	0	0	0	3	0	17	10,627	0	0	0	270																		
15	395	415	2	32	22,871	45	50	0	0	0	0	3	0	13	10,606	0	0	0	270																		
16	382	391	2	34	22,830	38	77	18	0	0	0	3	0	14	10,532	0	0	0	270																		
17	381	386	2	46	22,780	37	73	18	0	0	0	4	0	19	10,455	0	0	0	270																		
18	364	386	2	44	22,715	30	76	18	0	0	0	3	0	19	10,369	0	0	0	270																		
19	359	423	2	45	22,607	28	60	18	0	0	0	3	0	19	10,297	0	0	0	270																		
20	357	463	2	46	22,457	27	56	18	0	0	0	4	0	19	10,227	0	0	0	270																		
21	358	515	2	48	22,253	27	54	19	0	0	0	3	0	20	10,158	0	0	0	270																		
22	364	541	2	51	22,026	30	57	18	0	0	0	3	0	21	10,089	0	0	0	270																		
23	365	567	2	47	21,778	30	55	18	0	0	0	4	0	20	10,022	0	0	0	270																		
24	361	556	2	46	21,538	29	54	18	0	0	0	3	0	20	9,956	0	0	0	270																		
25	340	541	2	53	21,285	19	57	17	0	0	0	3	0	23	9,875	0	0	0	270																		
26	328	505	2	55	21,054	13	47	18	0	0	0	4	0	24	9,795	0	1	1	269																		
27	303	432	2	55	20,871	2	47	18	0	0	0	3	0	24	9,705	0	1	1	268																		
28	302	411	2	51	20,712	1	55	18	0	0	0	3	0	21	9,609	0	0	0	268																		
29	293	449	2	41	20,517	0	58	17	0	0	0	4	0	18	9,512	0	0	0	268																		
30	273	440	2	37	20,314	0	55	18	0	0	0	3	0	16	9,420	0	0	0	268																		
31	*****																																				
S.F.D.	12,940	13,242	53	0	1,311	20,314	1,855	1,515	269	114	0	100	0	559	9,420	0	0	2	268	S.F.D.																	
AC.FT.	25,666	26,266	105	0	2,600	40,293	3,679	3,004	534	226	0	199	0	1,109	18,684	0	0	4	532	AC.FT.																	
TOTAL ACRE-FOOT STORAGE DAYS																		607,047	TOTAL ACRE-FOOT STORAGE DAYS																		16,048

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH ===== DAY(S) ===== PAGE NO. ===== TITLE OF COLUMN ===== COMMENT =====

June 16 2 BMSD FLOW -- FOR CITY Delivered as per terms of BUENA VISTA WATER STORAGE DISTRICT/
City of Bakersfield water exchange agreement dated April 16, 1950.

ISABELLA RESERVOIR

MINIMUM ANNUAL STORAGE QUANTITIES

(1954 - 1989)

YEAR	ACRE-FEET	DATE OF OCCURRENCE
1954	0	Began storage on April 16, 1954
1955	4,330	April 21
1956	79,823	January 1
1957	101,074	December 14
1958	100,947	January 23
1959	71,344	December 19
1960	29,119	December 31
1961	17,410	November 19
1962	17,448	January 11
1963	82,190	January 28
1964	94,497	December 18
1965	117,117	March 23
1966	81,941	November 27
1967	199,282	December 14
1968	119,349	December 7
1968	124,283	December 7
1970	156,517	January 12
1970	156,517	November 24
1971	120,161	November 25
1972	50,030	October 16
1973	55,449	January 7
1974	201,710	March 1
1975	169,893	December 17
1976	67,668	December 29
1977	34,504	December 16
1978	44,060	January 1
1979	208,632	December 30
1980	208,224	January 7
1981	166,907	December 27
1982	168,984	January 1
1983	260,010	January 9
1984	244,755	December 15
1985	189,823	November 23
1986	195,579	January 1
1987	142,661	December 1
1988	72,638	December 9
1989	71,111	February 18

DAY	ISABELLA RESERVOIR		CHANGE IN STORAGE+LOSS		COMPUTED		MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS		FRONT-KERN INFLOW DAY
	ELEVATION (FEET)	MIDNIGHT STORAGE	FIRST POINT REGULATED FLOW	+1ST POINT ABOVE FLOW	1ST POINT NATURAL FLOW	RECREATION POOL + DEAD STORAGE = 15,218 S.F.D. (30,184 ACFT)	TOTAL IRRIGATION	POOL LOSS AT 2ND PT.	2ND POINT GROUP FLOW	FRONT-KERN INFLOW DAY	
End of Previous Month	2544.08	89,693	45,220	273	45,220	30,002	45,220	30,002	45,220	30,002	45,220
1	2543.95	89,189	44,966	80	431	5	3	259	262	29,751	0
2	2543.81	88,648	44,693	75	462	6	2	268	258	29,468	0
3	2543.66	88,071	44,402	75	460	5	2	247	252	29,182	0
4	2543.50	87,459	44,094	80	467	6	3	242	234	28,866	0
5	2543.33	86,810	43,767	69	469	5	3	213	221	28,547	0
6	2543.15	86,129	43,423	64	485	5	2	208	215	28,210	0
7	2542.94	85,338	43,025	62	557	6	3	224	206	27,794	0
8	2542.71	84,478	42,591	63	557	5	3	188	218	27,390	0
9	2542.52	83,771	42,235	57	539	5	3	242	230	27,022	0
10	2542.40	83,328	42,011	54	426	6	2	260	231	26,769	0
11	2542.24	82,739	41,714	63	424	5	3	192	224	26,504	0
12	2542.08	82,116	41,400	61	468	6	2	219	211	26,182	0
13	2541.91	81,534	41,107	47	465	5	2	222	222	25,889	0
14	2541.73	80,882	40,778	58	493	5	3	224	234	25,570	0
15	2541.57	80,304	40,487	70	475	6	3	257	244	25,266	0
16	2541.39	79,659	40,161	70	506	5	3	252	258	24,946	0
17	2541.19	78,947	39,802	67	552	6	2	264	257	24,580	0
18	2540.97	78,169	39,410	69	576	5	3	255	247	24,180	0
19	2540.73	77,326	38,985	63	580	5	2	221	263	23,797	0
20	2540.49	76,489	38,563	68	662	6	2	312	279	23,342	0
21	2540.29	75,797	38,214	75	575	5	3	303	274	22,964	0
22	2540.06	75,006	37,816	70	534	6	3	209	241	22,598	0
23	2539.83	74,222	37,420	71	532	5	3	210	194	22,186	0
24	2539.60	73,444	37,028	66	487	5	2	164	172	21,802	0
25	2539.33	72,537	36,571	63	532	6	3	141	157	21,361	0
26	2539.10	71,772	36,185	60	488	6	2	166	158	20,967	0
27	2538.86	70,979	35,785	57	507	5	2	167	161	20,561	0
28	2538.62	70,192	35,388	55	447	5	3	150	151	20,165	0
29	2538.39	69,445	35,012	63	449	5	3	136	154	19,807	0
30	2538.13	68,606	34,589	57	538	6	2	176	163	19,371	0
31	2537.87	67,775	34,170	61	511	5	3	155	155	18,952	0
TOTAL SECOND FOOT DAYS			2,013	15,694	169	80	6,746	6,746	6,746	*****	591
TOTAL ACRE-Feet			3,993	31,129	336	159	13,380	13,380	13,380	37,591	1,172

