

APPENDIX

APPENDIX A. WATER BALANCE STUDY OF CAPAYAS RESERVOIR ONLY

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TABLE A-1 SUMMARY TABLE OF WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

* RESERVOIR CAPACITY 2.34 (MCM)
 * MAIN CANAL CAPACITY 2.13 (CU.M/S)

YEAR	INFLOW (MCM)	DEMAND (MCM)	INTAKE (MCM)	DEM TO BAY (MCM)	FR BAY (MCM)	EVAPO (MCM)	SPILLAGE (MCM)	SHORTAGE (MCM)
56-57	14.489	6.802	6.802	0.0	0.0	1.027	6.850	0.0
57-58	7.736	6.648	6.648	0.0	0.0	0.917	0.642	0.0
58-59	10.577	5.994	5.994	0.0	0.0	1.055	3.439	0.0
59-60	10.083	6.959	6.959	0.0	0.0	0.992	2.568	0.0
60-61	11.402	5.740	5.740	0.0	0.0	1.030	4.577	0.0
61-62	12.873	4.217	4.217	0.0	0.0	1.079	7.767	0.0
62-63	13.584	5.715	5.661	-0.054	0.0	0.997	7.117	-0.054
63-64	10.672	7.324	7.175	-0.149	0.0	0.884	2.803	-0.149
64-65	16.062	6.232	5.955	-0.277	0.0	0.986	9.318	-0.277
65-66	9.631	7.283	7.061	-0.222	0.0	0.906	1.848	-0.222
66-67	11.868	6.581	5.913	-0.667	0.0	0.927	5.218	-0.667
67-68	7.950	5.490	5.490	0.0	0.0	0.822	1.829	0.0
68-69	9.181	5.507	4.754	-0.753	0.0	0.785	3.832	-0.753
69-70	9.609	5.539	5.539	0.0	0.0	0.938	3.322	0.0
70-71	13.701	6.004	6.004	0.0	0.0	1.053	6.834	0.0
71-72	11.379	4.111	4.111	0.0	0.0	0.988	6.497	0.0
72-73	8.585	4.530	3.287	-1.243	0.0	0.748	4.738	-1.243
73-74	12.327	6.248	6.095	-0.153	0.0	0.945	6.563	-0.153
74-75	12.809	5.131	4.596	-0.535	0.0	1.027	6.267	-0.535
75-76	8.881	6.409	6.409	0.0	0.0	0.959	2.526	0.0
76-77	12.190	4.527	4.527	0.0	0.0	1.039	5.991	0.0
77-78	9.595	6.146	6.146	0.0	0.0	0.981	2.659	0.0
78-79	8.438	6.732	6.580	-0.152	0.0	0.830	1.929	-0.152
79-80	16.134	4.232	4.232	0.0	0.0	0.997	10.385	0.0
80-81	10.317	6.034	6.034	0.0	0.0	0.963	3.510	0.0
81-82	11.484	7.013	7.013	0.0	0.0	0.959	3.702	0.0
82-83	6.534	6.415	3.318	-3.098	0.0	0.574	2.834	-3.098
83-84	9.754	6.436	4.591	-1.845	0.0	0.896	4.457	-1.845
AVE.	10.994	5.929	5.602	-0.327	0.0	0.939	4.644	-0.327

TABLE A-2(1) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

MONTH	YEAR --- 1956 - 1957		IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
	10-DAY INFLOW	UNIT : MCM											
NOV	(30)	0.106	0.108	0.009	0.117	1.736	0.117	0.029	2.307	32.964	0.0	0.0	65%
	(31)	0.055	0.316	0.008	0.324	1.651	0.324	0.025	2.018	32.663	0.0	0.0	65%
	(32)	0.581	0.0	0.008	0.008	1.888	0.008	0.027	2.341	34.000	0.0	0.227	65%
DEC	(33)	0.449	0.121	0.008	0.130	2.079	0.130	0.027	2.341	34.000	0.0	0.297	65%
	(34)	0.426	0.014	0.008	0.022	2.056	0.022	0.025	2.341	34.000	0.0	0.385	65%
	(35)	0.724	0.0	0.008	0.008	2.354	0.008	0.025	2.341	34.000	0.0	0.696	65%
	(36)	1.321	0.027	0.009	0.036	2.951	0.036	0.027	2.341	34.000	0.0	1.264	65%
JAN	(1)	0.740	0.062	0.008	0.070	2.370	0.070	0.030	2.341	34.000	0.0	0.645	65%
	(2)	0.239	0.263	0.008	0.271	1.869	0.271	0.029	2.285	32.941	0.0	0.0	65%
	(3)	0.064	0.596	0.009	0.606	1.638	0.606	0.027	1.722	32.355	0.0	0.0	65%
	(4)	0.810	0.0	0.008	0.008	1.821	0.008	0.028	2.341	34.000	0.0	0.160	65%
	(5)	0.120	0.412	0.008	0.421	1.750	0.421	0.025	2.020	32.666	0.0	0.0	65%
	(6)	0.076	0.313	0.007	0.320	1.385	0.320	0.019	1.762	32.396	0.0	0.0	65%
	(7)	0.232	0.009	0.008	0.017	1.283	0.017	0.029	1.952	32.595	0.0	0.0	65%
	(8)	0.248	0.002	0.008	0.010	1.489	0.010	0.031	2.164	32.815	0.0	0.0	65%
	(9)	0.061	0.184	0.009	0.193	1.514	0.193	0.033	2.005	32.650	0.0	0.0	65%
	(10)	0.685	0.0	0.008	0.008	1.979	0.008	0.038	2.341	34.000	0.0	0.307	65%
	(11)	0.019	0.023	0.008	0.031	1.649	0.031	0.038	2.296	32.953	0.0	0.0	65%
	(12)	0.069	0.0	0.008	0.008	1.654	0.008	0.038	2.323	32.981	0.0	0.0	65%
	(13)	0.070	0.0	0.008	0.008	1.682	0.008	0.037	2.341	34.000	0.0	0.012	65%
	(14)	0.161	0.0	0.008	0.008	1.791	0.008	0.037	2.341	34.000	0.0	0.121	65%
	(15)	0.017	0.445	0.009	0.454	1.647	0.454	0.035	1.875	32.514	0.0	0.0	65%
	(16)	0.925	0.0	0.008	0.008	2.089	0.008	0.032	2.341	34.000	0.0	0.424	65%
	(17)	0.622	0.0	0.008	0.008	2.252	0.008	0.032	2.341	34.000	0.0	0.587	65%
	(18)	0.127	0.877	0.008	0.886	1.757	0.886	0.025	1.563	32.189	0.0	0.0	65%
	(19)	1.397	0.0	0.008	0.008	2.249	0.008	0.031	2.341	34.000	0.0	0.585	65%
	(20)	0.657	0.161	0.008	0.169	2.287	0.169	0.031	2.341	34.000	0.0	0.462	65%
	(21)	0.152	0.750	0.009	0.759	1.782	0.759	0.028	1.712	32.345	0.0	0.0	65%
	(22)	0.466	0.0	0.008	0.008	1.467	0.008	0.030	2.145	32.796	0.0	0.0	65%
	(23)	0.221	0.473	0.008	0.481	1.655	0.481	0.027	1.863	32.502	0.0	0.0	65%
	(24)	0.257	0.470	0.009	0.479	1.409	0.479	0.027	1.619	32.248	0.0	0.0	65%
	(25)	0.042	0.711	0.008	0.719	0.950	0.719	0.015	0.932	30.329	0.0	0.0	65%
	(26)	0.240	0.163	0.008	0.171	0.461	0.171	0.016	0.990	30.417	0.0	0.0	65%
	(27)	0.437	0.0	0.008	0.008	0.716	0.008	0.020	1.405	32.025	0.0	0.0	65%
	(28)	1.111	0.0	0.008	0.008	1.805	0.008	0.027	2.341	34.000	0.0	0.145	65%
	(29)	0.562	0.0	0.008	0.008	2.192	0.008	0.027	2.341	34.000	0.0	0.532	65%
TOTAL		14.489	6.502	0.300	6.802	6.802	6.802	1.027			0.0	6.850	

TABLE A-2(2) WATER BALANCE STUDY WITH CAPAYAS DAM, ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1957 - 1958		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPOR	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.0	0.296	0.009	0.305	1.630	0.305	0.027	2.015	32.660	0.0	0.0	65%
	(31)	0.408	0.0	0.008	0.008	1.712	0.008	0.027	2.341	34.000	0.0	0.051	65%
	(32)	0.201	0.184	0.008	0.192	1.831	0.192	0.027	2.328	32.987	0.0	0.0	65%
	(33)	0.051	0.505	0.008	0.514	1.668	0.514	0.024	1.847	32.486	0.0	0.0	65%
DEC	(34)	0.146	0.231	0.008	0.239	1.282	0.239	0.020	1.739	32.373	0.0	0.0	65%
	(35)	0.272	0.0	0.008	0.008	1.300	0.008	0.022	1.986	32.630	0.0	0.0	65%
	(36)	0.060	0.446	0.009	0.455	1.335	0.455	0.021	1.575	32.202	0.0	0.0	65%
JAN	(1)	0.340	0.141	0.008	0.149	1.204	0.149	0.025	1.746	32.381	0.0	0.0	65%
	(2)	0.174	0.263	0.008	0.271	1.209	0.271	0.024	1.631	32.260	0.0	0.0	65%
	(3)	0.184	0.261	0.009	0.270	1.104	0.270	0.025	1.526	32.151	0.0	0.0	65%
	(4)	0.094	0.358	0.008	0.366	0.909	0.366	0.019	1.240	30.789	0.0	0.0	65%
FEB	(5)	0.424	0.0	0.008	0.008	0.953	0.008	0.022	1.638	32.268	0.0	0.0	65%
	(6)	0.058	0.196	0.007	0.203	0.985	0.203	0.017	1.481	32.104	0.0	0.0	65%
	(7)	0.275	0.0	0.008	0.008	1.045	0.008	0.027	1.725	32.359	0.0	0.0	65%
MAR	(8)	0.009	0.364	0.008	0.372	1.023	0.372	0.024	1.344	30.944	0.0	0.0	65%
	(9)	0.113	0.121	0.009	0.130	0.746	0.130	0.025	1.307	30.890	0.0	0.0	65%
APR	(10)	0.004	0.137	0.008	0.145	0.600	0.145	0.025	1.147	30.650	0.0	0.0	65%
	(11)	0.073	0.0	0.008	0.008	0.509	0.008	0.025	1.191	30.717	0.0	0.0	65%
	(12)	0.479	0.0	0.008	0.008	0.959	0.008	0.031	1.636	32.266	0.0	0.0	65%
MAY	(13)	0.028	0.0	0.008	0.008	0.953	0.008	0.030	1.632	32.261	0.0	0.0	65%
	(14)	0.0	0.0	0.008	0.008	0.921	0.008	0.029	1.600	32.228	0.0	0.0	65%
	(15)	0.324	0.0	0.009	0.009	1.213	0.009	0.036	1.885	32.525	0.0	0.0	45%
	(16)	0.160	0.269	0.008	0.277	1.334	0.277	0.027	1.746	32.381	0.0	0.0	45%
JUN	(17)	0.308	0.135	0.008	0.143	1.343	0.143	0.028	1.889	32.529	0.0	0.0	45%
	(18)	0.378	0.190	0.008	0.199	1.556	0.199	0.029	2.044	32.691	0.0	0.0	45%
	(19)	0.921	0.0	0.008	0.008	2.254	0.008	0.031	2.341	34.000	0.0	0.591	45%
	(20)	0.062	0.475	0.008	0.483	1.692	0.483	0.027	1.898	32.538	0.0	0.0	45%
	(21)	0.371	0.230	0.009	0.239	1.558	0.239	0.031	2.005	32.650	0.0	0.0	45%
AUG	(22)	0.249	0.373	0.008	0.382	1.543	0.382	0.027	1.851	32.489	0.0	0.0	45%
	(23)	0.469	0.170	0.008	0.178	1.609	0.178	0.029	2.118	32.767	0.0	0.0	45%
	(24)	0.088	0.589	0.009	0.598	1.495	0.598	0.027	1.587	32.214	0.0	0.0	45%
SEP	(25)	0.039	0.414	0.008	0.423	0.915	0.423	0.018	1.190	30.716	0.0	0.0	45%
	(26)	0.443	0.0	0.008	0.008	0.922	0.008	0.021	1.609	32.238	0.0	0.0	45%
	(27)	0.215	0.0	0.008	0.008	1.113	0.008	0.023	1.798	32.435	0.0	0.0	45%
OCT	(28)	0.043	0.0	0.008	0.008	1.130	0.008	0.023	1.816	32.453	0.0	0.0	45%
	(29)	0.273	0.0	0.008	0.008	1.378	0.008	0.025	2.061	32.708	0.0	0.0	45%
TOTAL		7.736	6.348	0.300	6.648		6.648	0.917			0.0	0.642	

TABLE A-2(3) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1958 - 1959		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
	(30)	0.069	0.051	0.009	0.060	1.419	0.060	0.027	2.048	32.695	0.0	0.0	50%
NOV	(31)	0.206	0.0	0.008	0.008	1.543	0.008	0.027	2.225	32.879	0.0	0.0	50%
	(32)	0.469	0.0	0.008	0.008	1.983	0.008	0.027	2.341	34.000	0.0	0.323	50%
DEC	(33)	0.195	0.283	0.008	0.291	1.825	0.291	0.027	2.224	32.878	0.0	0.0	50%
	(34)	0.211	0.0	0.008	0.008	1.724	0.008	0.025	2.341	34.000	0.0	0.066	50%
	(35)	0.076	0.101	0.008	0.110	1.706	0.110	0.024	2.288	32.945	0.0	0.0	50%
	(36)	0.041	0.355	0.009	0.364	1.618	0.364	0.024	1.947	32.589	0.0	0.0	50%
JAN	(1)	1.012	0.0	0.008	0.008	2.248	0.008	0.030	2.341	34.000	0.0	0.585	50%
	(2)	0.272	0.182	0.008	0.190	1.902	0.190	0.030	2.341	34.000	0.0	0.058	50%
	(3)	0.143	0.294	0.009	0.303	1.773	0.303	0.031	2.156	32.807	0.0	0.0	50%
FEB	(4)	0.393	0.0	0.008	0.008	1.838	0.008	0.028	2.341	34.000	0.0	0.177	50%
	(5)	0.037	0.359	0.008	0.367	1.667	0.367	0.025	1.991	32.635	0.0	0.0	50%
	(6)	0.015	0.325	0.007	0.331	1.295	0.331	0.018	1.661	32.291	0.0	0.0	50%
MAR	(7)	0.203	0.204	0.008	0.213	1.153	0.213	0.026	1.630	32.259	0.0	0.0	50%
	(8)	0.621	0.0	0.008	0.008	1.540	0.008	0.032	2.216	32.870	0.0	0.0	50%
	(9)	0.458	0.0	0.009	0.009	1.963	0.009	0.036	2.341	34.000	0.0	0.293	50%
APR	(10)	0.055	0.006	0.008	0.015	1.685	0.015	0.038	2.341	34.000	0.0	0.007	50%
	(11)	0.004	0.017	0.008	0.025	1.634	0.025	0.038	2.287	32.943	0.0	0.0	50%
	(12)	0.026	0.0	0.008	0.008	1.602	0.008	0.038	2.272	32.928	0.0	0.0	50%
MAY	(13)	0.143	0.0	0.008	0.008	1.704	0.008	0.037	2.341	34.000	0.0	0.034	50%
	(14)	0.166	0.0	0.008	0.008	1.796	0.008	0.040	2.341	34.000	0.0	0.126	50%
	(15)	0.158	0.0	0.009	0.009	1.788	0.009	0.037	2.341	34.000	0.0	0.114	65%
JUN	(16)	0.168	0.337	0.008	0.346	1.798	0.346	0.030	2.138	32.789	0.0	0.0	65%
	(17)	0.131	0.613	0.008	0.621	1.558	0.621	0.025	1.628	32.257	0.0	0.0	65%
	(18)	0.319	0.485	0.008	0.493	1.236	0.493	0.024	1.435	32.056	0.0	0.0	65%
JUL	(19)	1.189	0.0	0.008	0.008	1.913	0.008	0.031	2.341	34.000	0.0	0.250	65%
	(20)	0.307	0.368	0.008	0.376	1.937	0.376	0.030	2.247	32.902	0.0	0.0	65%
	(21)	0.893	0.0	0.009	0.009	2.429	0.009	0.034	2.341	34.000	0.0	0.762	65%
AUG	(22)	0.084	0.814	0.008	0.823	1.714	0.823	0.025	1.583	32.210	0.0	0.0	65%
	(23)	0.761	0.0	0.008	0.008	1.633	0.008	0.031	2.310	32.967	0.0	0.0	65%
	(24)	0.267	0.610	0.009	0.619	1.866	0.619	0.031	1.933	32.575	0.0	0.0	65%
SEP	(25)	0.207	0.168	0.008	0.176	1.429	0.176	0.024	1.945	32.588	0.0	0.0	65%
	(26)	0.338	0.121	0.008	0.129	1.572	0.129	0.025	2.134	32.785	0.0	0.0	65%
	(27)	0.403	0.0	0.008	0.008	1.826	0.008	0.027	2.341	34.000	0.0	0.166	65%
OCT	(28)	0.249	0.0	0.008	0.008	1.879	0.008	0.027	2.341	34.000	0.0	0.219	65%
	(29)	0.288	0.0	0.008	0.008	1.918	0.008	0.027	2.341	34.000	0.0	0.258	65%
TOTAL		10.577	5.694	0.300	5.994		5.994	1.055			0.0	3.439	

TABLE A-2(4) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1959 - 1960		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.082	0.126	0.009	0.135	1.712	0.135	0.029	2.265	32.921	0.0	0.0	65%
	(31)	0.264	0.089	0.008	0.097	1.818	0.097	0.027	2.341	34.000	0.0	0.069	65%
	(32)	0.153	0.293	0.008	0.301	1.783	0.301	0.026	2.172	32.824	0.0	0.0	65%
	(33)	0.264	0.242	0.008	0.250	1.725	0.250	0.026	2.164	32.816	0.0	0.0	65%
DEC	(34)	0.285	0.151	0.008	0.160	1.738	0.160	0.024	2.271	32.927	0.0	0.0	65%
	(35)	0.077	0.356	0.008	0.365	1.637	0.365	0.022	1.966	32.609	0.0	0.0	65%
JAN	(36)	0.463	0.0	0.009	0.009	1.718	0.009	0.027	2.341	34.000	0.0	0.058	65%
	(1)	0.012	0.585	0.008	0.593	1.642	0.593	0.025	1.741	32.375	0.0	0.0	65%
	(2)	0.304	0.195	0.008	0.203	1.334	0.203	0.025	1.822	32.459	0.0	0.0	65%
	(3)	1.088	0.0	0.009	0.009	2.199	0.009	0.032	2.341	34.000	0.0	0.533	65%
FEB	(4)	0.242	0.150	0.008	0.158	1.872	0.158	0.028	2.341	34.000	0.0	0.061	65%
	(5)	0.081	0.497	0.008	0.505	1.711	0.505	0.024	1.898	32.538	0.0	0.0	65%
	(6)	0.190	0.016	0.007	0.023	1.377	0.023	0.021	2.048	32.695	0.0	0.0	65%
MAR	(7)	0.013	0.504	0.008	0.512	1.350	0.512	0.025	1.529	32.154	0.0	0.0	65%
	(8)	0.194	0.021	0.008	0.029	1.012	0.029	0.027	1.672	32.303	0.0	0.0	65%
	(9)	0.089	0.151	0.009	0.160	1.050	0.160	0.028	1.579	32.206	0.0	0.0	65%
APR	(10)	0.102	0.054	0.008	0.062	0.970	0.062	0.030	1.593	32.221	0.0	0.0	65%
	(11)	0.065	0.004	0.008	0.012	0.947	0.012	0.031	1.621	32.250	0.0	0.0	65%
	(12)	0.742	0.0	0.008	0.008	1.652	0.008	0.038	2.321	32.979	0.0	0.0	65%
MAY	(13)	0.0	0.0	0.008	0.008	1.610	0.008	0.037	2.282	32.938	0.0	0.0	65%
	(14)	0.146	0.0	0.008	0.008	1.717	0.008	0.037	2.341	34.000	0.0	0.047	65%
	(15)	0.521	0.0	0.009	0.009	2.151	0.009	0.040	2.341	34.000	0.0	0.477	65%
JUN	(16)	0.322	0.370	0.008	0.378	1.952	0.378	0.031	2.259	32.915	0.0	0.0	65%
	(17)	0.608	0.0	0.008	0.008	2.156	0.008	0.032	2.341	34.000	0.0	0.491	65%
	(18)	0.606	0.307	0.008	0.316	2.236	0.316	0.032	2.341	34.000	0.0	0.264	65%
JUL	(19)	0.511	0.0	0.008	0.008	2.141	0.008	0.031	2.341	34.000	0.0	0.477	65%
	(20)	0.074	0.485	0.008	0.493	1.704	0.493	0.027	1.900	32.540	0.0	0.0	65%
	(21)	0.338	0.0	0.009	0.009	1.527	0.009	0.033	2.202	32.855	0.0	0.0	65%
AUG	(22)	0.320	0.055	0.008	0.063	1.811	0.063	0.031	2.341	34.000	0.0	0.092	65%
	(23)	0.042	0.817	0.008	0.826	1.672	0.826	0.024	1.538	32.164	0.0	0.0	65%
	(24)	0.115	0.693	0.009	0.702	0.942	0.702	0.020	0.938	30.338	0.0	0.0	65%
SEP	(25)	0.272	0.421	0.008	0.430	0.499	0.430	0.014	0.771	30.090	0.0	0.0	65%
	(26)	0.448	0.075	0.008	0.083	0.508	0.083	0.017	1.125	30.617	0.0	0.0	65%
	(27)	0.601	0.0	0.008	0.008	1.015	0.008	0.022	1.701	32.333	0.0	0.0	65%
OCT	(28)	0.217	0.0	0.008	0.008	1.207	0.008	0.023	1.891	32.531	0.0	0.0	65%
	(29)	0.232	0.0	0.008	0.008	1.412	0.008	0.025	2.095	32.744	0.0	0.0	65%
TOTAL		10.083	6.659	0.300	6.959	6.959	6.959	0.992			0.0	2.568	

