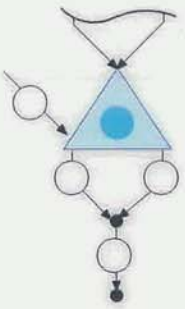
HYDRO
NEWFOUNDLAND AND LABRADOR HYDRO

Churchill River Complex

Optimization Study



Volume 2 - Detailed Model Information

January 1999

Acres International

HYDRO
NEWFOUNDLAND AND LABRADOR HYDRO

Churchill River Complex

Optimization Study

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January 1999

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1- CF1 - 5428.5 MW + Diversions + CF2 - 1100 MW + GI - 2264 MW + MF - 824 MW (Proposed Churchill River Complex)

2- CF1 - 5428.5 MW (Existing Case)

CF1 - 5428.5 MW + Diversions +
CF2 - 1100 MW + GI - 2264 MW +
MF - 824 MW

(Proposed Churchill River Complex)

(a) Output File

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0001

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 2 Romaine Diversion Headpond

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	19373.4	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	21185.4	21780.3	20505.2	20800.7	19858.1
2	1957	1957	21323.0	20241.8	19508.5	19236.0	19479.8	19900.9	20387.3	21700.2	22334.0	22334.0	22334.0	22334.0	20926.1
3	1958	1958	22334.0	21167.6	19993.8	19236.0	19236.0	19335.9	19479.5	20805.5	22047.3	22334.0	22334.0	21606.0	20825.8
4	1959	1959	21586.0	20709.3	19926.9	19236.0	19236.0	19344.0	19484.8	20342.5	21248.6	20374.9	20917.8	21364.9	20314.3
5	1960	1960	21819.2	20832.3	19828.1	19236.0	19236.0	19305.8	19451.5	19996.4	21066.3	20219.7	19742.8	19248.5	19998.5
6	1961	1961	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20522.2	19874.2	19328.4	19236.0	19404.1
7	1962	1962	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19720.4	20989.0	20725.5	20215.0	19591.3	19657.8
8	1963	1963	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20274.0	21561.1	20569.9	19895.6	19321.3	19689.5
9	1964	1964	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19472.4	21783.8	22301.4	20962.3	21435.5	20050.6
10	1965	1965	22029.6	20690.2	19737.2	19236.0	19236.0	19372.4	19587.4	19528.4	21740.4	22334.0	22334.0	22334.0	20680.0
11	1966	1966	22334.0	22334.0	21045.4	20416.1	20567.4	20683.5	20764.8	20513.8	21928.6	20640.6	19860.5	19236.0	20860.4
12	1967	1967	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20649.1	21718.7	21982.0	22334.0	22334.0	20305.8
13	1968	1968	22334.0	22334.0	20746.1	20671.8	20835.1	20992.8	21120.6	20945.4	22334.0	22334.0	22334.0	22334.0	21609.6
14	1969	1969	22334.0	22334.0	20947.7	21238.5	21515.1	21707.3	21874.5	22070.2	22334.0	22334.0	22334.0	22334.0	21946.4
15	1970	1970	21092.9	20065.8	19268.7	19236.0	19236.0	19236.0	19236.0	21083.7	21798.6	22334.0	22334.0	22334.0	20604.6
16	1971	1971	22334.0	20935.9	19921.8	19236.0	19236.0	19236.0	19236.0	19236.0	21797.7	21589.3	20437.0	19795.4	20249.3
17	1972	1972	20679.6	19799.0	19236.0	19236.0	19236.0	19236.0	19236.0	20925.4	22162.0	21304.4	20199.0	19511.8	20063.5
18	1973	1973	19387.4	19236.0	19236.0	19236.0	19236.0	19236.0	19340.0	19236.0	20834.3	20698.1	20234.8	19523.9	19619.6