Date: August 9, 1990

By: *[Signature]*

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH	DAY(S)	PRGE NO.	TITLE OF COLUMN	COMMENT
July	20	2	HACIENDA WD FLOW - AT 1ST POINT	Delivered as per terms of La Hacienda, Inc./Catalyst Energy Corporation letter agreement dated July 16, 1990.

GLOBAL WARMING ???

ISABELLA, CALIFORNIA
AVERAGE MONTHLY TEMPERATURES (° F)
1956 to Date

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
1990	42.5	42.6	50.7	57.9	61.7	71.9	80.1	74.3	68.4	58.6	51.8	44.2	59.2
1989	41.8	43.4	52.7	61.7	63.0	72.1	78.4	77.9	72.5	66.1	50.3	43.1	59.7
1988	42.3	48.5	50.8	55.1	59.6	70.3	80.2	76.5	69.6	64.4	48.6	38.8	58.2
1987	38.9	45.9	47.5	59.0	63.2	73.4	75.7	78.5	64.1	58.2	51.0	43.0	59.6
1986	49.7	49.0	53.5	54.9	63.5	73.7	75.7	75.3	65.1	59.0	47.0	44.5	58.6
1985	43.2	46.5	46.5	59.3	62.9	73.1	79.9	78.2	65.1	55.7	48.3	41.9	59.5
1984	45.2	46.6	51.4	67.3	67.3	70.6	80.9	75.7	74.6	61.3	50.2	46.1	58.5
1983	45.2	47.2	48.5	61.4	69.2	69.2	73.0	77.1	68.5	61.3	48.6	43.2	57.8
1982	41.8	47.4	47.4	52.5	63.6	68.6	75.6	79.7	73.2	56.9	52.9	47.1	60.9
1981	48.3	49.5	47.7	57.0	63.6	76.0	79.1	75.3	69.2	63.2	52.4	49.0	59.1
1980	47.3	49.1	46.5	57.7	66.8	66.8	77.8	72.6	74.0	61.8	50.0	48.4	59.1
1979	40.7	41.7	48.5	60.6	63.2	71.4	75.9	76.8	67.6	65.3	47.2	39.7	58.3
1978	44.3	46.1	53.1	60.4	60.4	71.7	76.7	76.8	62.3	62.3	51.1	47.3	58.0
1977	42.8	44.8	43.8	57.5	55.4	74.0	77.5	70.5	68.3	60.3	53.6	44.3	58.3
1976	44.2	45.7	47.4	65.7	65.7	71.2	75.9	73.6	72.4	61.4	48.7	45.1	56.9
1975	43.1	43.6	45.7	60.7	60.7	71.2	76.6	76.2	74.2	61.4	50.0	41.0	58.4
1974	41.3	44.6	49.4	51.2	62.2	72.5	76.6	74.8	68.5	59.1	46.9	44.9	57.6
1973	40.3	45.7	42.8	53.0	64.9	73.1	76.9	76.1	68.2	56.8	45.7	39.6	59.1
1972	42.0	49.1	56.1	56.1	65.6	73.5	80.5	79.7	56.4	38.8	48.6	38.8	57.9
1971	43.4	44.8	50.6	52.5	58.3	70.7	79.7	80.1	60.1	52.4	53.3	45.0	60.0
1970	45.6	50.4	49.9	51.0	65.8	72.7	81.6	79.4	69.6	57.6	50.8	40.7	60.1
1969	44.0	42.4	48.1	54.7	63.9	69.6	78.9	74.8	73.1	61.0	56.4	39.7	59.6
1968	42.8	52.2	53.0	55.7	63.6	74.4	80.6	82.1	72.3	63.9	51.2	44.4	60.8
1967	44.4	47.9	50.9	45.4	62.6	69.2	80.9	79.5	62.2	62.2	51.8	43.6	58.8
1966	46.1	47.9	52.4	60.7	68.0	73.3	77.3	76.8	66.8	64.4	48.6	47.2	59.2
1965	46.1	49.6	49.6	54.1	60.6	70.5	79.4	78.8	66.8	62.7	51.0	46.1	61.0
1964	43.3	44.8	47.2	53.6	60.6	68.2	76.7	76.1	74.3	63.2	53.0	47.8	61.9
1963	44.0	42.7	48.6	50.2	60.9	73.4	79.5	79.0	71.2	62.3	49.6	44.7	61.7
1962	44.7	46.4	48.0	61.3	62.0	80.0	81.3	81.3	76.0	61.6	50.9	45.3	63.3
1961	48.0	50.7	57.2	59.5	63.6	79.8	83.0	80.0	65.4	63.4	55.6	47.3	63.3
1960	41.7	45.8	55.6	57.2	62.8	77.2	86.4	82.8	70.7	65.4	52.1	50.8	62.3
1959	47.6	46.1	56.5	64.1	68.7	77.2	79.7	82.8	74.9	67.3	52.1	46.9	61.1
1958	46.3	49.3	47.6	56.1	62.8	72.2	79.7	78.4	73.5	59.3	49.8	46.9	61.1
1957	40.6	52.5	52.0	58.1	62.8	77.3	81.9	78.4	59.3	59.3	53.7	46.8	60.6
1956	46.6	43.7	52.5	55.6	65.0	74.0	79.8	76.2	74.7	59.1	53.7	46.8	60.6
Normal	43.9	46.9	49.8	55.1	62.9	72.4	78.8	77.4	71.1	61.2	50.7	44.3	59.6
Maximum	49.7	52.7	56.3	64.1	68.7	79.8	86.4	82.8	76.0	67.3	56.4	50.8	63.3
Minimum	38.9	41.7	42.8	45.4	55.4	66.8	72.6	70.5	64.1	55.7	45.7	38.8	56.9