TABLE A-2(5) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1960 -- 1961		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.394	0.0	0.009	0.009	1.778	0.009	0.029	2.341	34.000	0.0	0.115	50%
	(31)	0.459	0.0	0.008	0.008	2.089	0.008	0.027	2.341	34.000	0.0	0.429	50%
	(32)	0.400	0.021	0.008	0.029	2.030	0.029	0.027	2.341	34.000	0.0	0.348	50%
	(33)	0.558	0.083	0.008	0.091	2.188	0.091	0.027	2.341	34.000	0.0	0.444	50%
DEC	(34)	0.320	0.0	0.008	0.008	1.950	0.008	0.025	2.341	34.000	0.0	0.292	50%
	(35)	0.210	0.119	0.008	0.128	1.840	0.128	0.025	2.341	34.000	0.0	0.063	50%
	(36)	0.294	0.107	0.009	0.116	1.924	0.116	0.027	2.341	34.000	0.0	0.157	50%
JAN	(1)	0.512	0.0	0.008	0.008	2.142	0.008	0.030	2.341	34.000	0.0	0.479	50%
	(2)	0.226	0.219	0.008	0.227	1.856	0.227	0.030	2.315	32.973	0.0	0.0	50%
	(3)	0.216	0.241	0.009	0.250	1.820	0.250	0.032	2.256	32.911	0.0	0.0	50%
	(4)	0.387	0.0	0.008	0.008	1.932	0.008	0.028	2.341	34.000	0.0	0.271	50%
	(5)	0.148	0.245	0.008	0.254	1.778	0.254	0.027	2.214	32.867	0.0	0.0	50%
	(6)	0.003	0.353	0.007	0.359	1.506	0.359	0.019	1.842	32.481	0.0	0.0	50%
MAR	(7)	0.060	0.289	0.008	0.297	1.191	0.297	0.026	1.584	32.212	0.0	0.0	50%
	(8)	0.174	0.051	0.008	0.059	1.047	0.059	0.027	1.678	32.309	0.0	0.0	50%
	(9)	0.050	0.071	0.009	0.080	1.017	0.080	0.029	1.625	32.254	0.0	0.0	50%
APR	(10)	0.298	0.0	0.008	0.008	1.212	0.008	0.034	1.886	32.526	0.0	0.0	50%
	(11)	0.125	0.0	0.008	0.008	1.300	0.008	0.035	1.974	32.617	0.0	0.0	50%
	(12)	0.136	0.0	0.008	0.008	1.399	0.008	0.036	2.071	32.719	0.0	0.0	50%
	(13)	0.131	0.0	0.008	0.008	1.491	0.008	0.035	2.164	32.815	0.0	0.0	50%
MAY	(14)	0.160	0.0	0.008	0.008	1.613	0.008	0.037	2.284	32.941	0.0	0.0	50%
	(15)	0.068	0.334	0.009	0.344	1.641	0.344	0.037	1.978	32.621	0.0	0.0	65%
	(16)	0.430	0.0	0.008	0.008	1.697	0.008	0.032	2.341	34.000	0.0	0.032	65%
	(17)	0.103	0.596	0.008	0.604	1.733	0.604	0.027	1.818	32.455	0.0	0.0	65%
	(18)	0.015	1.057	0.008	1.066	1.122	1.066	0.016	0.756	30.067	0.0	0.0	65%
	(19)	1.184	0.0	0.008	0.008	1.229	0.008	0.027	1.910	32.551	0.0	0.0	65%
	(20)	0.243	0.205	0.008	0.214	1.442	0.214	0.027	1.917	32.559	0.0	0.0	65%
	(21)	0.788	0.0	0.009	0.009	1.994	0.009	0.034	2.341	34.000	0.0	0.327	65%
	(22)	0.134	0.553	0.008	0.561	1.764	0.561	0.027	1.892	32.532	0.0	0.0	65%
	(23)	0.425	0.0	0.008	0.008	1.606	0.008	0.031	2.283	32.939	0.0	0.0	65%
	(24)	0.097	0.726	0.009	0.735	1.669	0.735	0.027	1.623	32.252	0.0	0.0	65%
	(25)	0.743	0.0	0.008	0.008	1.655	0.008	0.027	2.336	32.995	0.0	0.0	65%
	(26)	0.378	0.011	0.008	0.019	2.003	0.019	0.027	2.341	34.000	0.0	0.332	65%
	(27)	0.175	0.158	0.008	0.166	1.805	0.166	0.027	2.328	32.986	0.0	0.0	65%
OCT	(28)	0.470	0.0	0.008	0.008	2.087	0.008	0.027	2.341	34.000	0.0	0.427	65%
	(29)	0.888	0.0	0.008	0.008	2.518	0.008	0.027	2.341	34.000	0.0	0.858	65%
TOTAL		11.402	5.440	0.300	5.740		5.740	1.030			0.0	4.577	

TABLE A-2(6) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1961 - 1962

UNIT : MCM

MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP. STORGE	WL	SHORT	SPILL	CROPPING INTENSITY	
(30)		0.778	0.0	0.009	0.009	2.408	0.009	0.029	2.341	34.000	0.0	0.745	65%
(31)		0.200	0.164	0.008	0.172	1.830	0.172	0.027	2.341	34.000	0.0	0.006	65%
(32)		0.430	0.0	0.008	0.008	2.060	0.008	0.027	2.341	34.000	0.0	0.400	65%
(33)		0.348	0.203	0.008	0.211	1.978	0.211	0.027	2.341	34.000	0.0	0.115	65%
(34)		0.298	0.060	0.008	0.068	1.928	0.068	0.025	2.341	34.000	0.0	0.210	65%
(35)		0.317	0.094	0.008	0.103	1.947	0.103	0.025	2.341	34.000	0.0	0.195	65%
(36)		0.343	0.078	0.009	0.087	1.973	0.087	0.027	2.341	34.000	0.0	0.235	65%
(1)		0.236	0.223	0.008	0.231	1.866	0.231	0.030	2.322	32.980	0.0	0.0	65%
(2)		0.400	0.0	0.008	0.008	2.011	0.008	0.030	2.341	34.000	0.0	0.348	65%
(3)		0.027	0.677	0.009	0.686	1.657	0.686	0.026	1.662	32.292	0.0	0.0	65%
(4)		0.951	0.0	0.008	0.008	1.902	0.008	0.028	2.341	34.000	0.0	0.241	65%
(5)		0.432	0.0	0.008	0.008	2.062	0.008	0.028	2.341	34.000	0.0	0.401	65%
(6)		0.183	0.121	0.007	0.127	1.813	0.127	0.022	2.341	34.000	0.0	0.038	65%
(7)		0.737	0.0	0.008	0.008	2.367	0.008	0.033	2.341	34.000	0.0	0.701	65%
(8)		0.114	0.230	0.008	0.238	1.744	0.238	0.032	2.190	32.843	0.0	0.0	65%
(9)		0.136	0.161	0.009	0.170	1.615	0.170	0.034	2.127	32.777	0.0	0.0	65%
(10)		0.0	0.139	0.008	0.148	1.416	0.148	0.034	1.950	32.593	0.0	0.0	65%
(11)		0.089	0.0	0.008	0.008	1.328	0.008	0.035	2.001	32.646	0.0	0.0	65%
(12)		0.026	0.0	0.008	0.008	1.316	0.008	0.035	1.990	32.634	0.0	0.0	65%
(13)		0.056	0.0	0.008	0.008	1.335	0.008	0.034	2.009	32.654	0.0	0.0	65%
(14)		0.182	0.0	0.008	0.008	1.480	0.008	0.035	2.153	32.804	0.0	0.0	65%
(15)		0.474	0.0	0.009	0.009	1.916	0.009	0.040	2.341	34.000	0.0	0.242	65%
(16)		0.158	0.436	0.008	0.445	1.788	0.445	0.029	2.030	32.676	0.0	0.0	65%
(17)		0.605	0.0	0.008	0.008	1.924	0.008	0.032	2.341	34.000	0.0	0.260	65%
(18)		0.471	0.400	0.008	0.409	2.101	0.409	0.032	2.341	34.000	0.0	0.036	65%
(19)		0.895	0.0	0.008	0.008	2.525	0.008	0.031	2.341	34.000	0.0	0.861	65%
(20)		0.145	0.066	0.008	0.074	1.775	0.074	0.031	2.341	34.000	0.0	0.045	65%
(21)		0.241	0.501	0.009	0.510	1.871	0.510	0.031	2.047	32.693	0.0	0.0	65%
(22)		0.637	0.003	0.008	0.011	1.973	0.011	0.031	2.341	34.000	0.0	0.305	65%
(23)		0.623	0.0	0.008	0.008	2.253	0.008	0.031	2.341	34.000	0.0	0.589	65%
(24)		0.338	0.325	0.009	0.334	1.968	0.334	0.034	2.317	32.975	0.0	0.0	65%
(25)		0.600	0.0	0.008	0.008	2.206	0.008	0.027	2.341	34.000	0.0	0.546	65%
(26)		0.702	0.0	0.008	0.008	2.332	0.008	0.027	2.341	34.000	0.0	0.672	65%
(27)		0.312	0.036	0.008	0.044	1.942	0.044	0.027	2.341	34.000	0.0	0.247	65%
(28)		0.278	0.0	0.008	0.008	1.908	0.008	0.027	2.341	34.000	0.0	0.248	65%
(29)		0.111	0.0	0.008	0.008	1.741	0.008	0.027	2.341	34.000	0.0	0.081	65%
TOTAL		12.873	3.917	0.300	4.217		4.217	1.079			0.0	7.767	

TABLE A-2(7) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1962 - 1963		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP0	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.297	0.0	0.009	0.009	1.927	0.009	0.029	2.341	34.000	0.0	0.264	65%
	(31)	0.860	0.0	0.008	0.008	2.490	0.008	0.027	2.341	34.000	0.0	0.830	65%
	(32)	0.190	0.241	0.008	0.249	1.820	0.249	0.027	2.260	32.915	0.0	0.0	65%
	(33)	1.068	0.0	0.008	0.008	2.617	0.008	0.027	2.341	34.000	0.0	0.957	65%
DEC	(34)	0.299	0.073	0.008	0.081	1.929	0.081	0.025	2.341	34.000	0.0	0.199	65%
	(35)	0.146	0.227	0.008	0.236	1.776	0.236	0.024	2.233	32.887	0.0	0.0	65%
	(36)	0.412	0.0	0.009	0.009	1.934	0.009	0.027	2.341	34.000	0.0	0.273	65%
JAN	(1)	0.933	0.0	0.008	0.008	2.563	0.008	0.030	2.341	34.000	0.0	0.900	65%
	(2)	0.481	0.174	0.008	0.183	2.111	0.183	0.030	2.341	34.000	0.0	0.274	65%
	(3)	0.286	0.341	0.009	0.350	1.916	0.350	0.032	2.251	32.906	0.0	0.0	65%
	(4)	0.024	0.644	0.008	0.652	1.564	0.652	0.022	1.606	32.234	0.0	0.0	65%
	(5)	0.762	0.0	0.008	0.008	1.657	0.008	0.028	2.337	32.996	0.0	0.0	65%
	(6)	0.030	0.382	0.007	0.389	1.656	0.389	0.020	1.963	32.606	0.0	0.0	65%
MAR	(7)	0.809	0.0	0.008	0.008	2.061	0.008	0.033	2.341	34.000	0.0	0.395	65%
	(8)	0.276	0.025	0.008	0.034	1.906	0.034	0.033	2.341	34.000	0.0	0.215	65%
	(9)	0.094	0.208	0.009	0.217	1.724	0.217	0.035	2.188	32.841	0.0	0.0	65%
APR	(10)	0.264	0.0	0.008	0.008	1.741	0.008	0.038	2.341	34.000	0.0	0.070	65%
	(11)	0.004	0.031	0.008	0.039	1.634	0.039	0.038	2.273	32.930	0.0	0.0	65%
	(12)	0.017	0.0	0.008	0.008	1.579	0.008	0.038	2.249	32.905	0.0	0.0	65%
	(13)	0.0	0.0	0.008	0.008	1.538	0.008	0.036	2.211	32.864	0.0	0.0	65%
	(14)	0.012	0.0	0.008	0.008	1.512	0.008	0.035	2.184	32.837	0.0	0.0	65%
	(15)	0.020	0.140	0.009	0.149	1.493	0.149	0.037	2.023	32.669	0.0	0.0	65%
JUN	(16)	0.019	0.589	0.008	0.597	1.331	0.597	0.024	1.427	32.048	0.0	0.0	65%
	(17)	0.020	0.787	0.008	0.795	0.741	0.741	0.0	0.711	30.000	-0.054	0.0	65%
	(18)	0.210	0.034	0.008	0.042	0.210	0.042	0.017	0.867	30.233	0.0	0.0	65%
JUL	(19)	0.232	0.165	0.008	0.173	0.388	0.173	0.017	0.914	30.303	0.0	0.0	65%
	(20)	0.202	0.244	0.008	0.252	0.405	0.252	0.016	0.853	30.211	0.0	0.0	65%
	(21)	1.323	0.0	0.009	0.009	1.465	0.009	0.032	2.140	32.791	0.0	0.0	65%
AUG	(22)	0.241	0.066	0.008	0.074	1.670	0.074	0.031	2.281	32.938	0.0	0.0	65%
	(23)	0.475	0.013	0.008	0.021	2.045	0.021	0.031	2.341	34.000	0.0	0.368	65%
	(24)	0.524	0.0	0.009	0.009	2.154	0.009	0.034	2.341	34.000	0.0	0.486	65%
SEP	(25)	0.049	0.754	0.008	0.763	1.679	0.763	0.021	1.611	32.240	0.0	0.0	65%
	(26)	0.286	0.276	0.008	0.284	1.186	0.284	0.021	1.597	32.225	0.0	0.0	65%
	(27)	1.218	0.0	0.008	0.008	2.104	0.008	0.027	2.341	34.000	0.0	0.444	65%
OCT	(28)	1.023	0.0	0.008	0.008	2.653	0.008	0.027	2.341	34.000	0.0	0.993	65%
	(29)	0.478	0.0	0.008	0.008	2.108	0.008	0.027	2.341	34.000	0.0	0.448	65%
TOTAL		13.584	5.415	0.300	5.715	5.661	5.661	0.997			-0.054	7.117	

TABLE A-2(8) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1963 - 1964		UNIT ; MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.284	0.0	0.009	0.009	1.914	0.009	0.029	2.341	34.000	0.0	0.251	65%
	(31)	0.750	0.0	0.008	0.008	2.380	0.008	0.027	2.341	34.000	0.0	0.720	65%
	(32)	0.081	0.346	0.008	0.355	1.711	0.355	0.025	2.048	32.694	0.0	0.0	65%
	(33)	0.069	0.520	0.008	0.528	1.406	0.528	0.021	1.572	32.199	0.0	0.0	65%
DEC	(34)	0.083	0.253	0.008	0.261	0.944	0.261	0.018	1.381	32.000	0.0	0.0	65%
	(35)	0.197	0.084	0.008	0.092	0.867	0.092	0.018	1.473	32.095	0.0	0.0	65%
	(36)	0.118	0.319	0.009	0.328	0.880	0.328	0.018	1.250	30.805	0.0	0.0	65%
JAN	(1)	0.109	0.466	0.008	0.474	0.648	0.474	0.016	0.874	30.243	0.0	0.0	65%
	(2)	0.239	0.268	0.008	0.276	0.402	0.276	0.016	0.827	30.172	0.0	0.0	65%
	(3)	0.391	0.167	0.009	0.176	0.507	0.176	0.020	1.027	30.472	0.0	0.0	65%
FEB	(4)	0.141	0.517	0.008	0.525	0.463	0.463	0.0	0.711	30.000	-0.062	0.0	65%
	(5)	1.135	0.0	0.008	0.008	1.135	0.008	0.024	1.819	32.456	0.0	0.0	65%
	(6)	0.445	0.0	0.007	0.007	1.553	0.007	0.022	2.240	32.895	0.0	0.0	65%
MAR	(7)	0.039	0.252	0.008	0.260	1.568	0.260	0.030	1.994	32.639	0.0	0.0	65%
	(8)	0.037	0.195	0.008	0.203	1.320	0.203	0.028	1.805	32.442	0.0	0.0	65%
	(9)	0.023	0.196	0.009	0.205	1.117	0.205	0.029	1.600	32.228	0.0	0.0	65%
APR	(10)	0.176	0.0	0.008	0.008	1.065	0.008	0.032	1.741	32.375	0.0	0.0	65%
	(11)	0.154	0.0	0.008	0.008	1.184	0.008	0.033	1.859	32.498	0.0	0.0	65%
	(12)	0.088	0.0	0.008	0.008	1.236	0.008	0.034	1.910	32.551	0.0	0.0	65%
MAY	(13)	0.416	0.0	0.008	0.008	1.615	0.008	0.037	2.286	32.943	0.0	0.0	65%
	(14)	0.891	0.0	0.008	0.008	2.466	0.008	0.037	2.341	34.000	0.0	0.796	65%
	(15)	0.663	0.0	0.009	0.009	2.293	0.009	0.040	2.341	34.000	0.0	0.619	65%
	(16)	0.026	0.427	0.008	0.435	1.656	0.435	0.028	1.909	32.550	0.0	0.0	65%
JUN	(17)	0.390	0.070	0.008	0.078	1.588	0.078	0.031	2.196	32.849	0.0	0.0	65%
	(18)	0.149	0.603	0.008	0.611	1.634	0.611	0.026	1.713	32.345	0.0	0.0	65%
	(19)	0.267	0.0	0.008	0.008	1.269	0.008	0.027	1.949	32.592	0.0	0.0	65%
JUL	(20)	0.456	0.0	0.008	0.008	1.694	0.008	0.031	2.341	34.000	0.0	0.030	65%
	(21)	0.384	0.082	0.009	0.092	2.014	0.092	0.034	2.341	34.000	0.0	0.264	65%
AUG	(22)	0.016	0.782	0.008	0.790	1.646	0.790	0.024	1.548	32.173	0.0	0.0	65%
	(23)	0.001	0.921	0.008	0.929	0.843	0.843	0.0	0.711	30.000	-0.086	0.0	65%
	(24)	0.279	0.178	0.009	0.187	0.279	0.187	0.018	0.791	30.120	0.0	0.0	65%
SEP	(25)	0.311	0.346	0.008	0.354	0.391	0.354	0.013	0.740	30.044	0.0	0.0	65%
	(26)	0.857	0.0	0.008	0.008	0.886	0.008	0.021	1.573	32.200	0.0	0.0	65%
	(27)	0.285	0.032	0.008	0.040	1.147	0.040	0.023	1.800	32.437	0.0	0.0	65%
OCT	(28)	0.521	0.0	0.008	0.008	1.610	0.008	0.027	2.292	32.949	0.0	0.0	65%
	(29)	0.201	0.0	0.008	0.008	1.782	0.008	0.027	2.341	34.000	0.0	0.122	65%
TOTAL		10.672	7.024	0.300	7.324	7.175	7.175	0.884			-0.149	2.803	

TABLE A-2(9) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1964 - 1965		UNIT : MCM																																	
MONTH	10-DAY INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	USE POSSIB.	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY																							
													(30)	(31)	(32)	(33)	(34)	(35)	(36)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
NOV	0.231	0.0	0.009	0.009	1.861	0.009	0.029	2.341	34.000	0.0	0.198	65%																							
	1.344	0.0	0.008	0.008	2.974	0.008	0.027	2.341	34.000	0.0	1.314	65%																							
	3.579	0.0	0.008	0.008	5.209	0.008	0.027	2.341	34.000	0.0	3.549	65%																							
	0.164	0.430	0.008	0.439	1.794	0.439	0.025	2.046	32.693	0.0	0.0	65%																							
DEC	0.620	0.0	0.008	0.008	1.955	0.008	0.025	2.341	34.000	0.0	0.298	65%																							
	0.196	0.225	0.008	0.233	1.826	0.233	0.024	2.285	32.941	0.0	0.0	65%																							
	0.575	0.055	0.009	0.064	2.149	0.064	0.027	2.341	34.000	0.0	0.433	65%																							
JAN	0.618	0.045	0.008	0.053	2.248	0.053	0.030	2.341	34.000	0.0	0.541	65%																							
	1.186	0.048	0.008	0.057	2.816	0.057	0.030	2.341	34.000	0.0	1.105	65%																							
	0.163	0.529	0.009	0.538	1.793	0.538	0.029	1.943	32.585	0.0	0.0	65%																							
FEB	0.157	0.261	0.008	0.269	1.389	0.269	0.024	1.812	32.449	0.0	0.0	65%																							
	0.495	0.0	0.008	0.008	1.596	0.008	0.028	2.277	32.933	0.0	0.0	65%																							
	0.266	0.0	0.007	0.007	1.832	0.007	0.022	2.341	34.000	0.0	0.177	65%																							
MAR	0.270	0.010	0.008	0.018	1.900	0.018	0.033	2.341	34.000	0.0	0.224	65%																							
	0.403	0.003	0.008	0.012	2.033	0.012	0.033	2.341	34.000	0.0	0.364	65%																							
	0.057	0.199	0.009	0.208	1.687	0.208	0.035	2.161	32.812	0.0	0.0	65%																							
APR	0.034	0.108	0.008	0.116	1.484	0.116	0.036	2.048	32.695	0.0	0.0	65%																							
	0.270	0.0	0.008	0.008	1.607	0.008	0.038	2.277	32.933	0.0	0.0	65%																							
	0.077	0.0	0.008	0.008	1.643	0.008	0.038	2.313	32.970	0.0	0.0	65%																							
MAY	0.022	0.0	0.008	0.008	1.624	0.008	0.037	2.295	32.952	0.0	0.0	65%																							
	0.010	0.0	0.008	0.008	1.594	0.008	0.036	2.266	32.921	0.0	0.0	65%																							
	0.018	0.161	0.009	0.170	1.573	0.170	0.038	2.081	32.729	0.0	0.0	65%																							
JUN	0.820	0.0	0.008	0.008	2.190	0.008	0.032	2.341	34.000	0.0	0.525	65%																							
	0.737	0.112	0.008	0.120	2.367	0.120	0.032	2.341	34.000	0.0	0.590	65%																							
	0.202	0.828	0.008	0.836	1.832	0.836	0.026	1.686	32.318	0.0	0.0	65%																							
JUL	0.493	0.0	0.008	0.008	1.468	0.008	0.029	2.147	32.798	0.0	0.0	65%																							
	0.149	0.316	0.008	0.325	1.585	0.325	0.027	1.949	32.592	0.0	0.0	65%																							
	0.188	0.495	0.009	0.504	1.426	0.504	0.027	1.612	32.240	0.0	0.0	65%																							
AUG	0.048	0.782	0.008	0.790	0.949	0.790	0.017	0.858	30.219	0.0	0.0	65%																							
	0.583	0.039	0.008	0.047	0.730	0.047	0.023	1.376	30.993	0.0	0.0	65%																							
	0.296	0.547	0.009	0.556	0.961	0.556	0.022	1.100	30.581	0.0	0.0	65%																							
SEP	0.049	0.712	0.008	0.721	0.444	0.444	0.0	0.711	30.000	0.0	0.0	65%																							
	0.146	0.005	0.008	0.013	0.146	0.013	0.014	0.835	30.185	0.0	0.0	65%																							
	0.607	0.0	0.008	0.008	0.731	0.008	0.020	1.419	32.040	0.0	0.0	65%																							
OCT	0.221	0.020	0.008	0.028	0.929	0.028	0.021	1.596	32.224	0.0	0.0	65%																							
	0.768	0.0	0.008	0.008	1.653	0.008	0.027	2.335	32.993	0.0	0.0	65%																							
TOTAL	16.062	5.932	0.300	6.232	5.955	0.986				-0.277	9.318																								

