

APPENDIX A TO PART 418--CALCULATION OF EFFICIENCY EQUATION

Calculation of Efficiency Equation Slope and Y-Intercept for Adjusted OCAP

	1988 OCAP		With Adjusted OCAP											
	Projected for 1992	Without added ac.												
Irrigated Acreage	64,850	61,630	64,850	64,500	64,000	63,500	63,000	62,500	62,000	61,500	61,000	60,500	60,000	59,500
Max. Headgate Entitlement	237,485	226,555	226,586	225,363	223,616	221,869	220,122	218,375	216,628	214,881	213,134	211,387	209,640	207,893
Distribution System Losses														
Evaporation Canals/Laterals	6,200	6,000	6,200	6,178	6,147	6,116	6,085	6,054	6,023	5,992	5,961	5,930	5,899	5,868
Reg. Reservoirs	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Seepage														
Canals/Laterals	51,000	48,500	51,000	50,728	50,340	49,952	49,564	49,175	48,787	48,399	48,011	47,623	47,234	46,846
Reg. Reservoirs	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Operational Losses	40,800	39,400	40,800	40,648	40,430	40,213	39,996	39,778	39,561	39,343	39,126	38,909	38,691	38,474
Total System Losses	109,500	105,400	109,500	109,054	108,418	107,781	107,144	106,508	105,871	105,234	104,598	103,961	103,325	102,688
100% Use of Entitlement:														
Allowable Diversion	346,985	331,955	336,086	334,417	332,034	329,650	327,266	324,883	322,499	320,115	317,732	315,348	312,965	310,581
Conveyance Efficiency	68.44%	68.25%	67.42%	67.39%	67.35%	67.30%	67.26%	67.22%	67.17%	67.13%	67.08%	67.03%	66.99%	66.94%
75% Use of Entitlement:														
Headgate Ent. Unused	59,371	56,639	56,646	56,341	55,904	55,467	55,031	54,594	54,157	53,720	53,284	52,847	52,410	51,973
Headgate Delivery	178,114	169,916	169,939	169,022	167,712	166,402	165,092	163,781	162,471	161,161	159,851	158,540	157,230	155,920
Diversion Reduction	68,717	65,554	65,563	65,209	64,704	64,198	63,693	63,187	62,682	62,176	61,671	61,165	60,660	60,154
Allowable Diversion	278,268	266,401	270,523	269,208	267,330	265,452	263,574	261,696	259,817	257,939	256,061	254,183	252,305	250,427
Conveyance Efficiency	64.01%	63.78%	62.82%	62.78%	62.74%	62.69%	62.64%	62.58%	62.53%	62.48%	62.43%	62.37%	62.32%	62.26%
Slope	0.1774	0.1787	0.1840	0.1842	0.1845	0.1847	0.1850	0.1853	0.1856	0.1858	0.1861	0.1864	0.1867	0.1870
Y-Intercept	50.70	50.38	49.02	48.97	48.90	48.83	48.76	48.69	48.62	48.54	48.47	48.39	48.31	48.24

Note: (1) The average water duty with Adjusted OCAP assumed to be 3.494 acre feet/acre based on 1995 conditions.

(2) The conveyance efficiency of the unused entitlement (75% use) assumed to be 86.4% based on Figure 1 and Table 1 of 1988 OCAP

Irrigated Acreage	59,000	58,500	58,000	57,500	57,000	56,500	56,000	55,500	55,000	54,500	54,000	53,500	53,000	52,500	52,000
Max. Headgate Ent.	206,146	204,399	202,652	200,905	199,158	197,411	195,664	193,917	192,170	190,423	188,676	186,929	185,182	183,435	181,688
Distribution Losses															
Evaporation Canals/Laterals	5,837	5,806	5,775	5,743	5,712	5,681	5,650	5,619	5,588	5,557	5,526	5,495	5,464	5,433	5,402
Reg. Reservoirs	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Seepage															
Canals/Laterals	46,458	46,070	45,682	45,293	44,905	44,517	44,129	43,741	43,352	42,964	42,576	42,188	41,800	41,411	41,023
Reg. Reservoirs	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Operational Losses	38,257	38,039	37,822	37,604	37,387	37,170	36,952	36,735	36,517	36,300	36,083	35,865	35,648	35,430	35,213
Total System Losses	102,051	101,415	100,778	100,141	99,505	98,868	98,231	97,595	96,958	96,321	95,685	95,048	94,411	93,775	93,138

100% Use of Entitlement:

Allowable Diversion	308,197	305,814	303,430	301,046	298,663	296,279	293,895	291,512	289,128	286,744	284,361	281,977	279,593	277,210	274,826
Conveyance Efficiency	66.89%	66.84%	66.79%	66.74%	66.68%	66.63%	66.58%	66.52%	66.47%	66.41%	66.35%	66.29%	66.23%	66.17%	66.11%

75% Use of Entitlement:

Entitlement Unused	51,537	51,100	50,663	50,226	49,790	49,353	48,916	48,479	48,043	47,606	47,169	46,732	46,296	45,859	45,422
Headgate Delivery	154,610	153,299	151,989	150,679	149,369	148,058	146,748	145,438	144,128	142,817	141,507	140,197	138,887	137,576	136,266
Diversion Reduction	59,649	59,143	58,638	58,132	57,627	57,121	56,616	56,110	55,605	55,099	54,594	54,088	53,583	53,077	52,572
Allowable Diversion	248,549	246,670	244,792	242,914	241,036	239,158	237,280	235,401	233,523	231,645	229,767	227,889	226,011	224,133	222,254
Conveyance Efficiency	62.20%	62.15%	62.09%	62.03%	61.97%	61.91%	61.85%	61.78%	61.72%	61.65%	61.59%	61.52%	61.45%	61.38%	61.31%
Slope	0.1873	0.1876	0.1879	0.1882	0.1886	0.1889	0.1892	0.1895	0.1899	0.1902	0.1906	0.1909	0.1913	0.1916	0.1920
Y-Intercept	48.16	48.08	47.99	47.91	47.83	47.74	47.66	47.57	47.48	47.39	47.30	47.20	47.11	47.01	46.91

Note: (1) The average water duty with Adjusted OCAP assumed to be 3.494 acre feet/acre based on 1995 conditions.

(2) The conveyance efficiency of the unused entitlement (75% use) assumed to be 86.4% based on Figure 1 and Table 1 of 1988 OCAP