DAY	ELEVATION (FEET)	ISABELLA RESERVOIR		CHANGE IN STORAGE-LOSS		RTO ABOVE	FLOW ABOVE 1ST POINT	RTO ABOVE 1ST PT. -RTO BRWNO WELL	COMPUTED NATURAL FLOW	MEAN STORAGE		KERN COUNTY RECREATION POOL + Dead Storage = 15,218 S.F.D. (30,184 ACFT)		FRONT-KERN INFLOW DRY
		MIDNIGHT STORAGE	S.F.D. LOSS	+1ST POINT	+FLOW ABOVE 1ST PT. -RTO BRWNO WELL					TOTAL IRRIGATION	RECREATION POOL LOSS AT 2ND PT.	POOL LOSS AT 2ND PT.		
End of Previous Month	2537.87	67,775	34,170	***	155	***	***	***	***	34,170	18,952	***	***	***
1	2537.59	66,888	33,723	61	532	6	2	143	143	33,716	18,498	22	22	0
2	2537.30	65,979	33,264	59	523	7	2	139	139	33,268	18,050	21	21	0
3	2537.05	65,202	32,873	55	471	6	2	142	142	32,880	17,662	20	20	0
4	2536.87	64,647	32,593	59	377	7	3	140	140	32,580	17,362	22	22	0
5	2536.69	64,095	32,315	52	343	6	3	138	138	32,320	17,102	19	19	0
6	2536.49	63,486	32,008	56	379	7	2	130	130	32,010	16,792	21	21	0
7	2536.29	62,881	31,703	57	382	6	2	147	147	31,714	16,496	22	22	0
8	2536.09	62,281	31,400	44	425	7	3	141	141	31,382	16,164	17	17	0
9	2535.86	61,595	31,054	43	414	6	2	139	139	31,060	15,842	17	17	0
10	2535.63	60,915	30,711	43	426	7	2	143	143	30,729	15,511	17	17	0
11	2535.40	60,241	30,372	53	467	6	3	159	159	30,365	15,147	21	21	0
12	2535.17	59,572	30,034	45	482	7	3	172	172	30,036	14,818	18	18	0
13	2534.93	58,879	29,685	59	453	7	2	172	172	29,691	14,473	24	24	0
14	2534.70	58,221	29,353	60	482	7	2	158	158	29,332	14,114	25	25	0
15	2534.46	57,540	29,010	56	404	6	2	138	138	29,006	13,788	23	23	0
16	2534.24	56,921	28,698	43	372	7	2	125	125	28,711	13,493	18	18	0
17	2534.06	56,418	28,444	43	354	6	2	119	119	28,429	13,211	18	18	0
18	2533.86	55,863	28,164	40	338	7	3	118	118	28,165	12,947	17	17	0
19	2533.66	55,313	27,887	38	342	6	3	114	114	27,896	12,678	17	17	0
20	2533.44	54,711	27,583	42	391	7	2	128	128	27,586	12,368	19	19	0
21	2533.26	54,222	27,337	38	347	6	2	147	147	27,344	12,126	17	17	0
22	2533.14	53,899	27,174	39	283	7	2	149	149	27,166	11,948	18	18	0
23	2533.04	53,630	27,038	40	233	6	2	144	144	27,033	11,815	18	18	0
24	2532.95	53,389	26,917	46	198	7	2	127	127	26,911	11,693	21	21	0
25	2532.87	53,175	26,809	37	181	6	3	117	117	26,807	11,589	17	17	0
26	2532.79	52,962	26,702	35	177	7	3	110	110	26,701	11,483	16	16	0
27	2532.68	52,671	26,555	37	214	6	2	121	121	26,567	11,349	17	17	0
28	2532.56	52,353	26,395	39	262	7	2	127	127	26,388	11,170	18	18	0
29	2532.44	52,038	26,236	49	232	6	2	132	132	26,235	11,017	23	23	0
30	2532.32	51,724	26,078	40	238	6	2	125	125	26,078	10,860	19	19	0
31	2532.24	51,515	25,972	40	187	6	3	124	124	25,972	10,754	19	19	0
TOTAL SECOND FOOT DAYS		1,448	10,849	201	4,228	72	72	4,228	4,228	*****	*****	601	601	0
TOTAL ACRE-FEET		2,872	21,519	399	8,386	144	144	8,386	8,386	51,515	21,331	1,192	1,192	0