TABLE A-2(10) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1965 - 1966		UNIT / MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP0	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.120	0.082	0.009	0.091	1.744	0.091	0.029	2.340	32.999	0.0	0.0	50%
	(31)	0.144	0.176	0.008	0.185	1.773	0.185	0.027	2.278	32.934	0.0	0.0	50%
	(32)	0.224	0.163	0.008	0.172	1.791	0.172	0.027	2.308	32.966	0.0	0.0	50%
	(33)	0.279	0.212	0.008	0.221	1.876	0.221	0.027	2.341	34.000	0.0	0.003	50%
DEC	(34)	0.277	0.047	0.008	0.055	1.907	0.055	0.025	2.341	34.000	0.0	0.202	50%
	(35)	0.573	0.0	0.008	0.008	2.203	0.008	0.025	2.341	34.000	0.0	0.545	50%
	(36)	0.156	0.243	0.009	0.252	1.786	0.252	0.026	2.224	32.878	0.0	0.0	50%
JAN	(1)	0.116	0.262	0.008	0.270	1.629	0.270	0.027	2.048	32.695	0.0	0.0	50%
	(2)	0.197	0.149	0.008	0.157	1.534	0.157	0.027	2.065	32.713	0.0	0.0	50%
	(3)	0.173	0.219	0.009	0.228	1.527	0.228	0.029	1.986	32.631	0.0	0.0	50%
	(4)	0.026	0.450	0.008	0.458	1.301	0.458	0.022	1.538	32.163	0.0	0.0	50%
FEB	(5)	0.075	0.273	0.008	0.281	0.902	0.281	0.020	1.317	30.904	0.0	0.0	50%
	(6)	0.205	0.0	0.007	0.007	0.811	0.007	0.017	1.503	32.127	0.0	0.0	50%
	(7)	0.035	0.225	0.008	0.234	0.827	0.234	0.023	1.286	30.859	0.0	0.0	50%
MAR	(8)	0.116	0.0	0.008	0.008	0.691	0.008	0.024	1.375	30.992	0.0	0.0	50%
	(9)	0.0	0.231	0.009	0.240	0.664	0.240	0.023	1.119	30.608	0.0	0.0	50%
	(10)	0.003	0.112	0.008	0.121	0.411	0.121	0.023	0.984	30.407	0.0	0.0	50%
APR	(11)	0.051	0.0	0.008	0.008	0.324	0.008	0.023	1.009	30.444	0.0	0.0	50%
	(12)	0.291	0.0	0.008	0.008	0.589	0.008	0.027	1.270	30.835	0.0	0.0	50%
MAY	(13)	0.433	0.0	0.008	0.008	0.992	0.008	0.030	1.670	32.301	0.0	0.0	50%
	(14)	0.621	0.0	0.008	0.008	1.580	0.008	0.036	2.252	32.907	0.0	0.0	50%
	(15)	0.100	0.334	0.009	0.344	1.641	0.344	0.037	1.978	32.621	0.0	0.0	65%
JUN	(16)	0.008	0.705	0.008	0.713	1.275	0.713	0.022	1.256	30.813	0.0	0.0	65%
	(17)	0.176	0.188	0.008	0.196	0.721	0.196	0.021	1.220	30.760	0.0	0.0	65%
	(18)	0.139	0.550	0.008	0.558	0.648	0.558	0.016	0.790	30.118	0.0	0.0	65%
JUL	(19)	0.187	0.484	0.008	0.493	0.271	0.271	0.0	0.711	30.000	-0.222	0.0	65%
	(20)	0.900	0.0	0.008	0.008	0.900	0.008	0.024	1.584	32.211	0.0	0.0	65%
	(21)	0.918	0.040	0.009	0.050	1.791	0.050	0.034	2.341	34.000	0.0	0.083	65%
AUG	(22)	0.374	0.412	0.008	0.420	2.004	0.420	0.031	2.269	32.925	0.0	0.0	65%
	(23)	0.107	0.722	0.008	0.730	1.665	0.730	0.025	1.626	32.255	0.0	0.0	65%
	(24)	0.692	0.0	0.009	0.009	1.607	0.009	0.034	2.281	32.937	0.0	0.0	65%
SEP	(25)	0.297	0.034	0.008	0.042	1.867	0.042	0.027	2.341	34.000	0.0	0.173	65%
	(26)	0.027	0.655	0.008	0.664	1.657	0.664	0.022	1.688	32.320	0.0	0.0	65%
	(27)	0.243	0.012	0.008	0.020	1.220	0.020	0.023	1.892	32.533	0.0	0.0	65%
OCT	(28)	0.905	0.0	0.008	0.008	2.086	0.008	0.027	2.341	34.000	0.0	0.427	65%
	(29)	0.443	0.0	0.008	0.008	2.073	0.008	0.027	2.341	34.000	0.0	0.413	65%
TOTAL		9.631	6.983	0.300	7.283		7.061	0.906			-0.222	1.848	

TABLE A-2(11) WATER BALANCE STUDY WITH LAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1966 - 1967		UNIT : MCM																																	
MONTH	10-DAY INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	TOTAL POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY																							
													(30)	(31)	(32)	(33)	(34)	(35)	(36)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
NOV	0.550	0.009	0.008	0.009	2.180	0.009	0.029	2.341	34.000	0.0	0.517	65%																							
	0.217	0.009	0.008	0.017	1.847	0.017	0.027	2.341	34.000	0.0	0.178	65%																							
	0.175	0.151	0.008	0.159	1.805	0.159	0.027	2.335	32.993	0.0	0.0	65%																							
	0.172	0.295	0.008	0.304	1.796	0.304	0.026	2.182	32.835	0.0	0.0	65%																							
DEC	0.302	0.025	0.008	0.034	1.773	0.034	0.025	2.341	34.000	0.0	0.090	65%																							
	0.447	0.0	0.008	0.008	2.077	0.008	0.025	2.341	34.000	0.0	0.419	65%																							
	0.249	0.208	0.009	0.217	1.879	0.217	0.027	2.341	34.000	0.0	0.011	65%																							
JAN	0.790	0.0	0.008	0.008	2.420	0.008	0.030	2.341	34.000	0.0	0.757	65%																							
	1.367	0.0	0.008	0.008	2.997	0.008	0.030	2.341	34.000	0.0	1.334	65%																							
	0.202	0.440	0.009	0.449	1.832	0.449	0.030	2.069	32.717	0.0	0.0	65%																							
FEB	0.068	0.572	0.008	0.580	1.426	0.580	0.022	1.541	32.166	0.0	0.0	65%																							
	0.940	0.0	0.008	0.008	1.770	0.008	0.028	2.341	34.000	0.0	0.109	65%																							
	0.394	0.0	0.007	0.007	2.024	0.007	0.022	2.341	34.000	0.0	0.369	65%																							
MAR	1.223	0.0	0.008	0.008	2.853	0.008	0.033	2.341	34.000	0.0	1.187	65%																							
	0.116	0.208	0.008	0.216	1.746	0.216	0.032	2.214	32.868	0.0	0.0	65%																							
	0.037	0.239	0.009	0.249	1.540	0.249	0.033	1.976	32.620	0.0	0.0	65%																							
APR	0.074	0.020	0.008	0.028	1.339	0.028	0.035	1.992	32.636	0.0	0.0	65%																							
	0.159	0.0	0.008	0.008	1.440	0.008	0.036	2.111	32.761	0.0	0.0	65%																							
	0.028	0.0	0.008	0.008	1.428	0.008	0.036	2.100	32.749	0.0	0.0	65%																							
MAY	0.0	0.0	0.008	0.008	1.389	0.008	0.034	2.063	32.710	0.0	0.0	65%																							
	0.003	0.0	0.008	0.008	1.355	0.008	0.034	2.029	32.675	0.0	0.0	65%																							
	0.585	0.0	0.009	0.009	1.903	0.009	0.040	2.341	34.000	0.0	0.229	65%																							
JUN	0.0	0.734	0.008	0.742	1.630	0.742	0.025	1.579	32.206	0.0	0.0	65%																							
	0.008	0.832	0.008	0.841	0.876	0.841	0.016	0.736	30.037	0.0	0.0	65%																							
	0.687	0.0	0.008	0.008	0.712	0.008	0.023	1.396	32.016	0.0	0.0	65%																							
JUL	0.429	0.116	0.008	0.124	1.114	0.124	0.025	1.681	32.313	0.0	0.0	65%																							
	0.268	0.197	0.008	0.205	1.238	0.205	0.025	1.723	32.357	0.0	0.0	65%																							
	0.084	0.795	0.009	0.804	1.096	0.804	0.020	0.989	30.415	0.0	0.0	65%																							
AUG	0.178	0.467	0.008	0.475	0.462	0.462	0.0	0.711	30.000	-0.014	0.0	65%																							
	0.074	0.724	0.008	0.733	0.079	0.079	0.0	0.711	30.000	-0.653	0.0	65%																							
	0.346	0.120	0.009	0.129	0.346	0.129	0.019	0.914	30.304	0.0	0.0	65%																							
SEP	0.401	0.026	0.008	0.034	0.604	0.034	0.018	1.268	30.831	0.0	0.0	65%																							
	0.336	0.067	0.008	0.075	0.893	0.075	0.020	1.514	32.138	0.0	0.0	65%																							
	0.276	0.033	0.008	0.041	1.079	0.041	0.022	1.732	32.365	0.0	0.0	65%																							
OCT	0.336	0.0	0.008	0.008	1.357	0.008	0.025	2.040	32.686	0.0	0.0	65%																							
	0.347	0.0	0.008	0.008	1.676	0.008	0.027	2.341	34.000	0.0	0.016	65%																							
TOTAL	11.868	6.281	0.300	6.581	5.913	5.913	0.927			-0.667	5.218																								

TABLE A-2(12) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

UNIT : MCM

MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY	
	(30)	0.094	0.134	0.009	0.143	1.724	0.143	0.029	2.269	32.925	0.0	0.0	0.0	65%
NOV	(31)	0.628	0.0	0.008	0.008	2.186	0.008	0.027	2.341	34.000	0.0	0.526	0.0	65%
	(32)	0.153	0.253	0.008	0.261	1.783	0.261	0.026	2.212	32.865	0.0	0.0	0.0	65%
	(33)	0.215	0.304	0.008	0.313	1.716	0.313	0.026	2.094	32.742	0.0	0.0	0.0	65%
DEC	(34)	0.085	0.312	0.008	0.320	1.468	0.320	0.021	1.843	32.481	0.0	0.0	0.0	65%
	(35)	0.929	0.0	0.008	0.008	2.061	0.008	0.025	2.341	34.000	0.0	0.403	0.0	65%
	(36)	0.017	0.531	0.009	0.540	1.647	0.540	0.023	1.801	32.437	0.0	0.0	0.0	65%
JAN	(1)	0.141	0.346	0.008	0.355	1.231	0.355	0.023	1.569	32.196	0.0	0.0	0.0	65%
	(2)	0.161	0.314	0.008	0.322	1.019	0.322	0.022	1.392	32.012	0.0	0.0	0.0	65%
	(3)	0.348	0.068	0.009	0.077	1.029	0.077	0.026	1.643	32.273	0.0	0.0	0.0	65%
FEB	(4)	0.142	0.152	0.008	0.161	1.074	0.161	0.022	1.607	32.236	0.0	0.0	0.0	65%
	(5)	0.022	0.570	0.008	0.578	0.918	0.578	0.017	1.040	30.491	0.0	0.0	0.0	65%
	(6)	0.106	0.028	0.007	0.034	0.435	0.034	0.014	1.102	30.583	0.0	0.0	0.0	65%
MAR	(7)	0.304	0.0	0.008	0.008	0.695	0.008	0.024	1.379	30.997	0.0	0.0	0.0	65%
	(8)	0.108	0.124	0.008	0.132	0.776	0.132	0.023	1.336	30.933	0.0	0.0	0.0	65%
	(9)	0.022	0.237	0.009	0.246	0.647	0.246	0.023	1.095	30.574	0.0	0.0	0.0	65%
APR	(10)	0.0	0.139	0.008	0.148	0.384	0.148	0.022	0.931	30.329	0.0	0.0	0.0	65%
	(11)	0.023	0.0	0.008	0.008	0.243	0.008	0.022	0.929	30.326	0.0	0.0	0.0	65%
	(12)	0.0	0.0	0.008	0.008	0.218	0.008	0.021	0.905	30.289	0.0	0.0	0.0	65%
MAY	(13)	0.013	0.0	0.008	0.008	0.207	0.008	0.020	0.895	30.274	0.0	0.0	0.0	65%
	(14)	0.0	0.0	0.008	0.008	0.184	0.008	0.020	0.872	30.240	0.0	0.0	0.0	65%
	(15)	0.004	0.095	0.009	0.104	0.165	0.104	0.020	0.757	30.068	0.0	0.0	0.0	20%
JUN	(16)	0.277	0.039	0.008	0.047	0.323	0.047	0.018	0.974	30.392	0.0	0.0	0.0	20%
	(17)	0.036	0.236	0.008	0.244	0.299	0.244	0.016	0.755	30.066	0.0	0.0	0.0	20%
	(18)	0.495	0.001	0.008	0.009	0.539	0.009	0.021	1.225	30.767	0.0	0.0	0.0	20%
JUL	(19)	0.439	0.0	0.008	0.008	0.953	0.008	0.025	1.636	32.266	0.0	0.0	0.0	20%
	(20)	0.136	0.138	0.008	0.146	1.061	0.146	0.024	1.607	32.235	0.0	0.0	0.0	20%
	(21)	0.046	0.266	0.009	0.275	0.942	0.275	0.024	1.359	30.968	0.0	0.0	0.0	20%
AUG	(22)	0.533	0.0	0.008	0.008	1.181	0.008	0.027	1.862	32.501	0.0	0.0	0.0	20%
	(23)	0.030	0.258	0.008	0.266	1.181	0.266	0.025	1.607	32.235	0.0	0.0	0.0	20%
	(24)	0.027	0.285	0.009	0.294	0.923	0.294	0.024	1.321	30.911	0.0	0.0	0.0	20%
SEP	(25)	0.022	0.236	0.008	0.244	0.632	0.244	0.017	1.088	30.563	0.0	0.0	0.0	20%
	(26)	1.037	0.0	0.008	0.008	1.414	0.008	0.025	2.097	32.746	0.0	0.0	0.0	20%
	(27)	0.074	0.126	0.008	0.134	1.460	0.134	0.024	2.018	32.663	0.0	0.0	0.0	20%
OCT	(28)	0.560	0.0	0.008	0.008	1.867	0.008	0.027	2.341	34.000	0.0	0.207	0.0	20%
	(29)	0.723	0.0	0.008	0.008	2.353	0.008	0.027	2.341	34.000	0.0	0.693	0.0	20%
TOTAL		7.950	5.190	0.300	5.490		5.490	0.822			0.0		1.829	

TABLE A-2(13) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1968 - 1969		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.128	0.124	0.009	0.133	1.758	0.133	0.029	2.312	32.970	0.0	0.0	65%
	(31)	0.164	0.240	0.008	0.248	1.765	0.248	0.026	2.207	32.860	0.0	0.0	65%
	(32)	1.909	0.0	0.008	0.008	3.405	0.008	0.027	2.341	34.000	0.0	1.744	65%
DEC	(33)	0.098	0.491	0.008	0.499	1.728	0.499	0.024	1.921	32.563	0.0	0.0	65%
	(34)	1.048	0.0	0.008	0.008	2.258	0.008	0.025	2.341	34.000	0.0	0.601	65%
	(35)	0.111	0.313	0.008	0.321	1.741	0.321	0.023	2.113	32.763	0.0	0.0	65%
	(36)	0.565	0.0	0.009	0.009	1.967	0.009	0.027	2.341	34.000	0.0	0.307	65%
JAN	(1)	0.068	0.296	0.008	0.305	1.698	0.305	0.028	2.082	32.730	0.0	0.0	65%
	(2)	0.092	0.193	0.008	0.201	1.463	0.201	0.026	1.952	32.595	0.0	0.0	65%
	(3)	0.008	0.681	0.009	0.690	1.249	0.690	0.022	1.253	30.809	0.0	0.0	65%
FEB	(4)	0.037	0.088	0.008	0.096	0.579	0.096	0.018	1.181	30.702	0.0	0.0	65%
	(5)	0.001	0.656	0.008	0.664	0.477	0.477	0.0	0.711	30.000	-0.188	0.0	65%
	(6)	0.010	0.272	0.007	0.278	0.014	0.014	0.0	0.711	30.000	-0.264	0.0	65%
MAR	(7)	0.390	0.0	0.008	0.008	0.390	0.008	0.020	1.078	30.547	0.0	0.0	65%
	(8)	0.040	0.253	0.008	0.261	0.407	0.261	0.018	0.844	30.199	0.0	0.0	65%
	(9)	0.009	0.262	0.009	0.271	0.148	0.148	0.0	0.711	30.000	-0.123	0.0	65%
APR	(10)	0.0	0.139	0.008	0.148	0.005	0.005	0.0	0.711	30.000	-0.142	0.0	65%
	(11)	0.0	0.032	0.008	0.041	0.005	0.005	0.0	0.711	30.000	-0.035	0.0	65%
	(12)	0.095	0.0	0.008	0.008	0.095	0.008	0.020	0.783	30.108	0.0	0.0	65%
MAY	(13)	0.013	0.0	0.008	0.008	0.085	0.008	0.019	0.775	30.095	0.0	0.0	65%
	(14)	0.058	0.0	0.008	0.008	0.122	0.008	0.019	0.810	30.148	0.0	0.0	65%
	(15)	0.439	0.0	0.009	0.009	0.538	0.009	0.027	1.219	30.758	0.0	0.0	20%
JUN	(16)	0.324	0.007	0.008	0.015	0.832	0.015	0.024	1.509	32.133	0.0	0.0	20%
	(17)	0.190	0.132	0.008	0.140	0.988	0.140	0.025	1.539	32.164	0.0	0.0	20%
	(18)	0.291	0.138	0.008	0.146	1.119	0.146	0.026	1.663	32.293	0.0	0.0	20%
JUL	(19)	0.895	0.0	0.008	0.008	1.847	0.008	0.031	2.341	34.000	0.0	0.183	20%
	(20)	0.442	0.004	0.008	0.013	2.072	0.013	0.031	2.341	34.000	0.0	0.404	20%
	(21)	0.0	0.302	0.009	0.311	1.630	0.311	0.031	2.005	32.649	0.0	0.0	20%
AUG	(22)	0.060	0.237	0.008	0.245	1.354	0.245	0.027	1.798	32.434	0.0	0.0	20%
	(23)	0.182	0.149	0.008	0.157	1.269	0.157	0.027	1.801	32.438	0.0	0.0	20%
	(24)	0.431	0.049	0.009	0.058	1.521	0.058	0.033	2.147	32.798	0.0	0.0	20%
SEP	(25)	0.384	0.000	0.008	0.009	1.820	0.009	0.027	2.341	34.000	0.0	0.160	20%
	(26)	0.289	0.037	0.008	0.045	1.919	0.045	0.027	2.341	34.000	0.0	0.222	20%
	(27)	0.202	0.038	0.008	0.047	1.832	0.047	0.027	2.341	34.000	0.0	0.134	20%
OCT	(28)	0.045	0.071	0.008	0.080	1.675	0.080	0.027	2.285	32.942	0.0	0.0	20%
	(29)	0.165	0.0	0.008	0.008	1.737	0.008	0.027	2.341	34.000	0.0	0.077	20%
TOTAL		9.181	5.207	0.300	5.507	4.754	4.754	0.785			-0.753	3.832	