19	1974	1974	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19368.5	20816.5	21429.6	21899.3	22272.8	20036.6
20	1975	1975	20999.5	20026.9	19377.3	19236.0	19236.0	19236.0	19536.0	21435.3	22334.0	22334.0	22334.0	22334.0	20701.6
21	1976	1976	22334.0	21202.7	20030.3	19475.7	19608.5	19740.0	19921.5	21178.5	22334.0	22334.0	22334.0	22334.0	21068.9
22	1977	1977	22334.0	22334.0	20746.0	21046.4	21222.9	21363.0	21480.4	22334.0	22334.0	22334.0	22334.0	22334.0	21849.7
23	1978	1978	22334.0	21194.5	19954.5	19236.0	19236.0	19236.0	19748.6	21316.6	22063.6	22334.0	22334.0	22334.0	20943.5
24	1979	1979	22334.0	22334.0	20675.0	20725.2	20830.5	20927.2	21069.9	22334.0	22334.0	22334.0	22334.0	22334.0	21713.8
25	1980	1980	22334.0	21509.5	20195.2	19616.8	19850.1	20076.0	20289.4	22106.3	22334.0	22334.0	22334.0	22334.0	21276.1
26	1981	1981	21441.4	20384.4	19641.9	19236.0	19236.0	19236.0	19236.0	19284.4	21102.3	21947.4	22334.0	22334.0	20451.2
27	1982	1982	20887.4	19981.6	19250.7	19236.0	19236.0	19236.0	19878.1	22334.0	22334.0	22334.0	22334.0	22334.0	20781.3
28	1983	1983	22334.0	22309.5	20765.7	20805.7	20918.1	21033.3	21249.3	22334.0	22334.0	22334.0	22334.0	22334.0	21757.1
29	1984	1984	21315.1	20568.7	19591.0	19236.0	19236.0	19236.0	19342.3	19236.0	20299.2	19951.5	19566.5	19236.0	19734.5
30	1985	1985	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20379.3	20842.9	20145.1	19478.7	19236.0	19561.2
31	1986	1986	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19261.3	19950.1	19927.0	19418.9	19236.0	19236.0	19370.5
32	1987	1987	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20878.0	21947.5	21281.7	20074.8	19379.7	19851.2
33	1988	1988	19360.9	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20397.9	21198.5	20214.3	19840.0	19586.6	19667.9
34	1989	1989	19296.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19447.8	20092.1	19491.8	19236.0	19236.0	19351.3
35	1990	1990	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19389.4	20329.3	19999.3	19354.5	19236.0	19413.4
36	1991	1991	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19511.1	20166.8	19809.4	19474.9	19236.0	19404.2
37	1992	1992	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19538.5	20061.7	19568.1	19236.0	19236.0	19357.7
38	1993	1993	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19692.8	21078.0	21240.2	20399.2	19898.3	19746.7
39	1994	1994	19511.8	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20720.1	21446.2	20247.5	19399.2	19236.0	19664.8
40	1995	1995	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20227.3	21333.2	21509.1	20441.4	19587.3	19812.5
41	1996	1996	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	20130.5	21689.0	21886.1	20531.0	19847.2	19894.7
AVERAGE			20593.1	20195.4	19636.8	19482.6	19521.5	19570.5	19669.8	20451.1	21466.3	21289.7	20922.2	20735.1	20294.5
MAXIMUM			22334.0	22334.0	21045.4	21238.5	21515.1	21707.3	21874.5	22334.0	22334.0	22334.0	22334.0	22334.0	21946.4
MINIMUM			19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19236.0	19927.0	19418.9	19236.0	19236.0	19351.3