By: *[Signature]* Date: SEPTEMBER 10, 1990

DAY	NORTH KERN WATER STORAGE DISTRICT				BUENA VISTA WATER STORAGE DISTRICT				HACIENDA WATER STORAGE DISTRICT				RESERVOIR																				
	ENT'L AT 1ST POINT	FLOW AT 1ST POINT	RESERVOIR STORAGE	LOSS	ENT'L AT 2ND POINT	FLOW AT 2ND POINT	RESERVOIR STORAGE	LOSS	ENT'L AT 2ND POINT	FLOW AT 2ND POINT	RESERVOIR STORAGE	LOSS	ENT'L AT 2ND POINT	FLOW AT 2ND POINT	RESERVOIR STORAGE	LOSS																	
1	143	497	2	0	17	18	0	0	4	0	18	0	0	0	5,800	0	0																
2	139	485	2	0	15	23	0	0	4	0	17	0	0	0	5,741	0	0																
3	142	443	2	0	16	12	0	0	4	0	16	0	0	0	5,693	0	0																
4	140	347	2	0	16	14	0	0	4	0	17	0	0	0	5,642	0	0																
5	138	313	2	0	15	15	0	0	4	0	15	0	0	0	5,593	0	0																
6	130	358	2	0	16	5	0	0	4	0	17	0	0	0	5,551	0	0																
7	147	366	2	0	16	0	0	0	4	0	17	0	0	0	5,514	0	0																
8	141	411	2	0	14	0	0	0	4	0	13	0	0	0	5,483	0	0																
9	139	396	2	0	18	0	0	0	4	0	13	0	0	0	5,448	0	0																
10	143	409	2	0	17	0	0	0	4	0	13	0	0	0	5,414	0	0																
11	159	453	2	0	14	0	0	0	4	0	16	0	0	0	5,380	0	0																
12	172	439	2	0	13	0	0	0	4	0	14	0	0	0	5,349	0	0																
13	172	439	2	0	14	0	0	0	5	0	19	0	0	0	5,311	0	0																
14	158	439	2	0	13	0	0	0	4	0	19	0	0	0	5,275	0	0																
15	138	390	2	0	14	0	0	0	4	0	18	0	0	0	5,239	0	0																
16	125	358	2	0	14	0	0	0	4	0	14	0	0	0	5,207	0	0																
17	119	339	2	0	15	0	0	0	4	0	14	0	0	0	5,174	0	0																
18	118	323	2	0	15	0	0	0	4	0	13	0	0	0	5,142	0	0																
19	114	328	2	0	14	0	0	0	4	0	13	0	0	0	5,111	0	0																
20	128	377	2	0	14	0	0	0	4	0	14	0	0	0	5,079	0	0																
21	147	347	2	0	0	0	0	0	4	0	13	0	0	0	5,062	0	0																
22	149	283	2	0	0	0	0	0	4	0	13	0	0	0	5,045	0	0																
23	144	233	2	0	0	0	0	0	4	0	14	0	0	0	5,027	0	0																
24	127	198	2	0	0	0	0	0	4	0	16	0	0	0	5,007	0	0																
25	117	181	2	0	0	0	0	0	4	0	13	0	0	0	4,990	0	0																
26	110	177	2	0	0	0	0	0	4	0	12	0	0	0	4,974	0	0																
27	121	214	2	0	0	0	0	0	4	0	13	0	0	0	4,957	0	0																
28	127	262	2	0	0	0	0	0	4	0	14	0	0	0	4,939	0	0																
29	132	232	2	0	0	0	0	0	4	0	17	0	0	0	4,918	0	0																
30	125	238	1	0	0	0	0	0	4	0	14	0	0	0	4,900	0	0																
31	124	187	2	0	0	0	0	0	4	0	14	0	0	0	4,882	0	0																
S.F.D.	4,228	10,462	61	0	300	87	0	0	125	0	463	0	0	0	4,882	0	0																
AC.FT.	8,366	20,750	121	0	596	173	0	0	247	0	918	0	0	0	9,683	0	0																
TOTAL ACRE-FOOT STORAGE DAYS																528,036	TOTAL ACRE-FOOT STORAGE DAYS																323,002
TOTAL ACRE-FOOT STORAGE DAYS																6,456	TOTAL ACRE-FOOT STORAGE DAYS																208 AC.FT.

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH	DAY(S)	PAGE NO.	TITLE OF COLUMN	COMMENT
August	1	2	BWMSD -- RESERVOIR STORAGE NWMSD -- RESERVOIR STORAGE	Reflects transfer of 269 acre-feet (136 s.f.d.) from BUENA VISTA WATER STORAGE DISTRICT to NORTH KERN WATER STORAGE DISTRICT (City of Bakersfield) as per terms of BWMSD/City of Bakersfield Exchange Agreement Dated April 18, 1990.
August	1	2	NWMSD -- FLOW ABOVE FIRST POINT -- KERN VALLEY GOLF COURSE	Delivered as per terms of City of Bakersfield/Kern Valley Golf Course Temporary Water Service Agreement Dated August 10, 1990.

1990 APRIL-JULY UNIMPAIRED RUNOFF
Central Valley Streams

April-July Flows
in 1000 Acre-feet

Watershed	Forecast as of				(2) 1990 Actual	% of Average
	(1) 50 Year Average	Feb. 1	Mar. 1	Apr. 1		
Sacramento River above Bend Bridge	2,569	1,620	1,550	1,250	1,100	1,724 67%
Feather River at Oroville Reservoir	1,971	1,100	1,100	770	680	846 43%
Yuba River at Smartville	1,107	640	670	490	440	591 53%
American River at Folsom Reservoir	1,366	740	760	550	470	566 41%
Cosumnes River at Michigan Bar	140	55	60	35	30	40 29%
Mokelumne River at Pardee Reservoir	490	280	290	220	210	207 42%
Stanislaus River at Melones Reservoir	753	410	430	310	300	284 38%
Tuolumne River at Don Pedro Reservoir	1,254	740	720	550	530	536 43%
Merced River at Exchequer Reservoir	654	360	360	250	250	233 36%
San Joaquin River at Millerton Lake	1,296	700	670	530	490	514 40%
Kings River at Pine Flat Reservoir	1,266	640	620	500	460	496 39%
Kaweah River at Terminus Reservoir	303	135	140	105	95	94 31%
Tule River at Success Reservoir	70	16	19	14	11	11 16%
KERN RIVER AT ISABELLA RESERVOIR	492	175	180	130	105	114 23%