TABLE A-2(14) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1969 - 1970

UNIT : MCM

MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.448	0.0	0.009	0.009	2.078	0.009	0.029	2.341	34.000	0.0	0.415	65%
	(31)	0.411	0.0	0.008	0.008	2.041	0.008	0.027	2.341	34.000	0.0	0.381	65%
	(32)	0.078	0.330	0.008	0.338	1.708	0.338	0.025	2.061	32.708	0.0	0.0	65%
	(33)	0.211	0.262	0.008	0.270	1.561	0.270	0.025	1.982	32.626	0.0	0.0	65%
DEC	(34)	0.744	0.0	0.008	0.008	2.015	0.008	0.025	2.341	34.000	0.0	0.357	65%
	(35)	0.333	0.039	0.008	0.047	1.963	0.047	0.025	2.341	34.000	0.0	0.266	65%
	(36)	0.155	0.347	0.009	0.356	1.785	0.356	0.025	2.120	32.770	0.0	0.0	65%
JAN	(1)	0.163	0.226	0.008	0.234	1.572	0.234	0.027	2.027	32.673	0.0	0.0	65%
	(2)	0.015	0.595	0.008	0.603	1.331	0.603	0.022	1.422	32.043	0.0	0.0	65%
	(3)	0.235	0.137	0.009	0.146	0.946	0.146	0.025	1.492	32.115	0.0	0.0	65%
	(4)	0.324	0.064	0.008	0.072	1.105	0.072	0.023	1.726	32.359	0.0	0.0	65%
FEB	(5)	0.109	0.407	0.008	0.415	1.124	0.415	0.020	1.405	32.025	0.0	0.0	65%
	(6)	0.320	0.0	0.007	0.007	1.014	0.007	0.018	1.704	32.337	0.0	0.0	65%
	(7)	0.039	0.289	0.008	0.297	1.032	0.297	0.024	1.427	32.048	0.0	0.0	65%
MAR	(8)	0.090	0.037	0.008	0.046	0.806	0.046	0.025	1.452	32.074	0.0	0.0	65%
	(9)	0.045	0.141	0.009	0.150	0.786	0.150	0.026	1.327	30.919	0.0	0.0	65%
	(10)	0.028	0.039	0.008	0.047	0.644	0.047	0.027	1.286	30.859	0.0	0.0	65%
APR	(11)	0.041	0.0	0.008	0.008	0.616	0.008	0.027	1.297	30.875	0.0	0.0	65%
	(12)	0.036	0.0	0.008	0.008	0.622	0.008	0.027	1.303	30.884	0.0	0.0	65%
	(13)	0.162	0.0	0.008	0.008	0.754	0.008	0.027	1.435	32.056	0.0	0.0	65%
	(14)	0.013	0.0	0.008	0.008	0.737	0.008	0.027	1.418	32.038	0.0	0.0	65%
	(15)	0.048	0.191	0.009	0.200	0.755	0.200	0.028	1.243	30.794	0.0	0.0	45%
	(16)	0.417	0.057	0.008	0.065	0.949	0.065	0.025	1.575	32.202	0.0	0.0	45%
JUN	(17)	0.515	0.031	0.008	0.039	1.379	0.039	0.029	2.027	32.673	0.0	0.0	45%
	(18)	0.955	0.0	0.008	0.008	2.271	0.008	0.032	2.341	34.000	0.0	0.606	45%
	(19)	1.023	0.0	0.008	0.008	2.653	0.008	0.031	2.341	34.000	0.0	0.989	45%
	(20)	0.204	0.308	0.008	0.317	1.834	0.317	0.030	2.204	32.857	0.0	0.0	45%
	(21)	0.184	0.461	0.009	0.470	1.677	0.470	0.030	1.894	32.535	0.0	0.0	45%
	(22)	0.332	0.125	0.008	0.134	1.515	0.134	0.029	2.069	32.717	0.0	0.0	45%
	(23)	0.334	0.115	0.008	0.124	1.692	0.124	0.031	2.254	32.909	0.0	0.0	45%
	(24)	0.088	0.555	0.009	0.564	1.631	0.564	0.029	1.755	32.389	0.0	0.0	45%
SEP	(25)	0.126	0.373	0.008	0.382	1.170	0.382	0.020	1.484	32.108	0.0	0.0	45%
	(26)	0.266	0.103	0.008	0.111	1.039	0.111	0.021	1.623	32.252	0.0	0.0	45%
	(27)	0.431	0.0	0.008	0.008	1.343	0.008	0.025	2.027	32.672	0.0	0.0	45%
	(28)	0.309	0.005	0.008	0.013	1.625	0.013	0.027	2.301	32.958	0.0	0.0	45%
OCT	(29)	0.377	0.0	0.008	0.008	1.967	0.008	0.027	2.341	34.000	0.0	0.307	45%
TOTAL		9.609	5.239	0.300	5.539		5.539	0.938			0.0	3.322	

TABLE A-2(15) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1970 - 1971		UNIT : MCM										
MONTH	10-DAY INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	1.409	0.009	0.009	3.039	0.009	0.029	2.341	34.000	0.0	1.376	65%
	(31)	0.105	0.008	0.261	1.735	0.261	0.026	2.164	32.816	0.0	0.0	65%
	(32)	0.265	0.008	0.140	1.718	0.140	0.027	2.267	32.923	0.0	0.0	65%
	(33)	0.754	0.008	0.008	2.310	0.008	0.027	2.341	34.000	0.0	0.650	65%
DEC	(34)	0.348	0.008	0.008	1.978	0.008	0.025	2.341	34.000	0.0	0.320	65%
	(35)	0.215	0.008	0.245	1.845	0.245	0.024	2.292	32.949	0.0	0.0	65%
	(36)	0.097	0.009	0.385	1.678	0.385	0.024	1.985	32.630	0.0	0.0	65%
JAN	(1)	0.815	0.008	0.008	2.089	0.008	0.030	2.341	34.000	0.0	0.427	65%
	(2)	0.061	0.008	0.553	1.691	0.553	0.025	1.829	32.467	0.0	0.0	65%
	(3)	0.552	0.009	0.009	1.670	0.009	0.032	2.341	34.000	0.0	0.005	65%
FEB	(4)	0.141	0.008	0.155	1.771	0.155	0.028	2.305	32.962	0.0	0.0	65%
	(5)	0.018	0.008	0.596	1.612	0.596	0.023	1.709	32.342	0.0	0.0	65%
	(6)	0.102	0.007	0.036	1.100	0.036	0.019	1.761	32.395	0.0	0.0	65%
	(7)	0.159	0.008	0.141	1.209	0.141	0.028	1.756	32.391	0.0	0.0	65%
MAR	(8)	0.135	0.008	0.135	1.180	0.135	0.027	1.734	32.368	0.0	0.0	65%
	(9)	0.329	0.009	1.352	1.352	0.009	0.033	2.027	32.673	0.0	0.0	65%
APR	(10)	0.012	0.008	0.135	1.328	0.135	0.034	1.875	32.515	0.0	0.0	65%
	(11)	0.043	0.008	0.018	1.207	0.018	0.034	1.872	32.512	0.0	0.0	65%
	(12)	0.565	0.008	0.008	1.726	0.008	0.038	2.341	34.000	0.0	0.055	65%
MAY	(13)	0.560	0.008	0.008	2.190	0.008	0.037	2.341	34.000	0.0	0.520	65%
	(14)	0.630	0.008	0.008	2.260	0.008	0.037	2.341	34.000	0.0	0.590	65%
	(15)	0.138	0.009	0.284	1.768	0.284	0.039	2.162	32.814	0.0	0.0	65%
JUN	(16)	0.906	0.008	0.008	2.357	0.008	0.032	2.341	34.000	0.0	0.693	65%
	(17)	0.407	0.008	0.207	2.037	0.207	0.032	2.341	34.000	0.0	0.173	65%
	(18)	0.506	0.008	0.288	2.136	0.288	0.032	2.341	34.000	0.0	0.191	65%
JUL	(19)	0.711	0.008	0.008	2.341	0.008	0.031	2.341	34.000	0.0	0.677	65%
	(20)	0.241	0.008	0.369	1.871	0.369	0.030	2.189	32.841	0.0	0.0	65%
	(21)	0.335	0.009	0.402	1.813	0.402	0.032	2.096	32.745	0.0	0.0	65%
AUG	(22)	0.265	0.008	0.397	1.650	0.397	0.028	1.941	32.583	0.0	0.0	65%
	(23)	0.461	0.008	0.008	1.691	0.008	0.031	2.341	34.000	0.0	0.026	65%
	(24)	0.232	0.009	0.534	1.862	0.534	0.031	2.013	32.659	0.0	0.0	65%
SEP	(25)	0.364	0.008	0.118	1.666	0.118	0.026	2.239	32.893	0.0	0.0	65%
	(26)	0.133	0.008	0.481	1.661	0.481	0.023	1.872	32.512	0.0	0.0	65%
	(27)	0.588	0.008	0.008	1.749	0.008	0.027	2.341	34.000	0.0	0.089	65%
OCT	(28)	0.500	0.008	0.008	2.130	0.008	0.027	2.341	34.000	0.0	0.470	65%
	(29)	0.599	0.008	0.008	2.229	0.008	0.027	2.341	34.000	0.0	0.569	65%
TOTAL		13.701	0.300	6.004	6.004	6.004	1.053			0.0	6.834	

TABLE A-2(16) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1971 - 1972		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPD	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.051	0.209	0.009	0.218	1.681	0.218	0.028	2.152	32.803	0.0	0.0	65%
	(31)	1.001	0.0	0.008	0.008	2.442	0.008	0.027	2.341	34.000	0.0	0.781	65%
	(32)	0.454	0.0	0.008	0.008	2.084	0.008	0.027	2.341	34.000	0.0	0.424	65%
	(33)	0.320	0.250	0.008	0.259	1.950	0.259	0.027	2.341	34.000	0.0	0.039	65%
DEC	(34)	0.174	0.092	0.008	0.101	1.804	0.101	0.025	2.341	34.000	0.0	0.054	65%
	(35)	0.140	0.163	0.008	0.171	1.770	0.171	0.024	2.291	32.948	0.0	0.0	65%
	(36)	0.173	0.209	0.009	0.218	1.753	0.218	0.026	2.225	32.879	0.0	0.0	65%
JAN	(1)	0.930	0.0	0.008	0.008	2.444	0.008	0.030	2.341	34.000	0.0	0.782	65%
	(2)	0.958	0.0	0.008	0.008	2.588	0.008	0.030	2.341	34.000	0.0	0.925	65%
	(3)	0.209	0.421	0.009	0.430	1.839	0.430	0.030	2.095	32.744	0.0	0.0	65%
FEB	(4)	0.072	0.272	0.008	0.280	1.456	0.280	0.024	1.868	32.507	0.0	0.0	65%
	(5)	0.052	0.338	0.008	0.346	1.209	0.346	0.022	1.557	32.184	0.0	0.0	65%
	(6)	0.051	0.143	0.007	0.149	0.897	0.149	0.017	1.446	32.068	0.0	0.0	65%
MAR	(7)	0.035	0.433	0.008	0.441	0.770	0.441	0.020	1.026	30.470	0.0	0.0	65%
	(8)	0.415	0.0	0.008	0.008	0.730	0.008	0.024	1.414	32.034	0.0	0.0	65%
	(9)	0.066	0.176	0.009	0.185	0.769	0.185	0.025	1.275	30.842	0.0	0.0	65%
APR	(10)	0.125	0.0	0.008	0.008	0.689	0.008	0.028	1.369	30.982	0.0	0.0	65%
	(11)	0.0	0.032	0.008	0.041	0.658	0.041	0.027	1.306	30.889	0.0	0.0	65%
	(12)	0.046	0.0	0.008	0.008	0.641	0.008	0.027	1.322	30.912	0.0	0.0	65%
MAY	(13)	0.001	0.0	0.008	0.008	0.612	0.008	0.026	1.294	30.871	0.0	0.0	65%
	(14)	0.029	0.0	0.008	0.008	0.612	0.008	0.026	1.295	30.871	0.0	0.0	65%
	(15)	0.984	0.0	0.009	0.009	1.568	0.009	0.040	2.236	32.890	0.0	0.0	20%
JUN	(16)	0.286	0.097	0.008	0.105	1.811	0.105	0.032	2.341	34.000	0.0	0.049	20%
	(17)	0.156	0.170	0.008	0.178	1.786	0.178	0.032	2.293	32.950	0.0	0.0	20%
	(18)	0.668	0.0	0.008	0.008	2.250	0.008	0.032	2.341	34.000	0.0	0.585	20%
JUL	(19)	0.727	0.0	0.008	0.008	2.357	0.008	0.031	2.341	34.000	0.0	0.693	20%
	(20)	0.0	0.244	0.008	0.252	1.630	0.252	0.028	2.065	32.713	0.0	0.0	20%
	(21)	0.005	0.299	0.009	0.308	1.359	0.308	0.028	1.740	32.374	0.0	0.0	20%
AUG	(22)	0.310	0.116	0.008	0.125	1.339	0.125	0.027	1.903	32.544	0.0	0.0	20%
	(23)	0.413	0.059	0.008	0.067	1.605	0.067	0.030	2.224	32.878	0.0	0.0	20%
	(24)	0.641	0.0	0.009	0.009	2.154	0.009	0.034	2.341	34.000	0.0	0.486	20%
SEP	(25)	0.551	0.0	0.008	0.008	2.181	0.008	0.027	2.341	34.000	0.0	0.521	20%
	(26)	0.314	0.061	0.008	0.069	1.944	0.069	0.027	2.341	34.000	0.0	0.223	20%
	(27)	0.659	0.0	0.008	0.008	2.289	0.008	0.027	2.341	34.000	0.0	0.629	20%
OCT	(28)	0.334	0.0	0.008	0.008	1.964	0.008	0.027	2.341	34.000	0.0	0.304	20%
	(29)	0.029	0.026	0.008	0.034	1.659	0.034	0.027	2.315	32.973	0.0	0.0	20%
TOTAL		11.379	3.811	0.300	4.111	4.111	4.111	0.988			0.0	6.497	

TABLE A-2(17) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1972 - 1973		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPD	STORGE	WL	SHORT	SPIII	CROPPING INTENSITY
NOV	(30)	0.539	0.0	0.009	0.009	2.143	0.009	0.029	2.341	34.000	0.0	0.480	50%
	(31)	0.341	0.0	0.008	0.008	1.971	0.008	0.027	2.341	34.000	0.0	0.311	50%
	(32)	0.131	0.201	0.008	0.210	1.761	0.210	0.027	2.241	32.896	0.0	0.0	50%
	(33)	0.385	0.046	0.008	0.054	1.915	0.054	0.027	2.341	34.000	0.0	0.209	50%
DEC	(34)	0.659	0.038	0.008	0.046	2.289	0.046	0.025	2.341	34.000	0.0	0.593	50%
	(35)	0.084	0.226	0.008	0.234	1.714	0.234	0.023	2.172	32.824	0.0	0.0	50%
	(36)	0.049	0.346	0.009	0.355	1.510	0.355	0.023	1.849	32.488	0.0	0.0	50%
JAN	(1)	0.180	0.0	0.008	0.008	1.318	0.008	0.027	1.999	32.644	0.0	0.0	50%
	(2)	0.0	0.481	0.008	0.489	1.288	0.489	0.022	1.493	32.117	0.0	0.0	50%
	(3)	0.0	0.556	0.009	0.565	0.782	0.565	0.018	0.916	30.305	0.0	0.0	50%
FEB	(4)	0.051	0.283	0.008	0.291	0.261	0.261	0.0	0.711	30.000	-0.030	0.0	50%
	(5)	0.130	0.011	0.008	0.019	0.130	0.019	0.015	0.813	30.152	0.0	0.0	50%
	(6)	0.0	0.371	0.007	0.378	0.106	0.106	0.0	0.711	30.000	-0.272	0.0	50%
MAR	(7)	0.018	0.319	0.008	0.327	0.023	0.023	0.0	0.711	30.000	-0.304	0.0	50%
	(8)	0.004	0.290	0.008	0.298	0.009	0.009	0.0	0.711	30.000	-0.289	0.0	50%
	(9)	0.122	0.0	0.009	0.009	0.122	0.009	0.019	0.811	30.149	0.0	0.0	50%
APR	(10)	0.013	0.008	0.008	0.016	0.113	0.016	0.020	0.793	30.123	0.0	0.0	50%
	(11)	0.011	0.0	0.008	0.008	0.093	0.008	0.020	0.781	30.105	0.0	0.0	50%
	(12)	0.007	0.0	0.008	0.008	0.077	0.008	0.019	0.766	30.082	0.0	0.0	50%
MAY	(13)	0.0	0.0	0.008	0.008	0.058	0.008	0.018	0.745	30.050	0.0	0.0	50%
	(14)	0.004	0.0	0.008	0.008	0.038	0.008	0.018	0.727	30.025	0.0	0.0	50%
	(15)	0.0	0.161	0.009	0.170	0.022	0.022	0.0	0.711	30.000	-0.148	0.0	20%
JUN	(16)	0.017	0.215	0.008	0.223	0.022	0.022	0.0	0.711	30.000	-0.201	0.0	20%
	(17)	0.800	0.0	0.008	0.008	0.800	0.008	0.024	1.484	32.107	0.0	0.0	20%
	(18)	0.299	0.157	0.008	0.165	1.072	0.165	0.025	1.598	32.226	0.0	0.0	20%
	(19)	0.555	0.0	0.008	0.008	1.442	0.008	0.029	2.121	32.771	0.0	0.0	20%
	(20)	0.021	0.230	0.008	0.238	1.431	0.238	0.027	1.882	32.522	0.0	0.0	20%
	(21)	0.462	0.024	0.009	0.033	1.633	0.033	0.035	2.284	32.940	0.0	0.0	20%
AUG	(22)	0.458	0.052	0.008	0.060	2.031	0.060	0.031	2.341	34.000	0.0	0.315	20%
	(23)	0.273	0.144	0.008	0.152	1.903	0.152	0.031	2.341	34.000	0.0	0.095	20%
	(24)	0.894	0.0	0.009	0.009	2.524	0.009	0.034	2.341	34.000	0.0	0.856	20%
SEP	(25)	0.373	0.044	0.008	0.052	2.003	0.052	0.027	2.341	34.000	0.0	0.299	20%
	(26)	0.413	0.005	0.008	0.013	2.043	0.013	0.027	2.341	34.000	0.0	0.378	20%
	(27)	0.518	0.0	0.008	0.008	2.148	0.008	0.027	2.341	34.000	0.0	0.488	20%
OCT	(28)	0.744	0.001	0.008	0.010	2.374	0.010	0.027	2.341	34.000	0.0	0.713	20%
	(29)	0.030	0.023	0.008	0.031	1.660	0.031	0.027	2.318	32.976	0.0	0.0	20%
TOTAL		8.585	4.230	0.300	4.530		3.287	0.748			-1.243	4.738	

TABLE A-2(18) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1973 -- 1974

UNIT : MCM

MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.081	0.119	0.009	0.128	1.688	0.128	0.029	2.249	32.904	0.0	0.0	50%
	(31)	0.474	0.027	0.008	0.036	2.012	0.036	0.027	2.341	34.000	0.0	0.324	50%
	(32)	2.189	0.0	0.008	0.008	3.819	0.008	0.027	2.341	34.000	0.0	2.159	50%
	(33)	0.387	0.174	0.008	0.182	2.017	0.182	0.027	2.341	34.000	0.0	0.183	50%
DEC	(34)	0.285	0.076	0.008	0.085	1.915	0.085	0.025	2.341	34.000	0.0	0.181	50%
	(35)	0.265	0.097	0.008	0.105	1.895	0.105	0.025	2.341	34.000	0.0	0.141	50%
	(36)	0.864	0.0	0.009	0.009	2.494	0.009	0.027	2.341	34.000	0.0	0.834	50%
JAN	(1)	0.153	0.114	0.008	0.123	1.783	0.123	0.030	2.341	34.000	0.0	0.006	50%
	(2)	0.088	0.243	0.008	0.251	1.718	0.251	0.028	2.155	32.806	0.0	0.0	50%
	(3)	0.037	0.427	0.009	0.436	1.481	0.436	0.027	1.734	32.368	0.0	0.0	50%
FEB	(4)	0.139	0.338	0.008	0.346	1.162	0.346	0.021	1.511	32.135	0.0	0.0	50%
	(5)	1.286	0.0	0.008	0.008	2.086	0.008	0.028	2.341	34.000	0.0	0.425	50%
	(6)	0.078	0.260	0.007	0.267	1.708	0.267	0.021	2.155	32.786	0.0	0.0	50%
MAR	(7)	0.431	0.0	0.008	0.008	1.855	0.008	0.033	2.341	34.000	0.0	0.189	50%
	(8)	0.126	0.118	0.008	0.126	1.756	0.126	0.033	2.313	32.971	0.0	0.0	50%
	(9)	0.101	0.128	0.009	0.137	1.703	0.137	0.036	2.247	32.902	0.0	0.0	50%
APR	(10)	0.581	0.0	0.008	0.008	2.117	0.008	0.038	2.341	34.000	0.0	0.446	50%
	(11)	0.295	0.0	0.008	0.008	1.925	0.008	0.038	2.341	34.000	0.0	0.254	50%
	(12)	0.354	0.0	0.008	0.008	1.984	0.008	0.038	2.341	34.000	0.0	0.313	50%
MAY	(13)	0.133	0.0	0.008	0.008	1.763	0.008	0.037	2.341	34.000	0.0	0.093	50%
	(14)	0.140	0.0	0.008	0.008	1.770	0.008	0.037	2.341	34.000	0.0	0.100	50%
	(15)	0.300	0.0	0.009	0.009	1.930	0.009	0.040	2.341	34.000	0.0	0.256	65%
JUN	(16)	0.026	0.688	0.008	0.697	1.656	0.697	0.026	1.650	32.280	0.0	0.0	65%
	(17)	0.627	0.0	0.008	0.008	1.566	0.008	0.031	2.243	32.898	0.0	0.0	65%
	(18)	0.793	0.0	0.008	0.008	2.325	0.008	0.032	2.341	34.000	0.0	0.660	65%
JUL	(19)	0.032	0.693	0.008	0.701	1.662	0.701	0.025	1.652	32.283	0.0	0.0	65%
	(20)	0.204	0.277	0.008	0.285	1.145	0.285	0.024	1.553	32.179	0.0	0.0	65%
	(21)	0.378	0.040	0.009	0.050	1.220	0.050	0.029	1.858	32.496	0.0	0.0	65%
AUG	(22)	0.185	0.425	0.008	0.433	1.332	0.433	0.025	1.590	32.217	0.0	0.0	65%
	(23)	0.0	0.923	0.008	0.931	0.884	0.884	0.0	0.711	30.000	-0.048	0.0	65%
	(24)	0.374	0.004	0.009	0.014	0.374	0.014	0.021	1.056	30.515	0.0	0.0	65%
SEP	(25)	0.133	0.412	0.008	0.420	0.478	0.420	0.013	0.761	30.075	0.0	0.0	65%
	(26)	0.142	0.295	0.008	0.303	0.197	0.197	0.0	0.711	30.000	-0.106	0.0	65%
	(27)	0.177	0.034	0.008	0.042	0.177	0.042	0.014	0.837	30.187	0.0	0.0	65%
OCT	(28)	0.132	0.034	0.008	0.043	0.258	0.043	0.015	0.916	30.306	0.0	0.0	65%
	(29)	0.337	0.0	0.008	0.008	0.542	0.008	0.018	1.232	30.778	0.0	0.0	65%
TOTAL		12.327	5.948	0.300	6.248		6.095	0.945			-0.153	6.563	