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Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
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Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 2 Romaine Diversion Headpond

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	494.134	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.887	496.463	495.229	495.515	494.603
2	1957	1957	496.021	494.974	494.265	494.001	494.237	494.644	495.115	496.386	496.999	496.999	496.999	496.999	495.637
3	1958	1958	496.999	495.870	494.734	494.001	494.001	494.098	494.237	495.520	496.722	496.999	496.999	496.294	495.539
4	1959	1959	496.275	495.427	494.670	494.001	494.001	494.105	494.242	495.072	495.949	495.103	495.629	496.061	495.044
5	1960	1960	496.501	495.546	494.574	494.001	494.001	494.068	494.209	494.737	495.772	494.953	494.491	494.013	494.739
6	1961	1961	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.246	494.619	494.090	494.001	494.164
7	1962	1962	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.470	495.697	495.442	494.948	494.345	494.409
8	1963	1963	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.005	496.251	495.292	494.639	494.084	494.440
9	1964	1964	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.230	496.467	496.968	495.672	496.130	494.789
10	1965	1965	496.704	495.408	494.486	494.001	494.001	494.133	494.341	494.284	496.425	496.999	496.999	496.999	495.398
11	1966	1966	496.999	496.999	495.752	495.143	495.289	495.402	495.480	495.238	496.607	495.360	494.605	494.001	495.573
12	1967	1967	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.368	496.404	496.658	496.999	496.999	495.036
13	1968	1968	496.999	496.999	495.462	495.390	495.549	495.701	495.825	495.655	496.999	496.999	496.999	496.999	496.298
14	1969	1969	496.999	496.999	495.658	495.939	496.207	496.393	496.554	496.744	496.999	496.999	496.999	496.999	496.624
15	1970	1970	495.798	494.804	494.033	494.001	494.001	494.001	494.001	495.789	496.481	496.999	496.999	496.999	495.325
16	1971	1971	496.999	495.646	494.665	494.001	494.001	494.001	494.001	494.001	496.480	496.278	495.163	494.542	494.982
17	1972	1972	495.398	494.546	494.001	494.001	494.001	494.001	494.001	495.636	496.833	496.003	494.933	494.268	494.802
18	1973	1973	494.148	494.001	494.001	494.001	494.001	494.001	494.102	494.001	495.548	495.416	494.968	494.280	494.372
19	1974	1974	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.129	495.530	496.124	496.578	496.940	494.776
20	1975	1975	495.708	494.766	494.138	494.001	494.001	494.001	494.291	496.129	496.999	496.999	496.999	496.999	495.419
21	1976	1976	496.999	495.904	494.770	494.233	494.361	494.489	494.664	495.881	496.999	496.999	496.999	496.999	495.775
22	1977	1977	496.999	496.999	495.462	495.753	495.924	496.059	496.173	496.999	496.999	496.999	496.999	496.999	496.530
23	1978	1978	496.999	495.896	494.696	494.001	494.001	494.001	494.497	496.014	496.737	496.999	496.999	496.999	495.653
24	1979	1979	496.999	496.999	495.394	495.442	495.544	495.638	495.776	496.999	496.999	496.999	496.999	496.999	496.399
25	1980	1980	496.999	496.201	494.929	494.370	494.595	494.814	495.020	496.779	496.999	496.999	496.999	496.999	495.975
26	1981	1981	496.135	495.112	494.394	494.001	494.001	494.001	494.001	494.048	495.807	496.625	496.999	496.999	495.177
27	1982	1982	495.599	494.722	494.015	494.001	494.001	494.001	494.622	496.999	496.999	496.999	496.999	496.999	495.496
28	1983	1983	496.999	496.975	495.481	495.520	495.629	495.740	495.949	496.999	496.999	496.999	496.999	496.999	496.441
29	1984	1984	496.013	495.291	494.344	494.001	494.001	494.001	494.104	494.001	495.030	494.693	494.321	494.001	494.483
30	1985	1985	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.107	495.556	494.881	494.236	494.001	494.316
31	1986	1986	494.001	494.001	494.001	494.001	494.001	494.001	494.025	494.692	494.670	494.178	494.001	494.001	494.131
32	1987	1987	494.001	494.001	494.001	494.001	494.001	494.001	494.001	495.590	496.625	495.981	494.813	494.140	494.596
33	1988	1988	494.122	494.001	494.001	494.001	494.001	494.001	494.001	495.125	495.900	494.948	494.586	494.340	494.419
34	1989	1989	494.059	494.001	494.001	494.001	494.001	494.001	494.001	494.206	494.829	494.249	494.001	494.001	494.113
35	1990	1990	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.149	495.059	494.740	494.116	494.001	494.173
36	1991	1991	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.267	494.902	494.556	494.232	494.001	494.164
37	1992	1992	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.294	494.800	494.322	494.001	494.001	494.119
38	1993	1993	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.443	495.784	495.940	495.127	494.642	494.495
39	1994	1994	494.268	494.001	494.001	494.001	494.001	494.001	494.001	495.437	496.140	494.980	494.159	494.001	494.416
40	1995	1995	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.960	496.031	496.201	495.167	494.341	494.559
41	1996	1996	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.867	496.375	496.566	495.254	494.592	494.638
AVERAGE			495.314	494.929	494.389	494.240	494.277	494.325	494.421	495.177	496.159	495.988	495.633	495.452	495.025
MAXIMUM			496.999	496.999	495.752	495.939	496.207	496.393	496.554	496.999	496.999	496.999	496.999	496.999	496.624
MINIMUM			494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.001	494.670	494.178	494.001	494.001	494.113