(1) All 50-year averages are based on data for water years 1936-1985 (2) Source: State of California Department of Water Resources

*** AUGUST 1990 KERN RIVER RUNOFF LOWEST RECORDED SINCE 1934 ***

THE HISTORY OF LOW AUGUST RUNOFF ON THE KERN

Rank	Year	Acre-Foot Volume
1	1924	5,881
2	1931	6,302
3	1934	6,948
4	1898	7,390
5	1990	8,386
6	1949	8,682
7	1900	8,860
8	1928	9,189
9	1926	9,522
10	1899	9,600

DAY	ELEVATION (FEET)	ISABELLA RESERVOIR		CHANGE IN STORAGE+LOSS		MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS		FRONT-KERN INFLOW DAY
		MIDNIGHT ACRE-FEET	S.F.D.	LOSS	FIRST POINT FLOW ABOVE	1ST POINT FLOW ABOVE	1ST POINT NATURAL FLOW	RECREATION POOL + DEAD STORAGE = 15,218 S.F.D. (30,184 ACFT)	POOL LOSS	
Previous Day	2532.24	51,515	25,972	***	124	***	25,972	10,754	***	***
1	2532.21	51,437	25,933	38	117	123	25,936	10,718	18	0
2	2532.18	51,359	25,894	43	120	120	25,888	10,670	21	0
3	2532.14	51,255	25,841	43	117	113	25,836	10,618	21	0
4	2532.09	51,125	25,776	40	120	106	25,778	10,560	19	0
5	2532.04	50,996	25,710	41	126	105	25,711	10,493	20	0
6	2531.99	50,867	25,645	42	131	99	25,633	10,415	20	0
7	2531.93	50,712	25,567	41	111	90	25,566	10,348	20	0
8	2531.87	50,558	25,490	42	109	79	25,490	10,272	20	0
9	2531.81	50,404	25,412	40	114	85	25,416	10,198	20	0
10	2531.75	50,250	25,334	40	129	91	25,334	10,116	20	0
11	2531.69	50,097	25,257	49	121	88	25,247	10,029	24	0
12	2531.61	49,893	25,154	50	119	81	25,155	9,937	25	0
13	2531.53	49,689	25,052	50	121	78	25,057	9,839	25	0
14	2531.47	49,538	24,975	42	122	78	24,967	9,749	21	0
15	2531.39	49,336	24,874	42	123	89	24,886	9,668	21	0
16	2531.34	49,209	24,810	42	125	92	24,807	9,589	21	0
17	2531.32	49,159	24,784	34	87	100	24,781	9,563	17	0
18	2531.29	49,083	24,746	33	94	99	24,749	9,531	17	0
19	2531.27	49,033	24,721	25	98	99	24,720	9,502	13	0
20	2531.26	49,008	24,708	16	93	107	24,714	9,496	8	0
21	2531.25	48,983	24,696	19	107	110	24,693	9,475	10	0
22	2531.23	48,933	24,670	22	111	118	24,674	9,456	11	0
23	2531.22	48,908	24,658	22	110	124	24,661	9,443	11	0
24	2531.22	48,908	24,658	23	109	130	24,655	9,437	12	0
25	2531.21	48,883	24,645	27	109	132	24,646	9,428	14	0
26	2531.19	48,833	24,620	28	126	131	24,619	9,401	14	0
27	2531.17	48,763	24,595	28	123	135	24,598	9,380	14	0
28	2531.17	48,783	24,595	22	115	140	24,597	9,379	11	0
29	2531.17	48,783	24,595	19	124	145	24,595	9,377	10	0
30	2531.16	48,758	24,582	23	140	154	24,582	9,364	12	0
31	*****									

TOTAL SECOND FOOT DAYS	1,026	3,471	134	3,241	3,241	3,241	*****	510	0	0
TOTAL ACRE-FEET	2,035	6,885	265	6,428	6,428	6,428	48,758	18,574	1,012	0

By: *[Signature]* Date: OCTOBER 5, 1990

NORTH KERN WATER STORAGE DISTRICT BUENA VISTA WATER STORAGE DISTRICT HACIENDA WATER DISTRICT

DAY	FLOW ABOVE FIRST POINT				FLOW				RESERVOIR				ENTITLEMENT				RESERVOIR					
	ENT'L AT 1ST POINT	La HACIENDA INC.	KERN VALLEY GOLF COURSE	La HACIENDA INC.	VIA CHD	VIA 1ST AT 2ND	CARMEL WATER	2800 ACRE WELL EXCH.	OLCESE WD	La HACIENDA INC.	RESERVOIR STORAGE	LOSS	CONTRIBUTED BY: NAWSD	RESERVOIR STORAGE	LOSS	OLCESE WD	La HACIENDA INC.	RESERVOIR STORAGE	LOSS			
1	123	117	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2	120	120	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3	113	117	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4	106	120	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5	105	126	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6	99	131	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7	90	111	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8	79	109	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9	85	114	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10	91	129	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11	88	121	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12	81	119	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
13	78	121	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
14	78	122	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15	89	123	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
16	92	125	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17	100	87	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18	99	94	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
19	99	98	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
20	107	93	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
21	110	107	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
22	118	111	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
23	124	110	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
24	130	109	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
25	132	109	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
26	131	126	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
27	135	123	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
28	140	115	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
29	145	124	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
30	154	140	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
31	*****																					
S.F.D.	3,241	3,471	46	0	15	658	4,818	0	0	0	0	0	0	0	73	0	368	4,441	0	0	0	
AC.FT.	6,428	6,885	91	0	30	1,305	9,557	0	0	0	0	0	0	0	144	0	730	8,809	0	0	0	
TOTAL ACRE-FOOT STORAGE DAYS	*****																					
TOTAL ACRE-FOOT STORAGE DAYS	304,280										275,490										6,248	