TABLE A-2(19) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1974 - 1975		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPD	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.159	0.009	0.009	0.019	0.680	0.019	0.021	1.357	30.965	0.0	0.0	50%
	(31)	0.797	0.0	0.008	0.008	1.443	0.008	0.026	2.125	32.775	0.0	0.0	50%
	(32)	0.390	0.025	0.008	0.033	1.804	0.033	0.027	2.341	34.000	0.0	0.119	50%
DEC	(33)	0.456	0.076	0.008	0.085	2.086	0.085	0.027	2.341	34.000	0.0	0.349	50%
	(34)	0.304	0.055	0.008	0.063	1.934	0.063	0.025	2.341	34.000	0.0	0.221	50%
	(35)	0.208	0.143	0.008	0.151	1.838	0.151	0.025	2.341	34.000	0.0	0.038	50%
	(36)	0.850	0.0	0.009	0.009	2.480	0.009	0.027	2.341	34.000	0.0	0.820	50%
JAN	(1)	0.676	0.076	0.008	0.085	2.306	0.085	0.030	2.341	34.000	0.0	0.567	50%
	(2)	0.403	0.123	0.008	0.131	2.033	0.131	0.030	2.341	34.000	0.0	0.247	50%
	(3)	0.875	0.0	0.009	0.009	2.505	0.009	0.032	2.341	34.000	0.0	0.839	50%
FEB	(4)	0.240	0.205	0.008	0.213	1.870	0.213	0.028	2.341	34.000	0.0	0.004	50%
	(5)	0.138	0.243	0.008	0.252	1.768	0.252	0.027	2.206	32.859	0.0	0.0	50%
	(6)	0.303	0.0	0.007	0.007	1.798	0.007	0.022	2.341	34.000	0.0	0.143	50%
	(7)	0.408	0.0	0.008	0.008	2.038	0.008	0.033	2.341	34.000	0.0	0.372	50%
MAR	(8)	0.088	0.146	0.008	0.154	1.718	0.154	0.032	2.248	32.903	0.0	0.0	50%
	(9)	0.013	0.212	0.009	0.222	1.550	0.222	0.033	2.012	32.657	0.0	0.0	50%
APR	(10)	0.051	0.076	0.008	0.084	1.352	0.084	0.034	1.949	32.592	0.0	0.0	50%
	(11)	0.253	0.0	0.008	0.008	1.491	0.008	0.037	2.162	32.814	0.0	0.0	50%
	(12)	0.477	0.0	0.008	0.008	1.928	0.008	0.038	2.341	34.000	0.0	0.257	50%
MAY	(13)	0.010	0.0	0.008	0.008	1.640	0.008	0.037	2.311	32.969	0.0	0.0	50%
	(14)	0.018	0.0	0.008	0.008	1.618	0.008	0.037	2.290	32.946	0.0	0.0	50%
	(15)	0.069	0.0	0.009	0.009	1.648	0.009	0.040	2.315	32.973	0.0	0.0	65%
	(16)	0.178	0.409	0.008	0.417	1.782	0.417	0.029	2.052	32.699	0.0	0.0	65%
JUN	(17)	0.434	0.066	0.008	0.074	1.775	0.074	0.032	2.341	34.000	0.0	0.044	65%
	(18)	0.616	0.042	0.008	0.050	2.246	0.050	0.032	2.341	34.000	0.0	0.539	65%
JUL	(19)	0.760	0.0	0.008	0.008	2.390	0.008	0.031	2.341	34.000	0.0	0.726	65%
	(20)	0.178	0.564	0.008	0.572	1.808	0.572	0.027	1.925	32.566	0.0	0.0	65%
	(21)	0.424	0.407	0.009	0.416	1.638	0.416	0.030	1.908	32.549	0.0	0.0	65%
AUG	(22)	0.049	0.844	0.008	0.852	1.246	0.852	0.019	1.091	30.568	0.0	0.0	65%
	(23)	0.004	0.916	0.008	0.925	0.389	0.389	0.0	0.711	30.000	-0.535	0.0	65%
	(24)	0.771	0.0	0.009	0.009	0.771	0.009	0.026	1.453	32.075	0.0	0.0	65%
SEP	(25)	0.986	0.0	0.008	0.008	1.728	0.008	0.027	2.341	34.000	0.0	0.068	65%
	(26)	0.110	0.177	0.008	0.185	1.740	0.185	0.026	2.245	32.900	0.0	0.0	65%
	(27)	0.322	0.015	0.008	0.023	1.856	0.023	0.027	2.341	34.000	0.0	0.181	65%
OCT	(28)	0.536	0.0	0.008	0.008	1.966	0.008	0.027	2.341	34.000	0.0	0.306	65%
	(29)	0.455	0.0	0.008	0.008	2.085	0.008	0.027	2.341	34.000	0.0	0.425	65%
TOTAL		12.809	4.831	0.300	5.131	4.596	4.596	1.027			-0.535	6.267	

TABLE A-2(20) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1975 - 1976		UNIT : MCM									
MONTH	10-DAY INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP. STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.419	0.009	0.009	2.049	0.009	2.341	34.000	0.0	0.386	65%
	(31)	0.228	0.034	0.042	1.858	0.042	2.341	34.000	0.0	0.164	65%
	(32)	0.160	0.198	0.207	1.790	0.207	2.273	32.929	0.0	0.0	65%
	(33)	0.224	0.253	0.261	1.786	0.261	2.214	32.868	0.0	0.0	65%
DEC	(34)	0.169	0.226	0.235	1.672	0.235	2.131	32.781	0.0	0.0	65%
	(35)	0.586	0.008	0.008	2.006	0.008	2.341	34.000	0.0	0.348	65%
	(36)	0.164	0.207	0.216	1.794	0.216	2.269	32.924	0.0	0.0	65%
JAN	(1)	0.337	0.266	0.274	1.895	0.274	2.307	32.964	0.0	0.0	65%
	(2)	0.079	0.543	0.551	1.675	0.551	1.815	32.452	0.0	0.0	65%
	(3)	1.189	0.009	0.009	2.293	0.009	2.341	34.000	0.0	0.627	65%
FEB	(4)	0.116	0.206	0.214	1.746	0.214	2.221	32.875	0.0	0.0	65%
	(5)	0.199	0.150	0.158	1.709	0.158	2.240	32.895	0.0	0.0	65%
	(6)	0.035	0.347	0.354	1.564	0.354	1.906	32.547	0.0	0.0	65%
MAR	(7)	0.145	0.011	0.019	1.340	0.019	2.007	32.652	0.0	0.0	65%
	(8)	0.0	0.386	0.395	1.296	0.395	1.592	32.219	0.0	0.0	65%
	(9)	0.078	0.127	0.136	0.959	0.136	1.512	32.136	0.0	0.0	65%
	(10)	0.005	0.111	0.119	0.806	0.119	1.375	30.991	0.0	0.0	65%
APR	(11)	0.034	0.008	0.008	0.698	0.008	1.378	30.995	0.0	0.0	65%
	(12)	0.027	0.008	0.008	0.694	0.008	1.374	30.989	0.0	0.0	65%
MAY	(13)	0.184	0.008	0.008	0.847	0.008	1.526	32.151	0.0	0.0	65%
	(14)	0.025	0.008	0.008	0.840	0.008	1.520	32.145	0.0	0.0	65%
	(15)	0.093	0.141	0.150	0.902	0.150	1.438	32.059	0.0	0.0	45%
JUN	(16)	0.201	0.267	0.275	0.928	0.275	1.347	30.949	0.0	0.0	45%
	(17)	0.469	0.008	0.008	1.105	0.008	1.786	32.421	0.0	0.0	45%
	(18)	0.390	0.374	0.383	1.465	0.383	1.771	32.407	0.0	0.0	45%
JUL	(19)	0.301	0.207	0.216	1.361	0.216	1.836	32.473	0.0	0.0	45%
	(20)	0.168	0.253	0.261	1.293	0.261	1.722	32.355	0.0	0.0	45%
	(21)	0.299	0.278	0.287	1.310	0.287	1.712	32.344	0.0	0.0	45%
AUG	(22)	0.634	0.122	0.130	1.635	0.130	2.190	32.843	0.0	0.0	45%
	(23)	1.186	0.008	0.008	2.665	0.008	2.341	34.000	0.0	1.001	45%
	(24)	0.005	0.612	0.621	1.633	0.621	1.702	32.335	0.0	0.0	45%
SEP	(25)	0.532	0.008	0.008	1.523	0.008	2.205	32.859	0.0	0.0	45%
	(26)	0.100	0.295	0.303	1.594	0.303	1.984	32.628	0.0	0.0	45%
	(27)	0.0	0.283	0.292	1.273	0.292	1.675	32.307	0.0	0.0	45%
OCT	(28)	0.012	0.211	0.219	0.976	0.219	1.454	32.076	0.0	0.0	45%
	(29)	0.088	0.008	0.008	0.831	0.008	1.518	32.143	0.0	0.0	45%
TOTAL		8.881	6.109	6.409	6.409	6.409	6.409	6.409	0.0	2.526	

TABLE A-2(21) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1976 - 1977		UNIT ; MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO.	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.149	0.0	0.009	0.009	0.956	0.009	0.024	1.640	32.270	0.0	0.0	50%
	(31)	0.078	0.031	0.008	0.039	1.007	0.039	0.022	1.663	32.293	0.0	0.0	50%
	(32)	0.302	0.0	0.008	0.008	1.254	0.008	0.024	1.937	32.579	0.0	0.0	50%
DEC	(33)	0.001	0.399	0.008	0.407	1.227	0.407	0.021	1.515	32.140	0.0	0.0	50%
	(34)	0.739	0.0	0.008	0.008	1.543	0.008	0.024	2.227	32.882	0.0	0.0	50%
	(35)	0.647	0.0	0.008	0.008	2.163	0.008	0.025	2.341	34.000	0.0	0.506	50%
	(36)	0.466	0.100	0.009	0.109	2.096	0.109	0.027	2.341	34.000	0.0	0.336	50%
JAN	(1)	0.094	0.344	0.008	0.352	1.724	0.352	0.027	2.060	32.708	0.0	0.0	50%
	(2)	0.569	0.013	0.008	0.021	1.918	0.021	0.030	2.341	34.000	0.0	0.243	50%
	(3)	1.217	0.0	0.009	0.009	2.847	0.009	0.032	2.341	34.000	0.0	1.181	50%
FEB	(4)	0.453	0.047	0.008	0.056	2.083	0.056	0.028	2.341	34.000	0.0	0.375	50%
	(5)	1.018	0.0	0.008	0.008	2.648	0.008	0.028	2.341	34.000	0.0	0.987	50%
	(6)	0.115	0.229	0.007	0.236	1.745	0.236	0.022	2.203	32.856	0.0	0.0	50%
MAR	(7)	0.347	0.0	0.008	0.008	1.839	0.008	0.033	2.341	34.000	0.0	0.173	50%
	(8)	0.007	0.154	0.008	0.162	1.637	0.162	0.031	2.160	32.811	0.0	0.0	50%
	(9)	0.0	0.220	0.009	0.229	1.449	0.229	0.032	1.904	32.545	0.0	0.0	50%
APR	(10)	0.008	0.008	0.008	0.016	1.201	0.016	0.034	1.868	32.508	0.0	0.0	50%
	(11)	0.007	0.0	0.008	0.008	1.164	0.008	0.033	1.839	32.477	0.0	0.0	50%
	(12)	0.0	0.0	0.008	0.008	1.128	0.008	0.033	1.803	32.440	0.0	0.0	50%
MAY	(13)	0.022	0.0	0.008	0.008	1.114	0.008	0.031	1.791	32.427	0.0	0.0	50%
	(14)	0.340	0.0	0.008	0.008	1.420	0.008	0.035	2.093	32.742	0.0	0.0	50%
	(15)	0.545	0.0	0.009	0.009	1.927	0.009	0.040	2.341	34.000	0.0	0.254	65%
JUN	(16)	0.155	0.343	0.008	0.351	1.785	0.351	0.030	2.120	32.770	0.0	0.0	65%
	(17)	0.260	0.357	0.008	0.365	1.669	0.365	0.029	1.991	32.636	0.0	0.0	65%
	(18)	0.257	0.432	0.008	0.440	1.537	0.440	0.027	1.787	32.422	0.0	0.0	65%
JUL	(19)	0.668	0.0	0.008	0.008	1.744	0.008	0.031	2.341	34.000	0.0	0.080	65%
	(20)	0.358	0.103	0.008	0.112	1.988	0.112	0.031	2.341	34.000	0.0	0.221	65%
	(21)	0.439	0.312	0.009	0.321	2.069	0.321	0.034	2.341	34.000	0.0	0.090	65%
AUG	(22)	0.526	0.102	0.008	0.110	2.156	0.110	0.031	2.341	34.000	0.0	0.390	65%
	(23)	0.554	0.131	0.008	0.139	2.184	0.139	0.031	2.341	34.000	0.0	0.389	65%
	(24)	0.448	0.151	0.009	0.160	2.078	0.160	0.034	2.341	34.000	0.0	0.260	65%
SEP	(25)	0.361	0.098	0.008	0.106	1.991	0.106	0.027	2.341	34.000	0.0	0.233	65%
	(26)	0.029	0.633	0.008	0.641	1.659	0.641	0.022	1.712	32.345	0.0	0.0	65%
	(27)	0.319	0.020	0.008	0.028	1.320	0.028	0.024	1.984	32.628	0.0	0.0	65%
OCT	(28)	0.425	0.0	0.008	0.008	1.698	0.008	0.027	2.341	34.000	0.0	0.038	65%
	(29)	0.267	0.0	0.008	0.008	1.897	0.008	0.027	2.341	34.000	0.0	0.237	65%
TOTAL		12.190	4.227	0.300	4.527		4.527	1.039			0.0	5.991	

TABLE A-2(22) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY	UNIT	MCM
	(30)	0.164	0.083	0.009	0.092	1.794	0.092	0.029	2.341	34.000	0.0	0.048	65%		
NOV	(31)	0.630	0.0	0.008	0.008	2.260	0.008	0.027	2.341	34.000	0.0	0.600	65%		
	(32)	0.181	0.275	0.008	0.283	1.811	0.283	0.027	2.218	32.871	0.0	0.0	65%		
	(33)	0.266	0.287	0.008	0.295	1.773	0.295	0.026	2.167	32.819	0.0	0.0	65%		
DEC	(34)	0.214	0.0	0.008	0.008	1.670	0.008	0.025	2.341	34.000	0.0	0.013	65%		
	(35)	0.035	0.268	0.008	0.276	1.665	0.276	0.023	2.082	32.731	0.0	0.0	65%		
	(36)	0.018	0.446	0.009	0.455	1.389	0.455	0.022	1.629	32.259	0.0	0.0	65%		
JAN	(1)	0.741	0.0	0.008	0.008	1.659	0.008	0.030	2.338	32.997	0.0	0.0	65%		
	(2)	0.424	0.106	0.008	0.114	2.051	0.114	0.030	2.341	34.000	0.0	0.282	65%		
	(3)	0.414	0.196	0.009	0.205	2.044	0.205	0.032	2.341	34.000	0.0	0.182	65%		
FEB	(4)	0.156	0.398	0.008	0.406	1.786	0.406	0.026	2.070	32.718	0.0	0.0	65%		
	(5)	0.286	0.097	0.008	0.105	1.645	0.105	0.027	2.229	32.883	0.0	0.0	65%		
	(6)	0.280	0.016	0.007	0.022	1.798	0.022	0.022	2.341	34.000	0.0	0.127	65%		
MAR	(7)	0.138	0.0	0.008	0.008	1.768	0.008	0.033	2.341	34.000	0.0	0.102	65%		
	(8)	0.0	0.379	0.008	0.387	1.630	0.387	0.029	1.930	32.572	0.0	0.0	65%		
	(9)	0.017	0.229	0.009	0.238	1.236	0.238	0.030	1.685	32.317	0.0	0.0	65%		
APR	(10)	0.046	0.082	0.008	0.090	1.020	0.090	0.031	1.616	32.244	0.0	0.0	65%		
	(11)	0.150	0.0	0.008	0.008	1.055	0.008	0.032	1.731	32.364	0.0	0.0	65%		
	(12)	0.161	0.0	0.008	0.008	1.181	0.008	0.033	1.855	32.494	0.0	0.0	65%		
MAY	(13)	0.043	0.0	0.008	0.008	1.187	0.008	0.032	1.863	32.502	0.0	0.0	65%		
	(14)	0.061	0.0	0.008	0.008	1.213	0.008	0.032	1.889	32.529	0.0	0.0	65%		
	(15)	0.102	0.0	0.009	0.009	1.280	0.009	0.036	1.951	32.594	0.0	0.0	65%		
JUN	(16)	0.100	0.559	0.008	0.568	1.340	0.568	0.024	1.465	32.087	0.0	0.0	65%		
	(17)	0.624	0.0	0.008	0.008	1.378	0.008	0.029	2.056	32.704	0.0	0.0	65%		
	(18)	1.079	0.0	0.008	0.008	2.424	0.008	0.032	2.341	34.000	0.0	0.760	65%		
JUL	(19)	0.524	0.011	0.008	0.019	2.154	0.019	0.031	2.341	34.000	0.0	0.479	65%		
	(20)	0.115	0.575	0.008	0.583	1.745	0.583	0.027	1.851	32.490	0.0	0.0	65%		
	(21)	0.289	0.319	0.009	0.328	1.429	0.328	0.029	1.790	32.426	0.0	0.0	65%		
AUG	(22)	0.157	0.344	0.008	0.352	1.236	0.352	0.024	1.575	32.202	0.0	0.0	65%		
	(23)	0.201	0.250	0.008	0.259	1.065	0.259	0.024	1.499	32.122	0.0	0.0	65%		
	(24)	0.090	0.781	0.009	0.790	0.878	0.790	0.018	0.787	30.113	0.0	0.0	65%		
SEP	(25)	0.273	0.081	0.008	0.089	0.349	0.089	0.015	0.960	30.372	0.0	0.0	65%		
	(26)	0.598	0.0	0.008	0.008	0.847	0.008	0.021	1.535	32.160	0.0	0.0	65%		
	(27)	0.304	0.063	0.008	0.071	1.128	0.071	0.022	1.750	32.385	0.0	0.0	65%		
OCT	(28)	0.421	0.0	0.008	0.008	1.460	0.008	0.025	2.143	32.794	0.0	0.0	65%		
	(29)	0.293	0.0	0.008	0.008	1.725	0.008	0.027	2.341	34.000	0.0	0.065	65%		
	TOTAL	9.595	5.846	0.300	6.146	6.146	6.146	0.981			0.0	2.659			

TABLE A-2 (23) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1978 - 1979		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPO	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
	(30)	0.202	0.155	0.009	0.164	1.832	0.164	0.029	2.341	34.000	0.0	0.015	65%
NOV	(31)	0.142	0.0	0.008	0.008	1.772	0.008	0.027	2.341	34.000	0.0	0.112	65%
	(32)	0.423	0.0	0.008	0.008	2.053	0.008	0.027	2.341	34.000	0.0	0.393	65%
DEC	(33)	0.050	0.530	0.008	0.538	1.680	0.538	0.023	1.835	32.473	0.0	0.0	65%
	(34)	0.552	0.0	0.008	0.008	1.676	0.008	0.025	2.341	34.000	0.0	0.018	65%
	(35)	0.192	0.101	0.008	0.110	1.822	0.110	0.025	2.341	34.000	0.0	0.063	65%
JAN	(36)	0.291	0.293	0.009	0.302	1.921	0.302	0.027	2.309	32.966	0.0	0.0	65%
	(1)	0.249	0.279	0.008	0.288	1.847	0.288	0.029	2.246	32.901	0.0	0.0	65%
	(2)	0.045	0.591	0.008	0.599	1.580	0.599	0.024	1.673	32.304	0.0	0.0	65%
	(3)	0.384	0.159	0.009	0.168	1.346	0.168	0.028	1.866	32.505	0.0	0.0	65%
FEB	(4)	0.152	0.155	0.008	0.163	1.307	0.163	0.024	1.837	32.475	0.0	0.0	65%
	(5)	0.045	0.486	0.008	0.495	1.171	0.495	0.020	1.372	30.987	0.0	0.0	65%
	(6)	0.023	0.380	0.007	0.387	0.684	0.387	0.013	0.999	30.430	0.0	0.0	65%
MAR	(7)	0.119	0.043	0.008	0.052	0.407	0.052	0.020	1.052	30.509	0.0	0.0	65%
	(8)	0.0	0.381	0.008	0.389	0.346	0.346	0.0	0.711	30.000	-0.043	0.0	65%
	(9)	0.054	0.160	0.009	0.169	0.060	0.060	0.0	0.711	30.000	-0.109	0.0	65%
APR	(10)	0.090	0.048	0.008	0.057	0.090	0.057	0.019	0.731	30.029	0.0	0.0	65%
	(11)	0.291	0.0	0.008	0.008	0.311	0.008	0.023	0.996	30.425	0.0	0.0	65%
	(12)	0.0	0.0	0.008	0.008	0.285	0.008	0.022	0.971	30.388	0.0	0.0	65%
MAY	(13)	0.0	0.0	0.008	0.008	0.260	0.008	0.021	0.947	30.352	0.0	0.0	65%
	(14)	0.608	0.0	0.008	0.008	0.844	0.008	0.028	1.523	32.148	0.0	0.0	65%
	(15)	0.330	0.0	0.009	0.009	1.142	0.009	0.035	1.815	32.452	0.0	0.0	45%
	(16)	0.055	0.461	0.008	0.469	1.159	0.469	0.023	1.383	32.002	0.0	0.0	45%
JUN	(17)	0.498	0.0	0.008	0.008	1.170	0.008	0.028	1.851	32.489	0.0	0.0	45%
	(18)	1.143	0.0	0.008	0.008	2.283	0.008	0.032	2.341	34.000	0.0	0.618	45%
	(19)	0.742	0.113	0.008	0.122	2.372	0.122	0.031	2.341	34.000	0.0	0.595	45%
JUL	(20)	0.332	0.183	0.008	0.191	1.962	0.191	0.031	2.341	34.000	0.0	0.116	45%
	(21)	0.155	0.416	0.009	0.425	1.785	0.425	0.031	2.046	32.692	0.0	0.0	45%
AUG	(22)	0.0	0.570	0.008	0.579	1.335	0.579	0.023	1.449	32.071	0.0	0.0	45%
	(23)	0.160	0.450	0.008	0.459	0.898	0.459	0.020	1.135	30.634	0.0	0.0	45%
	(24)	0.217	0.0	0.009	0.009	0.641	0.009	0.024	1.325	30.916	0.0	0.0	45%
SEP	(25)	0.124	0.469	0.008	0.477	0.738	0.477	0.015	0.962	30.374	0.0	0.0	45%
	(26)	0.237	0.0	0.008	0.008	0.488	0.008	0.018	1.178	30.698	0.0	0.0	45%
	(27)	0.433	0.0	0.008	0.008	0.900	0.008	0.021	1.587	32.215	0.0	0.0	45%
OCT.	(28)	0.060	0.0	0.008	0.008	0.936	0.008	0.021	1.623	32.252	0.0	0.0	45%
	(29)	0.040	0.007	0.008	0.016	0.952	0.016	0.021	1.631	32.260	0.0	0.0	45%
TOTAL		8.438	6.432	0.300	6.732		6.580	0.830			-0.152	1.929	