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0003

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Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 5 Ossokmanuan Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1948.21	1048.87	1419.08	1789.30	1709.27
2	1957	1957	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	592.59	1987.11	2329.30	2537.47	2835.00	2021.01
3	1958	1958	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	443.38	1664.48	1048.87	1419.08	1789.30	1694.64
4	1959	1959	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1072.91	1048.87	1419.08	1789.30	1636.33
5	1960	1960	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
6	1961	1961	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1382.07	1048.87	1419.08	1789.30	1662.09
7	1962	1962	2777.50	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1266.16	1048.87	1419.08	1789.30	1647.64
8	1963	1963	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1248.02	1048.87	1419.08	1789.30	1650.92
9	1964	1964	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1707.79	1157.38	1419.08	1789.30	1698.28
10	1965	1965	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2042.48	2835.00	2835.00	2268.36	2023.88
11	1966	1966	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	768.15	1048.87	1419.08	1789.30	1610.93
12	1967	1967	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	671.35	1251.22	1048.87	1419.08	2835.00	1766.34
13	1968	1968	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2518.66	2835.00	2835.00	2640.21	2094.55
14	1969	1969	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2710.64	2835.00	1419.08	1789.30	1921.65
15	1970	1970	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	900.79	1309.48	2001.31	1419.08	1789.30	1782.55
16	1971	1971	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1869.00	1048.87	1419.08	1789.30	1702.67
17	1972	1972	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	945.57	733.04	1048.87	1419.08	1789.30	1658.87
18	1973	1973	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1628.57	1048.87	1419.08	1789.30	1682.63
19	1974	1974	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2089.34	1048.87	1419.08	1789.30	1721.03
20	1975	1975	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	940.13	1450.19	1048.87	1419.08	2313.24	1761.84
21	1976	1976	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2089.34	1540.71	1419.08	1928.54	1773.62
22	1977	1977	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	559.23	2945.02	2835.00	2835.00	1789.30	2077.85
23	1978	1978	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1600.54	1651.23	2835.00	2689.36	2408.25	2096.25
24	1979	1979	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	776.13	2556.95	2835.00	1748.03	1789.30	1973.00
25	1980	1980	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	3352.80	2835.00	1686.60	1789.30	1997.46
26	1981	1981	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1675.97	1633.63	1419.08	1789.30	1735.31
27	1982	1982	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1623.17	2124.76	1765.50	1419.08	1789.30	1891.03
28	1983	1983	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1007.15	2304.57	2835.00	1779.62	1789.30	1973.85
29	1984	1984	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1116.30	1048.87	1419.08	1789.30	1639.94
30	1985	1985	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	540.57	688.28	1048.87	1419.08	1789.30	1621.39
31	1986	1986	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	366.55	678.65	1048.87	1419.08	1789.30	1606.09
32	1987	1987	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	385.09	911.15	1048.87	1419.08	1789.30	1627.01
33	1988	1988	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
34	1989	1989	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	960.60	1048.87	1419.08	1789.30	1626.97
35	1990	1990	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
36	1991	1991	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1088.91	1048.87	1419.08	1789.30	1637.66
37	1992	1992	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
38	1993	1993	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1015.49	1048.87	1419.08	1789.30	1631.54
39	1994	1994	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	422.74	678.65	1048.87	1419.08	1789.30	1610.77
40	1995	1995	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	919.33	1048.87	1419.08	1789.30	1623.53
41	1996	1996	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1383.45	1048.87	1419.08	1789.30	1662.21
AVERAGE			2833.60	2835.00	2835.00	2835.00	1773.92	856.07	.60	499.74	1500.09	1498.23	1604.29	1904.02	1747.96
MAXIMUM			2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1623.17	3352.80	2835.00	2835.00	2835.00	2096.25
MINIMUM			2777.50	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 5 Ossokmanuan Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.033	476.692	477.246	477.800	477.597