La HACIENDA INC. OLCESE WD CARMEL WATER 2800 ACRE WELL EXCH. RESERVOIR STORAGE LOSS ENT'L AT 1ST POINT VIA CHD VIA 1ST AT 2ND CARMEL WATER 2800 ACRE WELL EXCH. OLCESE WD La HACIENDA INC. RESERVOIR STORAGE LOSS OLCESE WD La HACIENDA INC. RESERVOIR STORAGE LOSS

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH ===== DAY(S) ===== PAGE NO. ===== TITLE OF COLUMN ===== COMMENT =====
 September None

*** SEPTEMBER 1990 KERN RIVER RUNOFF LOWEST RECORDED SINCE 1924 ***

THE HISTORY OF LOW SEPTEMBER RUNOFF ON THE KERN

Rank	Year	Acres-Foot Volume
1	1924	5,494
2	1899	6,248
3	1990	6,428
4	1949	6,541
5	1928	6,583
6	1931	6,860
7	1898	6,885
8	1948	6,899
9	1926	7,029
10	1934	7,043

SEPTEMBER 1990 FINDS A PLACE IN KERN RIVER RECORD BOOK

Minimum Natural Flow on Record for September

Day	S. F. D.	Year	Day	S. F. D.	Year
1	88	1924	16	82	1924
2	89	1924	17	85	1924
3	89	1924	18	83	1924
4	87	1924	19	74	1948
5	94	1924	20	85	1924
6	96	1924	21	96	1924
7	88	1924	22	95	1924
8	79	1990	23	96	1899
9	85	1990	24	97	1899
10	91	1990	25	99	1924
11	88	1990	26	100	1949
12	81	1990	27	98	1949
13	78	1990	28	104	1924
14	78	1990	29	98	1899
15	84	1924	30	93	1899

DAY	ISABELLA RESERVOIR		CHANGE IN STORAGE		COMPUTED	MEAN STORAGE		KERN COUNTY		FRONT- KERN INFLOW DAY
	ELEVATION (FEET)	MIDNIGHT STORAGE	FIRST POINT REGULATED FLOW	STORAGE+LOSS		Recreation Pool + Dead Storage = 15,218 S.F.D. (30,184 ACFT)	TOTAL IRRIGATION	POOL LOSS AT 2ND PT.	RECREATION POOL LOSS	
Previous Day	2531.16	48,758	***	154	***	24,582	9,364	***	***	***
1	2531.13	48,683	35	145	149	24,548	9,330	18	0	0
2	2531.08	48,558	37	156	156	24,485	9,287	19	0	0
3	2531.06	48,508	29	167	164	24,457	9,239	15	0	0
4	2531.04	48,458	29	161	165	24,429	9,211	15	0	0
5	2531.00	48,359	37	170	162	24,381	9,163	19	0	0
6	2530.96	48,259	32	172	157	24,331	9,113	16	0	0
7	2530.93	48,185	29	159	156	24,296	9,078	15	0	0
8	2530.92	48,160	29	138	152	24,278	9,060	15	0	0
9	2530.90	48,110	22	146	147	24,254	9,036	11	0	0
10	2530.87	48,036	29	144	139	24,218	9,000	15	0	0
11	2530.84	47,962	28	141	145	24,191	8,973	14	0	0
12	2530.82	47,912	34	151	146	24,149	8,931	18	0	0
13	2530.79	47,838	39	137	155	24,126	8,908	20	0	0
14	2530.78	47,814	27	143	150	24,103	8,885	14	0	0
15	2530.76	47,764	32	140	157	24,085	8,867	17	0	0
16	2530.76	47,764	26	133	149	24,073	8,855	14	0	0
17	2530.76	47,764	22	112	147	24,063	8,865	11	0	0
18	2530.74	47,718	29	134	127	24,044	8,826	15	0	0
19	2530.69	47,592	18	148	122	24,000	8,782	9	0	0
20	2530.65	47,494	17	150	127	23,957	8,739	9	0	0
21	2530.63	47,445	25	155	136	23,910	8,692	13	0	0
22	2530.59	47,347	24	152	145	23,877	8,659	13	0	0
23	2530.57	47,298	22	150	139	23,843	8,625	12	0	0
24	2530.55	47,249	22	142	138	23,815	8,597	12	0	0
25	2530.52	47,176	22	138	134	23,788	8,570	12	0	0
26	2530.50	47,127	15	144	134	23,762	8,544	8	0	0
27	2530.48	47,079	17	147	141	23,737	8,519	9	0	0
28	2530.46	47,030	24	146	138	23,704	8,486	13	0	0
29	2530.43	46,957	23	138	133	23,675	8,457	12	0	0
30	2530.41	46,908	16	135	127	23,649	8,431	8	0	0
31	2530.39	46,859	21	119	117	23,625	8,407	11	0	0
TOTAL SECOND FOOT DAYS			811	4,527	73	4,454	4,454	422	0	0
TOTAL ACRE- FEET			1,609	8,979	145	8,834	8,834	837	0	0

By: *[Signature]* Date: NOVEMBER 9, 1990

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH: October
 DAY(S):
 PAGE NO.:
 TITLE OF COLUMN:
 COMMENT: None