TABLE A-2.(24) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1979 - 1980		UNIT : MCM												
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB USE	INTAKE	EVAP	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY	
NOV	(30)	0.174	0.0	0.009	0.009	1.494	0.009	0.028	2.173	32.826	0.0	0.0	50%	
	(31)	0.147	0.186	0.008	0.194	1.609	0.194	0.026	2.106	32.755	0.0	0.0	50%	
	(32)	0.175	0.202	0.008	0.210	1.570	0.210	0.025	2.051	32.698	0.0	0.0	50%	
	(33)	0.222	0.0	0.008	0.008	1.562	0.008	0.027	2.243	32.898	0.0	0.0	50%	
DEC	(34)	0.412	0.0	0.008	0.008	1.944	0.008	0.025	2.341	34.000	0.0	0.286	50%	
	(35)	0.079	0.168	0.008	0.177	1.709	0.177	0.024	2.225	32.879	0.0	0.0	50%	
	(36)	0.212	0.193	0.009	0.202	1.726	0.202	0.026	2.215	32.868	0.0	0.0	50%	
JAN	(1)	0.302	0.074	0.008	0.082	1.806	0.082	0.030	2.341	34.000	0.0	0.069	50%	
	(2)	0.092	0.125	0.008	0.134	1.722	0.134	0.029	2.275	32.932	0.0	0.0	50%	
	(3)	0.821	0.0	0.009	0.009	2.385	0.009	0.032	2.341	34.000	0.0	0.720	50%	
	(4)	0.238	0.193	0.008	0.201	1.868	0.201	0.028	2.341	34.000	0.0	0.014	50%	
	(5)	1.448	0.0	0.008	0.008	3.078	0.008	0.028	2.341	34.000	0.0	1.417	50%	
	(6)	0.0	0.371	0.007	0.378	1.630	0.378	0.020	1.948	32.590	0.0	0.0	50%	
	(7)	0.0	0.426	0.008	0.435	1.237	0.435	0.025	1.493	32.117	0.0	0.0	50%	
MAR	(8)	0.064	0.157	0.008	0.166	0.846	0.166	0.024	1.373	30.988	0.0	0.0	50%	
	(9)	0.090	0.122	0.009	0.131	0.752	0.131	0.026	1.312	30.897	0.0	0.0	50%	
	(10)	0.166	0.021	0.008	0.030	0.767	0.030	0.029	1.425	32.046	0.0	0.0	50%	
APR	(11)	0.0	0.019	0.008	0.028	0.714	0.028	0.028	1.374	30.990	0.0	0.0	50%	
	(12)	0.212	0.0	0.008	0.008	0.875	0.008	0.030	1.553	32.179	0.0	0.0	50%	
	(13)	0.075	0.0	0.008	0.008	0.917	0.008	0.029	1.596	32.224	0.0	0.0	50%	
	(14)	0.214	0.0	0.008	0.008	1.099	0.008	0.031	1.776	32.412	0.0	0.0	50%	
	(15)	0.056	0.124	0.009	0.133	1.121	0.133	0.033	1.671	32.303	0.0	0.0	45%	
	(16)	0.194	0.364	0.008	0.372	1.154	0.372	0.024	1.474	32.097	0.0	0.0	45%	
	(17)	0.205	0.242	0.008	0.251	0.968	0.251	0.023	1.411	32.031	0.0	0.0	45%	
	(18)	0.751	0.0	0.008	0.008	1.451	0.008	0.030	2.129	32.779	0.0	0.0	45%	
	(19)	0.063	0.249	0.008	0.257	1.481	0.257	0.027	1.913	32.554	0.0	0.0	45%	
	(20)	0.579	0.0	0.008	0.008	1.781	0.008	0.031	2.341	34.000	0.0	0.117	45%	
	(21)	1.531	0.0	0.009	0.009	2.817	0.009	0.034	2.341	34.000	0.0	1.150	45%	
	(22)	1.236	0.105	0.008	0.113	2.866	0.113	0.031	2.341	34.000	0.0	1.497	45%	
	(23)	1.108	0.096	0.009	0.105	2.738	0.105	0.034	2.341	34.000	0.0	0.974	45%	
SEP	(24)	0.919	0.0	0.008	0.008	2.549	0.008	0.027	2.341	34.000	0.0	0.889	45%	
	(25)	0.0	0.493	0.008	0.501	1.630	0.501	0.023	1.822	32.460	0.0	0.0	45%	
	(26)	0.549	0.0	0.008	0.008	1.660	0.008	0.027	2.341	34.000	0.0	0.000	45%	
	(27)	2.085	0.0	0.008	0.008	3.715	0.008	0.027	2.341	34.000	0.0	2.055	45%	
OGT	(28)	0.128	0.0	0.008	0.008	1.758	0.008	0.027	2.341	34.000	0.0	0.098	45%	
	(29)													
TOTAL		16.134	3.932	0.300	4.232	4.232	4.232	0.997			0.0	10.385		

TABLE A-2 (25) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1980 - 1981		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPD	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.181	0.0	0.009	0.009	1.811	0.009	0.029	2.341	34.000	0.0	0.148	65%
	(31)	0.173	0.129	0.008	0.137	1.803	0.137	0.027	2.341	34.000	0.0	0.014	65%
	(32)	0.279	0.187	0.008	0.195	1.909	0.195	0.027	2.341	34.000	0.0	0.062	65%
DEC	(33)	0.586	0.074	0.008	0.082	2.216	0.082	0.027	2.341	34.000	0.0	0.482	65%
	(34)	0.588	0.0	0.008	0.008	2.218	0.008	0.025	2.341	34.000	0.0	0.560	65%
	(35)	0.191	0.210	0.008	0.218	1.821	0.218	0.024	2.295	32.952	0.0	0.0	65%
	(36)	0.844	0.0	0.009	0.009	2.428	0.009	0.027	2.341	34.000	0.0	0.767	65%
JAN	(1)	0.517	0.106	0.008	0.114	2.147	0.114	0.030	2.341	34.000	0.0	0.378	65%
	(2)	0.172	0.245	0.008	0.253	1.802	0.253	0.029	2.236	32.891	0.0	0.0	65%
	(3)	0.524	0.0	0.009	0.009	2.049	0.009	0.032	2.341	34.000	0.0	0.384	65%
FEB	(4)	0.377	0.094	0.008	0.103	2.007	0.103	0.028	2.341	34.000	0.0	0.252	65%
	(5)	0.0	0.497	0.008	0.505	1.630	0.505	0.024	1.817	32.454	0.0	0.0	65%
	(6)	0.129	0.180	0.007	0.187	1.235	0.187	0.019	1.745	32.379	0.0	0.0	65%
MAR	(7)	0.134	0.101	0.008	0.109	1.168	0.109	0.027	1.748	32.382	0.0	0.0	65%
	(8)	0.009	0.207	0.008	0.215	1.046	0.215	0.025	1.521	32.146	0.0	0.0	65%
	(9)	0.176	0.010	0.009	0.019	0.986	0.019	0.029	1.655	32.286	0.0	0.0	65%
APR	(10)	0.003	0.086	0.008	0.095	0.947	0.095	0.030	1.539	32.164	0.0	0.0	65%
	(11)	0.163	0.0	0.008	0.008	0.991	0.008	0.031	1.668	32.298	0.0	0.0	65%
	(12)	0.053	0.0	0.008	0.008	1.010	0.008	0.032	1.686	32.318	0.0	0.0	65%
MAY	(13)	0.014	0.0	0.008	0.008	0.989	0.008	0.030	1.667	32.298	0.0	0.0	65%
	(14)	0.086	0.0	0.008	0.008	1.042	0.008	0.030	1.720	32.353	0.0	0.0	65%
	(15)	0.248	0.0	0.009	0.009	1.257	0.009	0.036	1.928	32.570	0.0	0.0	45%
JUN	(16)	0.258	0.187	0.008	0.195	1.475	0.195	0.029	1.968	32.611	0.0	0.0	45%
	(17)	0.0	0.473	0.008	0.481	1.257	0.481	0.024	1.468	32.091	0.0	0.0	45%
	(18)	0.155	0.209	0.008	0.217	0.912	0.217	0.023	1.388	32.007	0.0	0.0	45%
JUL	(19)	0.999	0.0	0.008	0.008	1.676	0.008	0.031	2.341	34.000	0.0	0.013	45%
	(20)	0.415	0.283	0.008	0.292	2.045	0.292	0.031	2.341	34.000	0.0	0.098	45%
	(21)	0.327	0.176	0.009	0.185	1.957	0.185	0.034	2.341	34.000	0.0	0.114	45%
AUG	(22)	0.047	0.601	0.008	0.609	1.677	0.609	0.026	1.758	32.393	0.0	0.0	45%
	(23)	0.044	0.553	0.008	0.561	1.091	0.561	0.021	1.225	30.768	0.0	0.0	45%
	(24)	0.440	0.307	0.009	0.316	0.954	0.316	0.024	1.331	30.925	0.0	0.0	45%
SEP	(25)	0.0	0.583	0.008	0.571	0.620	0.571	0.013	0.752	30.061	0.0	0.0	45%
	(26)	0.411	0.257	0.008	0.265	0.452	0.265	0.015	0.888	30.265	0.0	0.0	45%
	(27)	0.630	0.0	0.008	0.008	0.807	0.008	0.020	1.495	32.119	0.0	0.0	45%
OCT	(28)	0.759	0.0	0.008	0.008	1.543	0.008	0.026	2.225	32.879	0.0	0.0	45%
	(29)	0.385	0.0	0.008	0.008	1.899	0.008	0.027	2.341	34.000	0.0	0.239	45%
TOTAL		10.317	5.734	0.300	6.034		6.034	0.963			0.0	3.510	

TABLE A-2(26) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1981 - 1982		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAP0	STORGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.447	0.0	0.009	0.009	2.077	0.009	0.029	2.341	34.000	0.0	0.414	65%
	(31)	0.315	0.0	0.008	0.008	1.945	0.008	0.027	2.341	34.000	0.0	0.285	65%
	(32)	0.199	0.199	0.008	0.208	1.829	0.208	0.027	2.310	32.968	0.0	0.0	65%
	(33)	0.167	0.421	0.008	0.429	1.766	0.429	0.025	2.028	32.674	0.0	0.0	65%
DEC	(34)	2.087	0.0	0.008	0.008	3.404	0.008	0.025	2.341	34.000	0.0	1.746	65%
	(35)	0.075	0.381	0.008	0.389	1.705	0.389	0.022	2.010	32.655	0.0	0.0	65%
	(36)	0.164	0.353	0.009	0.362	1.463	0.362	0.023	1.795	32.431	0.0	0.0	65%
JAN	(1)	0.078	0.331	0.008	0.339	1.162	0.339	0.023	1.516	32.141	0.0	0.0	65%
	(2)	0.201	0.314	0.008	0.322	1.006	0.322	0.021	1.378	30.996	0.0	0.0	65%
	(3)	0.166	0.430	0.009	0.439	0.833	0.439	0.020	1.091	30.567	0.0	0.0	65%
	(4)	0.444	0.0	0.008	0.008	0.824	0.008	0.021	1.511	32.135	0.0	0.0	65%
FEB	(5)	0.159	0.395	0.008	0.403	0.959	0.403	0.019	1.253	30.809	0.0	0.0	65%
	(6)	0.183	0.001	0.007	0.007	0.725	0.007	0.016	1.417	32.037	0.0	0.0	65%
MAR	(7)	0.001	0.465	0.008	0.474	0.707	0.474	0.019	0.931	30.328	0.0	0.0	65%
	(8)	0.263	0.0	0.008	0.008	0.483	0.008	0.021	1.169	30.684	0.0	0.0	65%
	(9)	0.883	0.0	0.009	0.009	1.341	0.009	0.033	2.016	32.661	0.0	0.0	65%
APR	(10)	0.038	0.009	0.008	0.018	1.343	0.018	0.035	2.006	32.651	0.0	0.0	65%
	(11)	0.0	0.012	0.008	0.021	1.295	0.021	0.035	1.956	32.599	0.0	0.0	65%
	(12)	0.0	0.0	0.008	0.008	1.245	0.008	0.034	1.919	32.561	0.0	0.0	65%
MAY	(13)	0.015	0.0	0.008	0.008	1.223	0.008	0.032	1.899	32.539	0.0	0.0	65%
	(14)	0.280	0.0	0.008	0.008	1.468	0.008	0.035	2.141	32.791	0.0	0.0	65%
	(15)	0.117	0.0	0.009	0.009	1.547	0.009	0.039	2.215	32.869	0.0	0.0	65%
JUN	(16)	0.027	0.453	0.008	0.461	1.531	0.461	0.027	1.759	32.394	0.0	0.0	65%
	(17)	0.687	0.0	0.008	0.008	1.735	0.008	0.032	2.341	34.000	0.0	0.071	65%
	(18)	0.108	0.926	0.008	0.934	1.738	0.934	0.024	1.496	32.119	0.0	0.0	65%
JUL	(19)	0.382	0.0	0.008	0.008	1.167	0.008	0.027	1.848	32.486	0.0	0.0	65%
	(20)	0.063	0.183	0.008	0.191	1.200	0.191	0.025	1.700	32.332	0.0	0.0	65%
	(21)	0.370	0.491	0.009	0.500	1.359	0.500	0.026	1.549	32.175	0.0	0.0	65%
AUG	(22)	0.102	0.383	0.008	0.391	0.940	0.391	0.021	1.244	30.795	0.0	0.0	65%
	(23)	0.923	0.0	0.008	0.008	1.456	0.008	0.030	2.134	32.784	0.0	0.0	65%
	(24)	0.436	0.204	0.009	0.213	1.859	0.213	0.034	2.328	32.987	0.0	0.0	65%
SEP	(25)	0.213	0.307	0.008	0.316	1.830	0.316	0.026	2.205	32.858	0.0	0.0	65%
	(26)	0.161	0.356	0.008	0.364	1.655	0.364	0.024	1.983	32.627	0.0	0.0	65%
	(27)	0.372	0.097	0.008	0.105	1.644	0.105	0.026	2.229	32.883	0.0	0.0	65%
OCT	(28)	0.495	0.0	0.008	0.008	2.013	0.008	0.027	2.341	34.000	0.0	0.353	65%
	(29)	0.863	0.0	0.008	0.008	2.493	0.008	0.027	2.341	34.000	0.0	0.833	65%
TOTAL		11.484	6.713	0.300	7.013	7.013	7.013	0.959			0.0	3.702	

TABLE A-2(27) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1982 - 1983		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVARO	STORGE	WL	SHORT	SPIII	CROPPING INTENSITY
NOV	(30)	0.087	0.177	0.009	0.187	1.717	0.187	0.029	2.219	32.872	0.0	0.0	65%
	(31)	0.088	0.049	0.008	0.058	1.596	0.058	0.027	2.227	32.882	0.0	0.0	65%
	(32)	0.184	0.218	0.008	0.226	1.700	0.226	0.026	2.165	32.816	0.0	0.0	65%
	(33)	0.054	0.451	0.008	0.459	1.508	0.459	0.023	1.742	32.376	0.0	0.0	65%
DEC	(34)	0.211	0.037	0.008	0.045	1.242	0.045	0.021	1.891	32.532	0.0	0.0	65%
	(35)	0.287	0.055	0.008	0.063	1.467	0.063	0.023	2.097	32.746	0.0	0.0	65%
	(36)	0.034	0.411	0.009	0.420	1.420	0.420	0.022	1.695	32.327	0.0	0.0	65%
JAN	(1)	0.068	0.218	0.008	0.226	1.052	0.226	0.023	1.519	32.144	0.0	0.0	65%
	(2)	0.078	0.432	0.008	0.440	0.886	0.440	0.019	1.144	30.646	0.0	0.0	65%
	(3)	0.008	0.699	0.009	0.708	0.446	0.446	0.0	0.711	30.000	-0.262	0.0	65%
FEB	(4)	0.037	0.416	0.008	0.424	0.042	0.042	0.0	0.711	30.000	-0.382	0.0	65%
	(5)	0.001	0.669	0.008	0.677	0.006	0.006	0.0	0.711	30.000	-0.671	0.0	65%
	(6)	0.010	0.334	0.007	0.341	0.014	0.014	0.0	0.711	30.000	-0.327	0.0	65%
	(7)	0.007	0.152	0.008	0.160	0.012	0.012	0.0	0.711	30.000	-0.148	0.0	65%
	(8)	0.0	0.375	0.008	0.383	0.005	0.005	0.0	0.711	30.000	-0.378	0.0	65%
	(9)	0.0	0.271	0.009	0.281	0.006	0.006	0.0	0.711	30.000	-0.275	0.0	65%
APR	(10)	0.0	0.139	0.008	0.148	0.005	0.005	0.0	0.711	30.000	-0.142	0.0	65%
	(11)	0.0	0.021	0.008	0.029	0.005	0.005	0.0	0.711	30.000	-0.024	0.0	65%
	(12)	0.0	0.0	0.008	0.008	0.005	0.005	0.0	0.711	30.000	-0.003	0.0	65%
MAY	(13)	0.015	0.0	0.008	0.008	0.015	0.008	0.018	0.705	28.986	0.0	0.0	65%
	(14)	0.0	0.0	0.008	0.008	0.0	0.0	0.0	0.711	30.000	-0.009	0.0	65%
	(15)	0.015	0.108	0.009	0.117	0.021	0.021	0.0	0.711	30.000	-0.096	0.0	20%
	(16)	0.055	0.205	0.008	0.213	0.060	0.060	0.0	0.711	30.000	-0.153	0.0	20%
JUN	(17)	0.026	0.253	0.008	0.261	0.031	0.031	0.0	0.711	30.000	-0.230	0.0	20%
	(18)	0.555	0.0	0.008	0.008	0.555	0.008	0.022	1.241	30.792	0.0	0.0	20%
	(19)	1.011	0.0	0.008	0.008	1.541	0.008	0.030	2.220	32.874	0.0	0.0	20%
JUL	(20)	0.286	0.0	0.008	0.008	1.795	0.008	0.031	2.341	34.000	0.0	0.131	20%
	(21)	0.513	0.084	0.009	0.093	2.143	0.093	0.034	2.341	34.000	0.0	0.392	20%
AUG	(22)	0.200	0.0	0.008	0.008	1.830	0.008	0.031	2.341	34.000	0.0	0.166	20%
	(23)	0.021	0.123	0.008	0.131	1.651	0.131	0.030	2.206	32.859	0.0	0.0	20%
	(24)	0.572	0.0	0.009	0.009	2.067	0.009	0.034	2.341	34.000	0.0	0.399	20%
SEP	(25)	0.0	0.216	0.008	0.024	1.630	0.224	0.027	2.097	32.746	0.0	0.0	20%
	(26)	0.802	0.002	0.008	0.011	2.188	0.011	0.027	2.341	34.000	0.0	0.526	20%
	(27)	0.477	0.0	0.008	0.008	2.107	0.008	0.027	2.341	34.000	0.0	0.447	20%
OCT	(28)	0.464	0.000	0.008	0.008	2.094	0.008	0.027	2.341	34.000	0.0	0.434	20%
	(29)	0.368	0.0	0.008	0.008	1.998	0.008	0.027	2.341	34.000	0.0	0.338	20%
TOTAL		6.534	6.115	0.300	6.415	3.318	3.318	0.574			-3.098	2.834	

TABLE A-2(28) WATER BALANCE STUDY WITH CAPAYAS DAM ONLY

RESERVOIR CAPACITY 2.3 (MCM)
 FULL WATER LEVEL 34.0 (M)
 LOW WATER LEVEL 30.0 (M)
 MAIN CANAL CAPACITY 2.1 (CU.M/SEC)

YEAR --- 1983 --- 1984		UNIT : MCM											
MONTH	10-DAY	INFLOW	IRRIG. DEMAND	DOMEST IC-USE	TOTAL DEMAND	POSSIB. USE	INTAKE	EVAPORATION	STORAGE	WL	SHORT	SPILL	CROPPING INTENSITY
NOV	(30)	0.393	0.0	0.009	0.009	2.023	0.009	0.029	2.341	34.000	0.0	0.360	65%
	(31)	0.426	0.0	0.008	0.008	2.056	0.008	0.027	2.341	34.000	0.0	0.396	65%
	(32)	0.105	0.285	0.008	0.293	1.735	0.293	0.026	2.132	32.782	0.0	0.0	65%
	(33)	0.173	0.0	0.008	0.008	1.594	0.008	0.027	2.275	32.931	0.0	0.0	65%
DEC	(34)	0.387	0.0	0.008	0.008	1.951	0.008	0.025	2.341	34.000	0.0	0.294	65%
	(35)	0.557	0.0	0.008	0.008	2.187	0.008	0.025	2.341	34.000	0.0	0.529	65%
	(36)	0.665	0.105	0.009	0.114	2.295	0.114	0.027	2.341	34.000	0.0	0.530	65%
JAN	(1)	0.356	0.047	0.008	0.056	1.986	0.056	0.030	2.341	34.000	0.0	0.276	65%
	(2)	0.394	0.186	0.008	0.194	2.024	0.194	0.030	2.341	34.000	0.0	0.176	65%
	(3)	0.216	0.146	0.009	0.155	1.846	0.155	0.032	2.341	34.000	0.0	0.034	65%
	(4)	0.176	0.213	0.008	0.221	1.806	0.221	0.028	2.273	32.929	0.0	0.0	65%
FEB	(5)	0.394	0.030	0.008	0.038	1.956	0.038	0.028	2.341	34.000	0.0	0.266	65%
	(6)	0.797	0.0	0.007	0.007	2.427	0.007	0.022	2.341	34.000	0.0	0.772	65%
	(7)	0.499	0.012	0.008	0.020	2.129	0.020	0.033	2.341	34.000	0.0	0.451	65%
	(8)	0.026	0.305	0.008	0.313	1.656	0.313	0.030	2.029	32.675	0.0	0.0	65%
	(9)	0.316	0.022	0.009	0.031	1.634	0.031	0.036	2.283	32.940	0.0	0.0	65%
APR	(10)	0.045	0.073	0.008	0.081	1.617	0.081	0.037	2.215	32.869	0.0	0.0	65%
	(11)	0.080	0.0	0.008	0.008	1.584	0.008	0.038	2.254	32.910	0.0	0.0	65%
	(12)	0.161	0.0	0.008	0.008	1.704	0.008	0.038	2.341	34.000	0.0	0.033	65%
	(13)	0.330	0.0	0.008	0.008	1.960	0.008	0.037	2.341	34.000	0.0	0.290	65%
	(14)	0.013	0.0	0.008	0.008	1.643	0.008	0.037	2.314	32.972	0.0	0.0	65%
	(15)	0.012	0.336	0.009	0.345	1.615	0.345	0.036	1.951	32.593	0.0	0.0	65%
JUN	(16)	0.091	0.0	0.008	0.008	1.331	0.008	0.029	2.010	32.655	0.0	0.0	65%
	(17)	0.177	0.475	0.008	0.484	1.476	0.484	0.026	1.682	32.314	0.0	0.0	65%
	(18)	0.067	0.827	0.008	0.835	1.038	0.835	0.018	0.901	30.284	0.0	0.0	65%
	(19)	0.0	0.453	0.008	0.461	0.196	0.196	0.0	0.711	30.000	-0.266	0.0	65%
	(20)	0.057	0.333	0.008	0.341	0.062	0.062	0.0	0.711	30.000	-0.279	0.0	65%
	(21)	0.250	0.0	0.009	0.009	0.250	0.009	0.019	0.939	30.340	0.0	0.0	65%
AUG	(22)	0.080	0.273	0.008	0.281	0.308	0.281	0.015	0.727	30.024	0.0	0.0	65%
	(23)	0.0	0.758	0.008	0.766	0.021	0.021	0.0	0.711	30.000	-0.745	0.0	65%
	(24)	0.072	0.624	0.009	0.633	0.078	0.078	0.0	0.711	30.000	-0.555	0.0	65%
	(25)	1.120	0.0	0.008	0.008	1.120	0.008	0.023	1.805	32.442	0.0	0.0	65%
SEP	(26)	0.077	0.601	0.008	0.609	1.171	0.609	0.018	1.260	30.820	0.0	0.0	65%
	(27)	0.330	0.032	0.008	0.040	0.879	0.040	0.021	1.535	32.160	0.0	0.0	65%
	(28)	0.341	0.0	0.008	0.008	1.165	0.008	0.023	1.850	32.488	0.0	0.0	65%
OCT	(29)	0.571	0.0	0.008	0.008	1.710	0.008	0.027	2.341	34.000	0.0	0.050	65%
TOTAL		9.754	6.136	0.300	6.436	4.591	0.896	-1.845	4.457				