2	1957	1957	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.010	478.085	478.537	478.806	479.150	478.033
3	1958	1958	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.764	477.613	476.692	477.246	477.800	477.577
4	1959	1959	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.728	476.692	477.246	477.800	477.489
5	1960	1960	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
6	1961	1961	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.191	476.692	477.246	477.800	477.527
7	1962	1962	479.086	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.017	476.692	477.246	477.800	477.507
8	1963	1963	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.990	476.692	477.246	477.800	477.510
9	1964	1964	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.678	476.855	477.246	477.800	477.581
10	1965	1965	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.158	479.150	479.150	478.457	478.026
11	1966	1966	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.272	476.692	477.246	477.800	477.451
12	1967	1967	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.128	476.995	476.692	477.246	479.150	477.669
13	1968	1968	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.784	479.150	479.150	478.928	478.117
14	1969	1969	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	479.011	479.150	477.246	477.800	477.884
15	1970	1970	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.471	477.082	478.104	477.246	477.800	477.710
16	1971	1971	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.919	476.692	477.246	477.800	477.588
17	1972	1972	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.538	476.220	476.692	477.246	477.800	477.526
18	1973	1973	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.560	476.692	477.246	477.800	477.558
19	1974	1974	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.220	476.692	477.246	477.800	477.613
20	1975	1975	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.530	477.293	476.692	477.246	478.516	477.674
21	1976	1976	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.220	477.428	477.246	478.007	477.692
22	1977	1977	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.956	479.263	479.150	479.150	477.800	478.094
23	1978	1978	479.150	479.150	479.150	479.150	477.777	476.404	475.031	477.518	477.593	479.150	478.986	478.642	478.142
24	1979	1979	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.284	478.829	479.150	477.738	477.800	477.968
25	1980	1980	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	479.655	479.150	477.646	477.800	477.971
26	1981	1981	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.630	477.567	477.246	477.800	477.637
27	1982	1982	479.150	479.150	479.150	479.150	477.777	476.404	475.031	477.551	478.267	477.764	477.246	477.800	477.870
28	1983	1983	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.630	478.505	479.150	477.786	477.800	477.974
29	1984	1984	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.793	476.692	477.246	477.800	477.494
30	1985	1985	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.925	476.153	476.692	477.246	477.800	477.469
31	1986	1986	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.637	476.139	476.692	477.246	477.800	477.444
32	1987	1987	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.667	476.486	476.692	477.246	477.800	477.475
33	1988	1988	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
34	1989	1989	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.560	476.692	477.246	477.800	477.475
35	1990	1990	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
36	1991	1991	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.752	476.692	477.246	477.800	477.491
37	1992	1992	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
38	1993	1993	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.642	476.692	477.246	477.800	477.481
39	1994	1994	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.730	476.139	476.692	477.246	477.800	477.452
40	1995	1995	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.499	476.692	477.246	477.800	477.470
41	1996	1996	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.193	476.692	477.246	477.800	477.527
AVERAGE			479.148	479.150	479.150	479.150	477.777	476.404	475.031	475.843	477.335	477.321	477.501	477.952	477.647
MAXIMUM			479.150	479.150	479.150	479.150	477.777	476.404	475.031	477.551	479.655	479.150	479.150	479.150	478.142
MINIMUM			479.086	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 6 Smallwood Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	24569.6	23734.0	20567.4	16560.9	13839.8	11099.6	9770.5	8929.9	19607.3	25534.8	28512.8	28941.0	19305.6
2	1957	1957	28941.0	28851.1	27083.6	24394.0	21640.0	18422.5	16024.9	20920.3	28130.2	28941.0	28941.0	28941.0	25102.6