Kern River Median Natural Flow at First Point of Measurement (1993 to Date)												Year: 1990		
DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
1	350	412	514	1,018	1,615	2,196	1,299	502	563	234	245	285		
2	347	441	533	1,005	1,650	2,219	1,225	485	557	239	258	284		
3	345	452	609	994	1,628	2,218	1,205	472	577	227	255	309		
4	352	461	621	998	1,698	2,238	1,188	475	565	240	255	321		
5	353	473	685	1,050	1,698	2,073	1,069	434	557	227	260	326		
6	364	481	633	1,098	1,712	2,131	1,043	426	559	236	260	330		
7	362	492	612	1,209	1,704	2,409	988	433	557	231	281	321		
8	370	523	604	1,189	1,707	2,331	980	421	549	232	280	313		
9	372	541	668	1,203	1,868	2,189	953	391	550	233	259	313		
10	365	554	633	1,182	1,897	2,122	898	384	547	230	266	307		
11	364	550	648	1,185	1,848	2,275	853	369	547	235	264	312		
12	369	560	661	1,180	1,905	2,297	834	384	544	228	286	314		
13	373	582	622	1,213	2,002	2,198	841	367	537	233	272	318		
14	389	562	672	1,249	1,947	2,186	833	351	529	229	273	327		
15	389	537	694	1,177	1,941	2,097	796	343	535	231	273	319		
16	376	570	689	1,217	1,966	1,975	799	359	540	238	273	330		
17	361	612	706	1,285	2,061	1,853	788	340	531	236	270	323		
18	372	608	728	1,270	2,147	1,811	722	326	529	243	282	318		
19	382	597	790	1,302	2,141	1,720	710	321	520	251	281	323		
20	388	591	813	1,328	2,073	1,619	702	312	521	250	289	325		
21	386	575	879	1,411	2,011	1,534	692	306	529	248	271	319		
22	388	572	843	1,425	2,028	1,625	641	299	523	240	275	324		
23	371	573	876	1,437	2,040	1,606	611	312	518	242	291	339		
24	391	579	871	1,484	2,086	1,545	605	308	512	243	289	340		
25	388	599	921	1,478	2,111	1,468	602	299	511	238	298	338		
26	392	589	989	1,557	2,073	1,439	576	285	522	248	288	327		
27	391	618	999	1,505	2,182	1,366	559	305	522	235	288	327		
28	403	636	992	1,511	2,193	1,368	532	280	517	231	284	341		
29	403	636	952	1,490	2,284	1,348	518	281	518	249	287	345		
30	422	-	973	1,540	2,250	1,309	520	280	525	242	288	339		
31	443	-	1,003	-	2,243	-	483	287	-	247	-	355		
TOTAL	11,701	15,380	23,633	39,190	60,627	56,885	24,955	11,121	7,991	7,384	8,183	10,010		
MAXIMUM DAY	443	636	1,003	1,557	2,284	2,409	1,299	502	565	255	298	355		
MINIMUM DAY	345	441	604	994	1,615	1,309	483	280	211	225	245	284		
MEAN	377	549	762	1,273	1,956	1,896	805	359	236	238	273	323		
TOTAL AC. FT.	23,209	30,506	46,875	75,749	120,282	112,630	49,497	22,058	14,065	14,646	16,231	19,855		
WHOLE YEAR--	TOTAL	275,160	MAXIMUM	2,409	MINIMUM	211	MEAN	754	TOTAL AC. FT.	545,773				

DAY	ISABELLA		RESERVOIR		CHANGE IN STORAGE+LOSS		COMPUTED		MEAN STORAGE		KERN COUNTY RECREATION POOL LOSS AT 2ND PT.		FRIANT-KERN INFLOW DAY
	ELEVATION (FEET)	ACRE-FEET	S.F.D.	LOSS	FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST POINT	+1ST POINT +FLOW ABOVE 1ST POINT	1ST POINT NATURAL FLOW	Recreation Pool + Dead Storage = 15,216 S.F.D. (30,184 ACFT) TOTAL IRRIGATION	RECREATION GROUP FLOW	POOL LOSS	2ND PT. AT 2ND PT.	
Previous Day	2530.39	46,859	23,625	***	***	***	117	***	23,625	8,407	***	***	***
1	2530.38	46,835	23,613	19	118	1	126	121	23,608	8,390	10	0	0
2	2530.37	46,811	23,601	12	111	1	112	122	23,606	8,388	6	0	0
3	2530.37	46,811	23,601	14	113	2	129	122	23,599	8,381	7	0	0
4	2530.37	46,811	23,601	15	110	1	126	124	23,597	8,379	8	0	0
5	2530.35	46,762	23,576	29	111	1	116	127	23,583	8,365	15	0	0
6	2530.35	46,762	23,576	18	120	1	139	132	23,576	8,358	10	0	0
7	2530.35	46,762	23,576	18	121	2	141	134	23,589	8,351	10	0	0
8	2530.34	46,738	23,564	14	120	1	123	133	23,567	8,349	7	0	0
9	2530.34	46,738	23,564	13	120	1	134	133	23,566	8,348	7	0	0
10	2530.34	46,738	23,564	15	127	1	143	142	23,565	8,347	8	0	0
11	2530.34	46,738	23,564	18	130	2	150	144	23,559	8,341	10	0	0
12	2530.32	46,689	23,539	20	142	1	138	145	23,541	8,323	11	0	0
13	2530.31	46,665	23,527	15	144	1	148	133	23,514	8,296	8	0	0
14	2530.27	46,568	23,478	15	145	1	112	139	23,492	8,274	8	0	0
15	2530.26	46,544	23,466	15	152	1	156	136	23,460	8,242	8	0	0
16	2530.24	46,496	23,442	14	150	1	141	139	23,434	8,216	8	0	0
17	2530.20	46,399	23,393	15	153	1	120	132	23,397	8,179	8	0	0
18	2530.17	46,327	23,357	15	155	1	135	131	23,357	8,139	8	0	0
19	2530.16	46,303	23,344	5	145	1	138	136	23,342	8,124	3	0	0
20	2530.14	46,255	23,320	11	147	1	135	145	23,328	8,110	6	0	0
21	2530.15	46,279	23,332	8	140	1	161	145	23,324	8,106	4	0	0
22	2530.15	46,279	23,332	6	133	1	140	147	23,331	8,113	3	0	0
23	2530.15	46,279	23,332	10	129	1	140	141	23,332	8,114	5	0	0
24	2530.15	46,279	23,332	10	130	2	142	147	23,337	8,119	5	0	0
25	2530.15	46,279	23,332	18	139	1	158	164	23,343	8,125	10	0	0
26	2530.18	46,351	23,369	4	150	0	181	112	23,361	8,143	2	0	0
27	2530.20	46,399	23,393	5	138	1	168	170	23,387	8,169	3	0	0
28	2530.19	46,375	23,381	7	154	1	150	154	23,379	8,161	4	0	0
29	2530.17	46,327	23,357	12	155	1	144	146	23,357	8,139	6	0	0
30	2530.16	46,303	23,344	12	150	0	149	149	23,344	8,126	6	0	0
31	*****												
TOTAL SECOND FOOT DAYS			402	4,052	32	4,205	4,205	4,205	*****		214	0	0
TOTAL ACRE-FEET			797	8,037	63	8,340	8,340	8,340	46,303	16,119	424	0	0