APPENDIX B. COST ESTIMATION OF IRRIGATION PROJECT

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TABLE B-1 (1) CONSTRUCTION COST ESTIMATION FOR CAPAYAS SYSTEM

Description of Item	Unit	Quantity	Unit Rate		Amount (P'000)		Remarks
			F/C	L/C	F/C	L/C	
1. Capayas Dam							
(1) Temporary works							
L.S.							(1 + 2 + 3) x 0.05
Sub-Total							
(2) Dam works							
Stripping	cu.m	36,000	15	6	21	216	756
Earth Excavation	"	10,000	19	8	27	80	270
Soft Rock Excavation	"	6,000	35	15	50	90	300
Earth Embankment	"	189,000	29	12	41	5,481	2,268
Earth Embankment by Excavated Material	"	21,500	12	5	17	258	108
Filter Embankment	"	900	82	33	115	74	50
Riprap Embankment	"	16,500	108	44	152	1,760	717
Toe Rock Embankment	"	800	29	12	41	23	10
Miscellaneous (5%)						427	176
Sub-Total						8,963	3,695
							12,658
(3) Spillway							
Earth Excavation	cu.m	21,000	19	8	27	599	168
Soft Rock Excavation	"	5,000	30	15	50	175	75
Backfill	"	1,500	22	9	31	33	14
Concrete Class A		2,600	741	696	1,437	1,927	1,810
Rainforced Bar	ton	170	11,119	4,537	15,456	1,890	737
Bridge	sq.m	360	1,600	400	2,000	576	144
Miscellaneous (5%)						250	147
Sub-Total						5,250	3,095
							8,345
(4) Intake							
Earth Excavation	cu.m	8,500	19	8	27	162	68
Soft Rock Excavation	"	1,000	35	15	50	35	15
Backfill	"	1,000	22	9	31	22	9
Concrete pipe ø 1,500mm	m	78	914	537	1,451	71	42
Concrete Class A	cu.m	850	741	696	1,437	630	592
Rainforced Bar	ton	55	11,119	4,537	15,456	612	239
Intake Gate ø 500mm	set	3	46,455	975	47,430	139	5
Foot Bridge	sq.m	48	400	100	500	19	5
Emergency Gate ø 500mm	set	1	49,040	777	49,817	49	1
Miscellaneous (5%)						87	49
Sub-Total						1,826	1,023
							2,849
Total							
						16,900	8,500
							25,200

TABLE B-1 (2) CONSTRUCTION COST ESTIMATION FOR CAPAYAS SYSTEM

Description of Item	Unit	Quantity	Unit Rate		Amount (P'000)		Remarks
			F/C	L/C	F/C	L/C	
2. Canal Works							
(1) Temporary works	L.S.						(5 + 6 + 7) x 2%
Sub-Total							
(2) Main Canal							
Stripping	cu.m	5,700	6	2	34	11	45
Earth Excavation	"	8,400	29	13	244	109	353
Fill by Excavated Material	"	6,000	16	8	96	48	144
Fill by Side Borrow	"	1,400	24	11	34	15	49
Backfill	"	100	22	9	2	1	3
Lining Concrete	"	1,540	834	576	1,284	887	2,171
Structural Concrete	"	100	924	1,174	92	12	104
Reinforced Bar	ton	3	11,119	4,537	33	13	46
Grauted Riprap	cu.m	100	651	437	65	44	109
Gravel paiting	"	1,000	76	39	76	39	135
Soading	sq.m	7,500	5	5	38	38	76
RC-pipe, ϕ 450 mm	m	200	319	144	64	29	93
" " ϕ 600 mm	"	100	352	163	35	16	51
" " ϕ 1000 mm	"	100	616	274	62	27	89
Distributor	set	3	-	-	542	28	570
Gate 0.5 x 1.0	"	4	5,125	781	13	3	16
Miscellaneous (5%)					137	66	205
Sub-Total					2,871	1,386	4,257
(3) Lateral Canal							
Stripping	cu.m	20,500	6	2	123	41	164
Earth Excavation	"	19,300	29	13	574	257	831
Fill by Excavated Material	"	15,200	16	8	243	122	365
Fill by Side Borrow	"	41,000	24	11	984	451	1,435
Backfill	"	80	22	9	2	1	3
Structural concrete	"	80	924	1,174	74	94	168
Reinforced Bar	ton	2	11,119	4,537	22	9	31
Grauted Riprap	cu.m	200	651	437	130	87	217
Gravel Paving	"	3,800	96	39	365	148	513
Sodding	sq.m	44,500	5	5	223	223	446
RC-pipe ϕ 450 mm	m	500	319	144	160	72	232
" " ϕ 600 mm	"	200	352	163	70	33	103
Gate 0.5 x 1.0	set	26	3,125	781	81	20	101
" 0.7 x 1.0	"	10	3,472	868	35	8	43
Miscellaneous (5%)					154	78	232
Sub-Total					3,238	1,645	4,881
							5
							6

TABLE B-1 (S) CONSTRUCTION COST ESTIMATION FOR CAPAYAS SYSTEM

Description of Item	Unit	Quantity	Unit Rate		Amount (P'000)		Remarks
			F/C	L/C	F/C	L/C	
(4) Drainage Canal							
Earth Excavation	cu.m	15,500	29	13	450	202	652
Backfill	"	200	22	9	4	2	6
Structural concrete	"	200	924	1,174	185	235	420
Reinforced Bar	ton	6	11,119	4,337	67	26	93
Grouted Riprap	cu.m	150	651	437	98	66	164
RC-pipe φ 600mm	m	200	352	163	70	33	103
Miscellaneous (5%)					44	28	72
Sub-Total					918	592	1,510
Total					7,200	3,700	10,900
3. Land Leveling							
Land Leveling	ha	430	2,820	1,097	1,212	472	1,684
Deep plawing	"	430	581	195	250	84	334
Ridge preparation	"	430	760	476	527	205	532
Miscellaneous (5%)					111	39	150
Total					1,900	800	2,700
4. Preparatory Works							
					400	300	700
Grand Total					26,400	15,100	39,500

TABLE B-2 ON-FARM DEVELOPMENT COST

Description of Item	Unit	Quantity	Unit Rate		Amount (₹'000)		Remarks		
			F/C	L/C	F/C	L/C		Total	
1. Farm Ditch	ha	750	421	218	639	315	164	479	16.2 m/ha
2. Supplementary Farm Ditch	"	750	1,170	535	1,703	877	400	1,277	50.9 m/ha
3. Farm Drain	"	750	127	62	189	95	47	142	14.1 m/ha
4. Farm Road	"	750	369	180	549	277	135	412	46.2 m/ha
5. On-farm Structure	"	750	471	309	780	353	232	585	
6. Miscellaneous (5%)						83	22	105	
Sub-Total						2,000	1,000	3,000	

TABLE B-5 LAND ACQUISITION & COMPENSATION COST

Description of Item	Unit	Quantity	Unit Rate		Amount (₹'000)		Remarks	
			F/C	L/C	F/C	L/C		Total
1. Capayas Dam	ha	20	-	4,000	4,000	-	80	
Mountain Area	"	80	-	6,000	6,000	-	480	
Waste Area						-	560	560
Sub-Total								
2. Canal	"	3	-	6,000	6,000	-	18	18
Waste Area	"	15	-	10,000	10,000	-	150	150
Cultivated Area						-	168	168
Sub-Total								
Total							728	728
							800	800

TABLE B-4 ENGINEERING AND ADMINISTRATION COST FOR IRRIGATION PROJECT

(Unit: P'000)

Description	Foreign	Local	Total
	Currency	Currency	
1. Consulting Service	15,200	2,500	15,700
2. Investigation for Detailed Design	-	70	70
3. Administration Cost			
• Personal Cost	-	1,220	1,220
• Equipment Cost for Construction Supervision	250	10	260
• Repair and Maintenance Cost	280	80	560
Total	<u>15,730</u>	<u>3,880</u>	<u>17,610</u>
	≐ 13,700	≐ 3,900	≐ 17,600

Note: Topo-survey for canal system of about 16 km will be made by NIA staff taking into account the land condition and acquisition, so that the cost of survey is excluded in this estimation.

TABLE B-5 CONSULTANT SERVICES FOR IRRIGATION PROJECT

Description	Unit	Quantity	Unit Rate (R)		Amount (P'000)	
			F/C	L/C	F/C	L/C
1. Detailed Design Stage						
(1) Remuneration						
Foreign Expert	Man-Month	27	160,000	-	4,320	-
Local Expert	"	10	60,000	-	600	600
Sub-Total					4,920	4,920
(2) Direct Cost						
Air Freight	Time	11	20,000	-	220	220
Equipments	L.S				40	40
Miscellaneous					20	20
Sub-Total					280	280
(3) Indirect Cost						
Hotel Charges	Man-Month	27	-	30,000	-	810
Domestic Air Freight	Time	20	-	2,000	40	40
Transportation Charge	"	10	-	20,000	200	200
Office Supplies	Month	6	-	5,000	30	30
Printing	"	6	-	5,000	30	30
Miscellaneous	L.S				60	60
Sub-Total					1,200	1,200
Total					5,200	6,400
2. Construction Supervision Stage						
(1) Remuneration						
Foreign Expert	Man-Month	40	155,000	-	6,200	-
Local Expert	"	25	60,000	-	1,500	1,500
Sub-Total					7,700	7,700
(2) Direct Cost						
Air Freight	Time	6	20,000	-	120	120
Equipments	L.S				110	110
Miscellaneous					70	70
Sub-Total					300	300
(3) Direct Cost						
Hotel Charge	Man-Month	40	-	50,000	-	1,200
Domestic Air Freight	Time	50	-	2,000	60	60
Office Supplies	Month	18	-	2,000	36	36
Miscellaneous					4	4
Sub-Total					1,300	1,300
Total					8,000	9,300
Grand Total					15,200	15,700

TABLE B-6 INVESTIGATION FOR DETAILED DESIGN

Description	Unit	Quantity	Unit Rate (P)		Amount (P'000)	
			F/C	L/C	F/C	L/C
(1) Topo-Survey						
• Survey for Capayas Dam	km	3.0	4,000	4,000	12	12
(2) Geological Survey						
• Drilling at Capayas Damsite	m	100	500	500	50	50
• Test pits at Capayas Damsite	place	5	700	700	4	4
• Laboratory Test of Dam Materials	L.S				10	10
• Corn Penetration Test at Canal Route	place	30	100	100	3	3
• Laboratory Test of Canal Material	L.S				2	2
• Miscellaneous (10%)					9	9
Total					<u>70</u>	<u>70</u>

TABLE B-7 MAN-MONTH OF CONSULTANT EXPERT
AND NIA STAFF FOR IRRIGATION PROJECT

(Unit: Man-Month)

Expert	Foreign Man-Month	Local Man-Month	Total Man-Month	NIA Staff Man-Month
1) Detailed Design Stage				
Project Manager	6	-	6	-
Dam Engineer	3	-	3	3
Irrigation Engineer	3	2	5	3
On-Farm Development	-	2	2	5
Hydrologist	2	-	2	2
Hydraulic Structure Eng.	4	3	7	4
Engineering Geologist	1	-	1	2
Soil Mechanist	1	-	1	2
Mechanical Engineer	1	-	1	-
Topo-Surveyor	-	-	-	5
Cost Estimator	1	-	1	1
Specification Specialist	2	-	2	2
Specialist as Required	3	3	6	6
Total	<u>27</u>	<u>10</u>	<u>37</u>	<u>35</u>
2) Construction Supervision Stage				
Resident Engineer	18	-	18	18
Design Eng. for Shop Draw.	2	2	4	12
Dam Engineer	12	6	18	12
Canal Engineer	-	12	12	12
Mechanical Engineer	2	-	2	-
Tender Evaluation Expert	1	-	1	1
Specialist as Required	5	5	10	5
Total	<u>40</u>	<u>25</u>	<u>65</u>	<u>60</u>

TABLE B-8 ADMINISTRATION COST

(Unit: P'000)

1. Personal Cost

a) Detailed Design Stage

NIA Design Staff P2,100/month x 35 M-M = 80

b) Construction Stage P19,000/month x 60 M-M = 1,140

Total 1,220

2. Equipment Cost for Construction Supervision

(Unit: P'000)

Description	Q'ty	Unit Rate		Amount		Total
		F/C	L/C	F/C	L/C	
• Jeep	1 no	150	-	150	-	150
• Motorcycle	2 nos	10	-	20	-	20
• Theodrite	1 no	30	-	30	-	30
• Level	1 "	12	-	12	-	12
• Current Meter	1 "	20	-	20	-	20
• Walkie-Talkie	3 nos	3	-	9	-	9
• Miscellaneous				9	-	9
• Transportation Cost L.S					10	10
Total				<u>250</u>	<u>10</u>	<u>260</u>

3. Repair and Maintenance Cost

(Unit: P'000)

• Vehicle Repair	P150,000 x 15% x 1 unit	=	23
• Vehicle Fuel	P6.5/l x 15l/day x 300 days x 1 unit	=	29
• Building Maintenance	P3,600,000 x 4.5%	=	160
• Office Suppliant			28
Sub-total			240
Total	P240 x 1.5 year	=	<u>360</u>
Grand Total			<u>1,840</u>

TABLE B-9 DETAILED DISBURSEMENT SCHEDULE
(Unit: \$'000)

Description	Year					
	1987	1988	1989	1990	Total	
1. Preparatory Works	F/C	-	-	-	400	
	L/C	300	-	-	300	
2. Construction Works	F/C	-	15,200	8,200	2,600	26,000
	L/C	-	7,500	4,000	1,300	12,800
3. On-farm Development	F/C	-	700	1,100	200	2,000
	L/C	-	400	500	100	1,000
4. Land Acquisition and Compensation	L/C	800	-	-	-	800
5. Engineering & Administration	F/C	9,600	1,400	1,300	1,400	13,700
	L/C	2,400	600	500	400	3,900
6. On-farm Equipment	F/C	-	-	900	-	900
	L/C	-	-	100	-	100
7. Total	F/C	10,000	17,300	11,500	4,200	43,000
	L/C	3,500	8,500	5,100	1,800	18,900
8. Physical Contingencies	F/C	1,500	2,600	1,700	600	6,400
	L/C	500	1,200	800	300	2,900
9. Total	F/C	11,500	19,900	13,200	4,800	49,400
	L/C	4,000	9,700	5,900	2,100	21,700
10. Price Escalation	F/C	2,800	7,100	6,100	2,600	18,600
	L/C	2,600	8,600	6,400	2,700	20,300
11. Grand Total	F/C	14,300	27,000	19,300	7,400	68,000
	L/C	6,600	18,300	12,500	4,800	42,000
Total		20,900	45,300	31,600	12,200	110,000

APPENDIX C. COST ESTIMATION OF APPURTENANT PROJECT

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TABLE C-1 COST FOR PILOT FARM

Description	Unit	Quantity	Unit Rate (₱)		Amount (₱'000)	
			F/C	L/C	F/C	L/C
1. Land Development						
Land Leveling	ha	32	2,820	1,097	3,917	125
Farm Land Preparation	"	24	1,341	671	2,012	48
On-Farm Facilities	"	24	2,700	1,300	4,000	96
Sub-total						<u>269</u>
2. Facilities						
Road Paving	cu.m	1,000	96	39	135	135
Office, Center	sq.m	500	1,200	800	2,000	1,000
Warehouse	"	300	600	400	1,000	300
Rice Mill, 11 ton/day	L.S		-	-	-	20,000
Agricultural Machinery	"		-	-	-	700
Potable Water Facility	"		-	-	-	800
Miscellaneous (10%)						2,296
Sub-total						<u>22,083</u>
Total						<u>22,270</u>
						<u>25,500</u>

TABLE C-2 COST FOR DOMESTIC WATER SUPPLY SYSTEM

Description	Unit	Quantity	Unit Rate (₱)		Amount (₱'000)	
			F/C	L/C	F/C	L/C
1. Conveyance Pipe ϕ 100 mm	m	1,600	200	50	320	80
2. Raw Water Reservoir, V = 740 cu.m.	place	1	195	105	195	105
3. Intake Pump						
Pump Station	unit	1	15	65	15	65
Pump, q = 15.0 cu.m/hr	unit	2	80	20	160	40
4. Slow Sand Filtration Pond (10 x 10 x 3m)	place	1	250	200	250	200
5. Distribution Reservoir, V = 90 cu.m	"	1	70	50	70	50
6. Distribution Pump, q = 22.5 cu.m/hr	unit	2	130	20	260	40
7. Elevated Tank, V = 30 cu.m	place	1	120	90	120	90
8. Miscellaneous (10%)	L.S		-	-	-	-
Total			970	170	970	170
						1,140

TABLE C-3 ENGINEERING AND ADMINISTRATION COST
FOR APPURTENANT PROJECT

<u>Description</u>	(Unit: ₱ '000)		
	<u>Foreign Currency</u>	<u>Local Currency</u>	<u>Total</u>
1. Consulting Services	5,060	1,040	6,100
2. Investigation for Detailed Design	-	20	20
3. Administration Cost			
. Personal Cost	-	440	440
. Equipment Cost for Construction Supervision	230	10	240
. Repair and Maintenance Cost	100	30	130
Total	<u>5,390</u>	<u>1,540</u>	<u>6,950</u>

TABLE C-4 CONSULTANT SERVICES FOR APPURTENANT PROJECT

Description	Unit	Quantity	Unit Rate (P)		Amount (P'000)	
			F/C	L/C	F/C	L/C
1. Detailed Design Stage						
(1) Remuneration	Man-Month	12.5	160,000	-	2,000	-
Foreign Expert	"	6.5	50,000	-	390	-
Local Expert					2,390	-
Sub-Total						2,390
(2) Direct Cost						
Air Freight	Time	11	20,000	-	220	-
Equipments	L.S				20	-
Miscellaneous					10	-
Sub-Total					250	-
(3) Indirect Cost						
Hotel Charges	Man-Month	12.5	-	30,000	375	-
Domestic Air Freight	Time	17	-	2,000	34	-
Transportation Charge	"	5	-	20,000	100	-
Office Supplies	Month	5	-	5,000	25	-
Printing	"	5	-	5,000	25	-
Miscellaneous	L.S				21	-
Sub-Total					580	-
Total			2,640		590	5,220
2. Construction Supervision Stage						
(1) Remuneration	Man-Month	11	155,000	-	1,705	-
Foreign Expert	"	10	60,000	-	600	-
Local Expert					2,305	-
Sub-Total						2,305
(2) Direct Cost						
Air Freight	Time	4	20,000	-	80	-
Equipments	L.S				20	-
Miscellaneous					15	-
Sub-Total					115	-
(3) Direct Cost						
Hotel Charge	Man-Month	11	-	30,000	420	-
Domestic Air Freight	Time	8	-	2,000	16	-
Office Supplies	Month	11	-	2,000	22	-
Miscellaneous					2	-
Sub-Total					460	-
Total			2,420		460	2,880
Grand Total			5,060		1,040	6,100

TABLE C-5 MAN-MONTH OF CONSULTANT EXPERT AND
NIA STAFF FOR APPURTENMENT PROJECT

(Unit: Man-Month)

Expert	Foreign Man-Month	Local Man-Month	Total Man-Month	NIA Staff Man-Month
1) Detailed Design Stage				
<u>Pilot Farm</u>				
Agronomist	1.0	-	1.0	-
Irrigation Engineer	1.5	-	1.5	2.0
Land & On-Farm Work Eng.	-	-	-	2.0
Agricultural Mechanical Eng.	1.0	-	1.0	-
Hydraulic Structure Eng.	1.0	-	1.0	-
Building Engineer	-	1.5	1.5	2.0
Electrical Engineer	-	1.0	1.0	2.0
Specification Specialist	1.0	-	1.0	-
Specialist as required	1.0	1.0	2.0	-
Sub-total	<u>6.5</u>	<u>3.5</u>	<u>10.0</u>	<u>8.0</u>
<u>Water Supply System</u>				
Water Supply Engineer	1.5	-	1.5	-
Structure Engineer	1.0	-	1.0	-
Pulification Plant Eng.	1.5	-	1.5	-
Building Engineer	-	1.0	1.0	2.0
Electrical Engineer	-	1.0	1.0	2.0
Specification Specialist	1.0	-	1.0	-
Specialist as required	1.0	1.0	2.0	-
Sub-total	<u>6.0</u>	<u>3.0</u>	<u>9.0</u>	<u>4.0</u>
Total	<u>12.5</u>	<u>6.5</u>	<u>19.0</u>	<u>12.0</u>
2) Supervision Stage				
Design Eng. for Shop Draw.	1.5	1.0	2.5	4.0
Civil Engineer	7.0	5.0	12.0	12.0
Mechanical Engineer	1.5	-	1.5	-
Building Engineer	-	3.0	3.0	6.0
Specialist as required	1.0	1.0	2.0	-
Total	<u>11.0</u>	<u>10.0</u>	<u>21.0</u>	<u>22.0</u>