3	1958	1958	28941.0	28941.0	27088.1	23923.6	21238.0	18422.5	15369.0	19682.9	28130.2	28941.0	28941.0	28941.0	24879.9
4	1959	1959	28941.0	28941.0	26891.4	23696.8	21172.0	18422.5	15369.0	18253.8	24455.1	27520.0	28941.0	28941.0	24295.4
5	1960	1960	28941.0	28941.0	26922.5	23654.2	21073.2	18422.5	15400.7	17985.3	21952.6	25185.3	25521.7	25315.8	23276.3
6	1961	1961	26151.1	25333.1	22506.9	18560.4	15727.6	12793.6	11183.6	10892.1	18942.1	21675.1	22442.4	23127.4	19111.3
7	1962	1962	21375.9	19086.5	15466.4	11186.8	8286.4	5350.6	3895.0	5467.3	12866.4	16348.5	17915.4	18772.4	13001.5
8	1963	1963	17813.9	16213.8	12884.0	8893.3	6302.2	3651.6	2522.6	5958.8	13438.3	15972.5	17526.7	19406.0	11715.3
9	1964	1964	19476.1	17780.1	14543.9	10687.7	8099.1	5669.6	4540.7	6030.7	15551.3	22049.3	26184.9	28941.0	14962.9
10	1965	1965	28941.0	28941.0	26843.9	23581.2	21088.2	18422.5	15369.0	16773.2	27189.5	28941.0	28941.0	28941.0	24497.7
11	1966	1966	28941.0	28941.0	27726.5	24843.0	21795.1	18422.5	15369.0	17301.9	22641.6	25334.8	27107.1	26843.6	23772.2
12	1967	1967	26229.7	26148.1	23199.2	19665.7	17337.3	15064.8	14786.6	20124.4	27195.5	28941.0	28941.0	28941.0	23047.9
13	1968	1968	28941.0	28941.0	28297.6	24843.0	21640.0	18422.5	15369.0	17752.9	28130.2	28941.0	28941.0	28941.0	24930.0
14	1969	1969	28941.0	28941.0	28604.5	24843.0	21959.6	18422.5	15444.8	16679.9	27737.7	28941.0	28941.0	28941.0	24866.4
15	1970	1970	28941.0	27920.1	24956.8	20734.3	17821.6	14809.6	13955.4	20279.2	27573.5	28941.0	28941.0	28941.0	23651.2
16	1971	1971	28941.0	28043.2	25147.8	21256.1	18206.1	15541.0	14185.6	12701.8	23027.9	27412.4	28091.3	28883.3	22619.8
17	1972	1972	28941.0	28400.4	25445.7	20810.0	18372.0	16315.4	15048.6	21670.4	26552.8	28941.0	28589.4	28131.6	23934.9
18	1973	1973	28941.0	28231.9	26355.3	22722.4	20566.9	17906.8	15369.0	15734.9	24953.0	28941.0	28941.0	28932.8	23966.3
19	1974	1974	28838.9	27456.2	24587.8	19799.3	17393.4	14304.0	12691.7	13945.7	25150.6	28941.0	28941.0	28941.0	22582.6
20	1975	1975	28941.0	28578.2	26465.4	22634.8	20384.6	17978.6	15444.1	22407.3	28130.2	28941.0	28941.0	28941.0	24815.6
21	1976	1976	28941.0	28941.0	27356.7	24843.0	21667.3	18422.5	15473.3	18806.3	28130.2	28941.0	28941.0	28941.0	24950.4
22	1977	1977	28941.0	28941.0	28486.6	24843.0	21872.2	18422.5	15369.0	19277.9	28130.2	28941.0	28941.0	28941.0	25092.2
23	1978	1978	28941.0	28941.0	26911.4	23897.7	20813.9	18002.4	15745.8	23887.4	28660.6	28941.0	28941.0	28941.0	25218.7
24	1979	1979	28941.0	28941.0	28059.4	24843.0	21640.0	18422.5	15660.2	22021.1	28609.1	28941.0	28941.0	28941.0	25330.0
25	1980	1980	28941.0	28941.0	27662.1	24843.0	21771.6	18422.5	15752.7	20309.1	28941.0	28941.0	28941.0	28941.0	25200.6
26	1981	1981	28941.0	28506.2	26405.6	22914.4	19879.8	16716.5	15008.8	18911.7	28130.2	28941.0	28941.0	28941.0	24353.1
27	1982	1982	28941.0	28178.4	25891.6	21672.2	19095.2	16968.6	15369.0	22676.6	28130.2	28941.0	28941.0	28941.0	24478.8
28	1983	1983	28941.0	28941.0	28941.0	24843.0	21640.0	18422.5	15560.9	21259.7	28130.2	28941.0	28941.0	28941.0	25291.9
29	1984	1984	28941.0	28941.0	26759.3	23417.5	20638.1	17803.9	15369.0	15675.2	22709.1	25443.7	26431.7	26594.5	23227.0
30	1985	1985	25928.2	24576.6	21624.0	16991.0	13861.9	10602.1	10539.1	18573.4	22463.5	25931.5	26339.0	27441.2	20406.0
31	1986	1986	27103.0	25288.0	21504.7	17950.9	15082.0	12599.5	14951.8	19466.4	21259.4	23165.1	25072.3	26400.5	20820.3
32	1987	1987	26861.7	26910.2	24121.3	21173.0	18215.8	16043.4	15165.7	19992.1	25946.3	27472.6	27688.2	28817.1	23200.6
33	1988	1988	28941.0	28401.7	24613.8	19797.1	17664.6	15566.0	15186.9	18927.2	23460.0	23408.6	23128.2	23515.3	21884.2
34	1989	1989	25140.9	25749.1	23454.7	19184.3	16355.2	13926.1	12809.0	15024.4	21811.7	23983.9	23837.0	24373.1	20470.8
35	1990	1990	25999.8	25233.7	22630.9	18558.9	15553.6	12571.8	11021.2	11740.7	17179.4	19627.9	19600.1	19405.3	18260.3
36	1991	1991	19083.8	19020.4	15753.0	11937.1	8888.4	6416.8	5160.2	6439.5	16174.4	20606.6	22862.9	25410.8	14812.8
37	1992	1992	25687.4	23748.6	20068.2	15677.1	12711.3	9325.1	7993.5	11396.9	14858.9	15769.2	15561.9	16014.2	15734.3
38	1993	1993	16760.1	15234.4	11985.9	7755.8	4936.6	2658.2	1630.3	3852.6	10365.4	13956.8	16134.3	17861.0	10261.0
39	1994	1994	18938.7	18512.3	15508.1	11412.3	8916.4	6106.3	5253.5	9837.1	12947.2	14355.5	13321.6	12588.4	12308.1
40	1995	1995	12211.6	12130.6	9349.8	5338.2	3225.2	632.7	.9	3743.4	10237.3	13629.6	15147.9	14806.5	8371.1
41	1996	1996	13412.0	13900.1	12266.5	8588.9	5709.3	3157.0	2033.3	4318.8	12651.1	18046.0	21666.1	23387.1	11594.7
AVERAGE			26029.9	25520.5	23193.6	19457.9	16684.9	13879.9	12150.3	15503.2	22689.8	24934.4	25574.7	25971.9	20965.9
MAXIMUM			28941.0	28941.0	28941.0	24843.0	21959.6	18422.5	16024.9	23887.4	28941.0	28941.0	28941.0	28941.0	25330.0
MINIMUM			12211.6	12130.6	9349.8	5338.2	3225.2	632.7	.9	3743.4	10237.3	13629.6	13321.6	12588.4	8371.1