Date: DECEMBER 17, 1990

By: *[Signature]*

DAY	ISABELLA RESERVOIR		CHANGE IN STORAGE+LOSS		COMPUTED		MEAN STORAGE		KERN COUNTY RECREATION		FRONT-POINT KERN INFLOW
	ELEVATION (FEET)	MIDNIGHT STORAGE	FIRST POINT REGULATED FLOW	FLOW ABOVE 1ST POINT	1ST POINT ABOVE FLOW	1ST POINT NATURAL FLOW	Recreation Pool + Dead Storage	TOTAL IRRIGATION	POOL LOSS	AT 2ND PT.	
Previous Day	2530.16	46,303	23,344	***	149	***	23,344	8,126	***	***	***
1	2530.16	46,303	23,344	2	151	151	23,344	8,126	1	0	0
2	2530.16	46,303	23,344	7	149	0	23,343	8,125	4	0	2
3	2530.16	46,303	23,344	7	145	1	23,341	8,123	4	0	3
4	2530.15	46,279	23,332	10	147	0	23,334	8,116	5	0	4
5	2530.14	46,255	23,320	10	153	1	23,323	8,105	5	0	5
6	2530.14	46,255	23,320	7	156	0	23,315	8,097	4	0	6
7	2530.13	46,231	23,308	7	155	1	23,308	8,090	4	0	7
8	2530.12	46,207	23,296	9	158	0	23,299	8,081	5	0	8
9	2530.12	46,207	23,296	9	157	1	23,292	8,074	5	0	9
10	2530.11	46,183	23,284	10	159	1	23,278	8,060	5	0	10
11	2530.09	46,134	23,259	10	156	1	23,265	8,047	5	0	11
12	2530.09	46,134	23,259	9	153	0	23,249	8,031	5	0	12
13	2530.07	46,086	23,235	7	150	1	23,246	8,028	4	0	13
14	2530.08	46,110	23,247	8	148	1	23,231	8,013	4	0	14
15	2530.05	46,038	23,211	2	155	1	23,212	7,994	1	0	15
16	2530.02	45,966	23,175	7	156	0	23,181	7,963	4	0	16
17	2530.01	45,942	23,162	7	151	1	23,151	7,933	4	0	17
18	2529.99	45,895	23,139	9	129	0	23,158	7,940	5	0	18
19	2530.03	45,990	23,187	1	125	0	23,192	7,974	1	0	19
20	2530.07	46,086	23,235	7	136	1	23,214	7,996	4	0	20
21	2530.06	46,062	23,223	6	137	0	23,225	8,007	3	0	21
22	2530.06	46,062	23,223	14	126	0	23,212	7,994	6	0	22
23	2530.04	46,014	23,199	8	124	1	23,199	7,981	4	0	23
24	2530.02	45,966	23,175	9	126	0	23,192	7,974	5	0	24
25	2530.05	46,038	23,211	11	117	0	23,217	7,999	6	0	25
26	2530.10	46,158	23,271	9	113	1	23,259	8,041	5	0	26
27	2530.12	46,207	23,296	8	116	0	23,291	8,073	4	0	27
28	2530.09	46,134	23,259	11	161	0	23,264	8,046	6	0	28
29	2530.08	46,110	23,247	5	157	1	23,246	8,028	3	0	29
30	2530.06	46,062	23,223	9	163	0	23,223	8,005	5	0	30
31	2530.04	46,014	23,199	7	174	0	23,199	7,981	4	0	31
TOTAL SECOND FOOT DAYS				242	4,500	15	4,612	*****	132	0	0
TOTAL ACRE-FEET				480	8,925	31	9,148	46,014	15,830	262	0

By: *Sal* Date: JANUARY 10, 1991

WATERMASTER NOTES *** KERN RIVER BULLETIN

MONTH DAY(S) PAGE NO. TITLE OF COLUMN COMMENT

December None

*** DECEMBER 1990 KERN RIVER RUNOFF LOWEST ON RECORD ***

THE HISTORY OF LOW DECEMBER RUNOFF ON THE KERN

Rank	Year	Acre-Foot Volume	Following Year Runoff in Percent of Normal
1	1990	9,148	???
2	1929	9,961	50%
3	1930	10,590	21%
4	1989	10,949	27%
5	1976	11,191	20%
6	1959	11,215	36%
7	1948	11,220	45%
8	1912	11,804	45%
9	1962	11,929	102%
10	1898	12,216	46%

DECEMBER 1990 FINDS A PLACE IN KERN RIVER RECORD BOOK

Minimum Natural Flow on Record for December

Day	S.F.D.	Year	Day	S.F.D.	Year
1	145	1931	16	132	1990
2	153	1931	17	129	1990
3	151	1990	18	145	1990
4	150	1990	19	160	1990
5	153	1990	20	163	1930
6	143	1977	21	150	1930
7	144	1977	22	127	1990
8	141	1977	23	120	1990
9	158	1959	24	128	1990
10	144	1977	25	140	1930
11	152	1977	26	147	1930
12	146	1990	27	144	1962
13	154	1898	28	145	1990
14	140	1931	29	145	1990
15	139	1990	30	145	1930
			31	143	1930