TABLE C-6 INVESTIGATION FOR DETAILED DESIGN

Description	Unit	Quantity	Unit Rate (P)		Amount (P '000)	
			F/C	L/C	F/C	L/C
1) Pilot Farm						
Drilling for Well	m	30	-	300	-	9
Miscellaneous (10%)			-		-	1
Sub-total			-		-	10
2) Domestic Water Supply						
Survey for Pipeline Alignment	km	1.6	-	3,800	-	6
Topographic Survey (s=1/1,000)	ha	1.2	-	2,000	-	3
Sub-total			-		-	10
Total			-		-	20

TABLE C-7 ADMINISTRATION COST

1. Personal Cost

		(Unit: P '000)
a) Detailed Design		
NIA Design Staff	₱ 2,100 x 12 M-M =	25
b) Construction Stage	₱19,000 x 22 M-M =	415
Total		<u>440</u>

2. Equipment Cost for Construction Supervision

(Unit: P '000)

Description	Unit	Q'ty	Unit Rate		Amount		Total
			F/C	L/C	F/C	L/C	
Jeep	unit	1	150	-	150	-	150
Motorcycle	unit	2	10	-	20	-	20
Theodrite	unit	1	30	-	30	-	30
Level	"	1	12	-	12	-	12
Walkie-Talkie	"	2	3	-	6	-	6
Miscellaneous		L.S*			12	-	12
Transportation Cost					-	10	10
Total					<u>230</u>	<u>10</u>	<u>240</u>

3. Repair and Maintenance Cost

(Unit: P '000)

• Vehicle Repair	₱150,000 x 15% x 1 unit =	23
• Vehicle Fuel	₱6.5/ℓ x 15ℓ/day x 300 days x 1 unit =	29
• Building Maintenance	₱1,300,000 x 5.0% =	65
• Office Suppliant		13
Sub-total		130
Total	₱130 x 1.0 year =	<u>130</u>
Grand Total		<u><u>810</u></u>

TABLE C-8 LAND ACQUISITION COST

Description	Unit	Q'ty	Unit Rate		Amount (P'000)		
			F/C	L/C	F/C	L/C	Total
1) Pilot Farm							
Paddy Field	ha	14	-	10,000	-	140	140
Upland Field	"	8	-	10,000	-	80	80
Grass Land	"	10	-	6,000	-	60	60
Sub-total					-	280	280
2) Domestic Water Supply							
Conveyance Pipeline	ha	0.5	-	6,000	-	3	3
Filtration System	"	1.2	-	6,000	-	7	7
Sub-total					-	10	10
Total					-	290	290

TABLE C-9 DETAILED DISBURSEMENT SCHEDULE

(Unit: #'000)

Description	Year				Total
	1987	1988	1989	1990	
1. Construction cost					
- Pilot Farm					
F/C	-	10,020	10,020	2,230	22,270
L/C	-	1,455	1,455	520	3,230
- Domestic Water Supply					
F/C	-	435	435	100	970
L/C	-	75	75	20	170
2. Land Acquisition					
F/C	-	-	-	-	-
L/C	290	-	-	-	290
3. Engineering & Administration					
F/C	5,170	110	110	-	5,390
L/C	1,220	160	160	-	1,540
Sub-total	5,170	10,565	10,565	2,530	28,630
4. Physical Contingency					
F/C	790	1,610	1,610	360	4,370
L/C	220	250	250	50	770
Sub-total	5,960	12,175	12,175	2,690	33,000
5. Price Escalation					
F/C	1,410	4,210	5,440	1,440	12,500
L/C	1,150	1,760	2,120	490	5,500
6. Grand Total					
F/C	7,370	16,585	17,615	4,130	45,500
L/C	2,860	3,700	4,060	880	11,500
Total	10,230	20,085	21,675	5,010	57,000

APPENDIX D. PROJECT EVALUATION

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TABLE D-1 CROPPED AREA

	(Unit: ha)		
	1989	1990	1991
<u>Without Project</u>			
Rainfed Paddy (Wet)	252	252	252
" (Dry)	210	210	210
Sub-total	<u>462</u>	<u>462</u>	<u>462</u>
Cassava	85	85	85
Sweet Potato	55	55	55
Total	<u>602</u>	<u>602</u>	<u>602</u>
<u>With Project</u>			
Irrigated Paddy (Wet)	-	620	620
" (Dry)	550	550	550
Sub-total	<u>550</u>	<u>1,170</u>	<u>1,170</u>
Mungbean	37	37	37
Peanut	37	37	37
Corn	38	38	38
Fruit Crop/Vegetable	38	38	38
Cassava (Rainfed)	85	85	85
Sweet Potato (Rainfed)	-	55	55
Remaining Area			
Rainfed Paddy (Wet)	252	-	-
" (Dry)	-	-	-
Cassava	-	-	-
Sweet Potato	-	-	-
Total	<u>1,037</u>	<u>1,460</u>	<u>1,460</u>

TABLE D-2 GROSS PRODUCTION VALUE WITHOUT PROJECT

(Unit: ₱,000)

Item	1 1987	2 1988	3 1989	4 1990	5 1991	6 1992	7 1993	8 1994	9 1995	10 1996	11 1997	12 1998
Rainfed Paddy P.Q(t)	545	348	350	350	350	350	355	355	355	358	358	360
Wet Season Price(₱/t)	2,915	-	-	-	-	-	-	-	-	-	-	-
G.P.V.	1,006	1,014	1,020	1,020	1,020	1,020	1,035	1,035	1,035	1,044	1,044	1,049
Dry Season P.Q(t)	265	267	267	267	267	269	271	271	273	273	275	275
Dry Season Price(₱/t)	2,915	-	-	-	-	-	-	-	-	-	-	-
G.P.V.	772	778	778	778	778	784	790	790	796	796	802	802
Cassava P.Q(t)	400	401	403	403	403	404	405	405	406	407	408	409
Cassava Price(₱/t)	985	-	-	-	-	-	-	-	-	-	-	-
G.P.V.	394	395	397	397	398	398	399	399	400	401	402	403
Sweet Potato P.Q(t)	111	112	112	112	112	112	112	112	112	112	112	113
Sweet Potato Price(₱/t)	1,310	-	-	-	-	-	-	-	-	-	-	-
Sweet Potato G.P.V.	145	147	147	147	147	147	147	147	147	147	147	148
Total Value	<u>2,517</u>	<u>2,334</u>	<u>2,542</u>	<u>2,349</u>	<u>2,571</u>	<u>2,371</u>	<u>2,571</u>	<u>2,571</u>	<u>2,378</u>	<u>2,388</u>	<u>2,395</u>	<u>2,402</u>

TABLE D-3 GROSS PRODUCTION VALUE WITH PROJECT

(Unit: P'000)

Item	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
1. Irrigated											
Paddy	P.Q(t)		1,760	3,634	4,183	4,505	4,739	4,863	4,935	5,007	5,079
	Price(P/t)		2,915	-	-	-	-	-	-	-	-
	G.P.V. (P)		5,130	10,593	12,193	13,132	13,814	14,176	14,386	14,595	14,805
Bean	P.Q(t)		22	26	30	30	33	33	37	37	37
	Price(P/t)		11,000	-	-	-	-	-	-	-	-
	G.P.V. (P)		242	286	330	330	363	363	407	407	407
Peanut	P.Q(t)		37	44	48	52	52	56	59	63	63
	Price(P/t)		8,200	-	-	-	-	-	-	-	-
	G.P.V. (P)		303	361	394	426	426	459	484	517	517
Corn	P.Q(t)		61	72	76	84	87	91	99	103	103
	Price(P/t)		2,725	-	-	-	-	-	-	-	-
	G.P.V. (P)		166	196	207	229	237	248	270	281	281
Fruit Crop/ Vegetable	P.Q(t)		201	236	255	270	289	304	323	338	338
	Price(P/t)		1,640	-	-	-	-	-	-	-	-
	G.P.V. (P)		330	387	418	443	474	498	529	554	554
2. Rainfed											
Cassava	P.Q(t)		722	842	910	969	1,029	1,088	1,148	1,207	1,207
	Price(P/t)		982	-	-	-	-	-	-	-	-
	G.P.V. (P)		709	863	894	952	1,010	1,068	1,127	1,185	1,185
Sweet Potato	P.Q(t)		-	358	418	446	473	506	534	567	594
	Price(P/t)		-	1,310	-	-	-	-	-	-	-
	G.P.V. (P)		-	469	457	584	620	663	700	743	778
Sub-total(1 - 2)			<u>6,880</u>	<u>13,155</u>	<u>14,893</u>	<u>16,096</u>	<u>16,944</u>	<u>17,475</u>	<u>17,903</u>	<u>18,282</u>	<u>18,527</u>
3. Remaining Area											
Rainfed Paddy	P.Q(t)		345	-	-	-	-	-	-	-	-
	Price(P)		2,915	-	-	-	-	-	-	-	-
	G.P.V. (P)		1,006	-	-	-	-	-	-	-	-
Sub-total			<u>1,006</u>	-	-	-	-	-	-	-	-
Grand Total Value			<u>7,886</u>	<u>13,155</u>	<u>14,893</u>	<u>16,096</u>	<u>16,944</u>	<u>17,475</u>	<u>17,903</u>	<u>18,282</u>	<u>18,527</u>

TABLE D-4 PRODUCTION COST WITHOUT PROJECT (ECONOMIC)

(Unit: ₱'000)

Item	1989	1990	1991	1992	1993
Rainfed Paddy					
Wet Season					
Area (ha)	252	-	-	-	-
Cost/ha(₱)	1,435	-	-	-	-
P.C (₱)	<u>362</u>	<u>366</u>	<u>369</u>	<u>373</u>	<u>376</u>
Dry Season					
Area (ha)	210	-	-	-	-
Cost/ha(₱)	1,282	-	-	-	-
P.C (₱)	<u>269</u>	<u>272</u>	<u>274</u>	<u>277</u>	<u>280</u>
Cassava					
Area (ha)	85	-	-	-	-
Cost/ha(₱)	837	-	-	-	-
P.C (₱)	<u>71</u>	<u>72</u>	<u>72</u>	<u>73</u>	<u>74</u>
Sweet Potato					
Area (ha)	55	-	-	-	-
Cost/ha(₱)	945	-	-	-	-
P.C (₱)	<u>52</u>	<u>53</u>	<u>53</u>	<u>54</u>	<u>54</u>
Total Production Cost	<u>754</u>	<u>763</u>	<u>768</u>	<u>777</u>	<u>784</u>

TABLE D-5 PRODUCTION COST WITH PROJECT (ECONOMIC)

		(Unit: P'000)					
Item		1989	1990	1991	1992	1993	1994
A. Irrigated Field							
1. Transplanting Paddy							
Wet Season Paddy							
Existing Paddy :	Area (ha)	-	208	208	208	208	208
	Cost/ha(P)	-	3,630	4,120	4,360	4,843	4,843
	P.C (P)	-	755	857	907	1,007	1,007
Reclaimed Paddy:	Area (ha)	440	440	440	440	440	440
	Cost/ha(P)	3,090	3,500	3,710	4,121	4,121	4,121
	P.C (P)	1,360	1,540	1,632	1,813	1,813	1,813
Dry Season Paddy							
Reclaimed Paddy:	Area (ha)	-	288	288	288	288	288
	Cost/ha(P)	-	3,970	3,880	4,120	4,360	4,843
	P.C (P)	-	1,143	1,170	1,186	1,257	1,395
	Sub-total	1,360	3,438	3,606	3,906	4,077	4,215
2. Direct Sowing Paddy							
Wet Season Paddy							
Existing Paddy :	Area (ha)	-	52	52	52	52	52
	Cost/ha(P)	-	3,620	4,100	4,310	4,829	4,829
	P.C (P)	-	188	213	224	251	251
Reclaimed Paddy:	Area (ha)	110	110	110	110	110	110
	Cost/ha(P)	3,080	3,490	3,700	4,107	4,107	4,107
	P.C (P)	339	384	407	452	452	452
Dry Season Paddy							
Reclaimed Paddy:	Area (ha)	-	72	72	72	72	72
	Cost/ha(P)	-	3,960	3,860	4,100	4,310	4,829
	P.C (P)	-	285	278	295	310	348
	Sub-total	339	857	898	971	1,013	1,051
	Total	1,699	4,295	4,504	4,877	5,090	5,266
3. Mungbean	Area (ha)	37	37	37	37	37	37
	Cost/ha(P)	3,050	3,050	3,240	3,430	3,815	3,815
	P.C (P)	113	113	120	127	141	141
4. Peanut	Area (ha)	37	37	37	37	37	37
	Cost/ha(P)	3,250	3,250	3,450	3,650	4,060	4,060
	P.C (P)	120	120	128	135	150	150
5. Feedgrain	Area (ha)	38	38	38	38	38	38
	Cost/ha(P)	4,110	4,110	4,370	4,630	5,140	5,140
	P.C (P)	156	156	166	176	195	195
6. Fruit Crop/Vegetable	Area (ha)	38	38	38	38	38	38
	Cost/ha(P)	7,500	7,500	7,970	8,440	9,384	9,384
	P.C (P)	285	285	303	321	357	357
B. Rainfed Field							
1. Cassava	Area (ha)	85	85	85	85	85	85
	Cost/ha(P)	2,060	2,060	2,190	2,320	2,578	2,578
	P.C (P)	175	175	186	197	219	219
2. Sweet Potato	Area (ha)	-	55	55	55	55	55
	Cost/ha(P)	-	4,060	4,060	4,320	4,570	5,082
	P.C (P)	-	223	223	238	251	280
3. Remaining Paddy	P.C (P)	402	-	-	-	-	-
	Grand Total	2,950	5,367	5,630	6,071	6,403	6,608

TABLE D-6 INCREMENTAL NET PRODUCTION VALUE

(Unit: Million Pesos)

<u>Item</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
<u>Without Project</u>										
Gross Production Value	2.32	2.33	2.34	2.35	2.37	2.37	2.38	2.39	2.40	2.40
Production Cost	0.75	0.76	0.77	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Net Production Value	<u>1.57</u>	<u>1.57</u>	<u>1.57</u>	<u>1.57</u>	<u>1.59</u>	<u>1.59</u>	<u>1.60</u>	<u>1.61</u>	<u>1.62</u>	<u>1.62</u>
<u>With Project</u>										
Gross Production Value	7.89	13.16	14.89	16.10	16.94	17.48	17.90	18.28	18.53	18.53
Production Cost	2.95	5.37	5.63	6.07	6.40	6.61	6.61	6.61	6.61	6.61
Net Production Value	<u>4.94</u>	<u>7.79</u>	<u>9.26</u>	<u>10.03</u>	<u>10.54</u>	<u>10.87</u>	<u>11.29</u>	<u>11.67</u>	<u>11.92</u>	<u>11.92</u>
<u>Incremental N.P.V.</u>	<u>3.37</u>	<u>6.22</u>	<u>7.69</u>	<u>8.46</u>	<u>8.95</u>	<u>9.28</u>	<u>9.69</u>	<u>10.06</u>	<u>10.30</u>	<u>10.30</u>

TABLE D-7 ECONOMIC PROJECT COST

Description	(Unit: £'000)					
	Grand Total		1987		1988	
	F/C	L/C	F/C	L/C	F/C	L/C
1. Financial Cost	49,400	21,700	11,500	4,000	19,900	9,700
2. Financial Land Acq.	-	-	-	800	-	-
3. Economic Land Acq.	-	-	-	190	-	-
4. (1 - 2 + 3)	49,400	21,090	11,500	3,390	19,900	9,700
5. L/C x 0.827	-	17,440	-	2,800	-	8,020
6. Economic Cost	49,400	17,440	11,500	2,800	19,900	8,020
		66,840		14,300		27,920
		71,100		15,500		29,600
		800		190		-
		190		190		-
		70,490		14,890		29,600
		-		-		-
		66,840		14,300		27,920

Description	1989			1990		
	F/C	L/C	Total	F/C	L/C	Total
	1. Financial Cost	13,200	5,900	19,100	4,800	2,100
2. Financial Land Acq.	-	-	-	-	-	-
3. Economic Land Acq.	-	-	-	-	-	-
4. (1 - 2 + 3)	13,200	5,900	19,100	4,800	2,100	6,900
5. L/C x 0.827	-	4,880	-	-	1,740	-
6. Economic Cost	13,200	4,880	18,080	4,800	1,740	6,540

TABLE D-8 OPERATION AND MAINTENANCE (O&M)

Total Financial Cost		$\text{P}3,135 \times 10^3$
Total Economic Cost, $\text{P}3,150 \times 0.82 =$		$\text{P}2,570 \times 10^3$
O & M Cost for Capayas Stage I Area		
	$\text{P}2,570 \times 10^3 \times 0.14 =$	$\text{P}360 \times 10^3$
Annual Operation and Maintenance Cost;		
1989 :	$\text{P}108 \times 10^3$	
1990 :	$\text{P}252 \times 10^3$	
1991 :	$\text{P}360 \times 10^3$	
1992 :	$\text{P}360 \times 10^3$	

TABLE D-9 REPLACEMENT COST

Gate Cost	:	$\text{P}600 \times 10^3$	
			(Economic life = 25 years)
O & M Equipment	:	$\text{P}1,000 \times 10^3$	
			(Economic life = 10 years)

TABLE D-10 PROJECT ECONOMIC COST AND RETURN

(Unit: Million Pesos)

Project Year	Project Cost	O & M Cost	Replacement Cost	Total Cost	Agricultural N.P.V.	Drinking Water	Total Benefit	Project Return	Present Worth Value	
									14%	15%
1 (1987)	14.30	-	-	14.30	-	-	-	-14.30	-12.544	-12.435
2 (1988)	27.92	-	-	27.92	-	-	-	-27.92	-21.484	-21.112
3 (1989)	18.08	0.11	-	18.19	3.37	1.17	4.54	-13.65	-9.213	-8.975
4 (1990)	6.54	0.25	-	6.79	6.22	"	7.39	0.60	0.355	0.343
5 (1991)	-	0.36	-	0.36	7.69	"	8.86	8.50	4.415	4.226
6 (1992)	-	"	-	"	8.46	"	9.63	9.27	4.223	4.008
7 (1993)	-	"	-	"	8.95	"	10.17	9.81	3.920	3.688
8 (1994)	-	"	-	"	9.28	"	10.45	10.09	3.537	3.298
9 (1995)	-	"	-	"	9.69	"	10.86	10.50	3.229	2.985
10 (1996)	-	"	-	"	10.06	"	11.23	10.87	2.932	2.687
11 (1997)	-	"	-	"	10.30	"	11.47	11.11	2.629	2.388
12 (1998)	-	"	1.00	1.36	"	"	"	10.11	2.098	1.890
13 (1999)	-	"	-	0.36	"	"	"	11.11	2.023	1.806
14 (2000)	-	"	-	"	"	"	"	"	1.774	1.570
15 (2001)	-	"	-	"	"	"	"	"	1.556	1.365
16 (2002)	-	"	-	"	"	"	"	"	1.365	1.187
17 (2003)	-	"	-	"	"	"	"	"	1.198	1.032
18 (2004)	-	"	-	"	"	"	"	"	1.051	0.898
19 (2005)	-	"	-	"	"	"	"	"	0.922	0.781
20 (2006)	-	"	-	"	"	"	"	"	0.808	0.679
21 (2007)	-	"	-	"	"	"	"	"	0.709	0.590
22 (2008)	-	"	1.00	1.36	"	"	"	10.11	0.566	0.467
23 (2009)	-	"	-	0.36	"	"	"	11.11	0.546	0.446
24 (2010)	-	"	-	"	"	"	"	"	0.479	0.388
25 (2011)	-	"	-	"	"	"	"	"	0.420	0.338
26 (2012)	-	"	-	"	"	"	"	"	0.368	0.293
27 (2013)	-	"	0.60	0.96	"	"	"	10.51	0.306	0.241
28 (2014)	-	"	-	0.36	"	"	"	11.11	0.283	0.222
29 (2015)	-	"	-	"	"	"	"	"	0.249	0.193
30 (2016)	-	"	-	"	"	"	"	"	0.218	0.168
31 (2017)	-	"	-	"	"	"	"	"	0.191	0.146
32 (2018)	-	"	1.00	1.36	"	"	"	10.11	0.153	0.115
33 (2019)	-	"	-	0.36	"	"	"	11.11	0.147	0.110
34 (2020)	-	"	-	"	"	"	"	"	0.129	0.096
35 (2021)	-	"	-	"	"	"	"	"	0.113	0.083
36 (2022)	-	"	-	"	"	"	"	"	0.099	0.073
37 (2023)	-	"	-	"	"	"	"	"	0.087	0.063
38 (2024)	-	"	-	"	"	"	"	"	0.076	0.055
39 (2025)	-	"	-	"	"	"	"	"	0.067	0.048
40 (2026)	-	"	-	"	"	"	"	"	0.059	0.041
41 (2027)	-	"	-	"	"	"	"	"	0.052	0.036
42 (2028)	-	"	1.00	1.36	"	"	"	10.11	0.041	0.029
43 (2029)	-	"	-	0.36	"	"	"	11.11	0.040	0.027
44 (2030)	-	"	-	"	"	"	"	"	0.035	0.024
45 (2031)	-	"	-	"	"	"	"	"	0.031	0.021
46 (2032)	-	"	-	"	"	"	"	"	0.027	0.018
47 (2033)	-	"	-	"	"	"	"	"	0.024	0.016
48 (2034)	-	"	-	"	"	"	"	"	0.021	0.014
49 (2035)	-	"	-	"	"	"	"	"	0.018	0.012
50 (2036)	-	"	-	"	"	"	"	"	0.016	0.010
Total	66.84	16.92	4.60	88.36	473.43	58.50	531.93	443.57	0.364	-3.308

$$EIRR = 14\% + 0.36 / (0.36 + 3.31) = 14.1\%$$