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Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 6 Smallwood Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	471.950	471.795	471.183	470.363	469.763	469.160	468.852	468.646	470.989	472.128	472.666	472.740	470.853
2	1957	1957	472.740	472.724	472.414	471.917	471.400	470.750	470.244	471.255	472.600	472.740	472.740	472.740	472.022
3	1958	1958	472.740	472.740	472.415	471.830	471.319	470.750	470.100	471.005	472.600	472.740	472.740	472.740	471.977
4	1959	1959	472.740	472.740	472.378	471.788	471.305	470.750	470.100	470.716	471.928	472.494	472.740	472.740	471.868
5	1960	1960	472.740	472.740	472.384	471.781	471.285	470.750	470.107	470.662	471.463	472.063	472.125	472.087	471.682
6	1961	1961	472.242	472.091	471.569	470.778	470.179	469.533	469.178	469.114	470.855	471.407	471.557	471.683	470.849
7	1962	1962	471.347	470.884	470.121	469.179	468.488	467.769	467.413	467.798	469.549	470.316	470.648	470.821	469.528
8	1963	1963	470.627	470.286	469.553	468.637	468.002	467.353	466.989	467.918	469.675	470.233	470.569	470.949	469.233
9	1964	1964	470.963	470.620	469.918	469.069	468.443	467.847	467.571	467.936	470.140	471.483	472.248	472.740	469.915
10	1965	1965	472.740	472.740	472.369	471.767	471.289	470.750	470.100	470.409	472.433	472.740	472.740	472.740	471.901
11	1966	1966	472.740	472.740	472.530	472.000	471.431	470.750	470.100	470.524	471.594	472.091	472.418	472.369	471.774
12	1967	1967	472.256	472.241	471.697	471.001	470.531	470.033	469.972	471.094	472.434	472.740	472.740	472.740	471.623
13	1968	1968	472.740	472.740	472.629	472.000	471.400	470.750	470.100	470.615	472.600	472.740	472.740	472.740	471.983
14	1969	1969	472.740	472.740	472.682	472.000	471.465	470.750	470.117	470.389	472.532	472.740	472.740	472.740	471.970
15	1970	1970	472.740	472.564	472.021	471.217	470.629	469.977	469.789	471.125	472.504	472.740	472.740	472.740	471.732
16	1971	1971	472.740	472.585	472.056	471.322	470.706	470.138	469.839	469.513	471.665	472.474	472.593	472.730	471.530
17	1972	1972	472.740	472.647	472.111	471.232	470.740	470.308	470.029	471.406	472.316	472.740	472.679	472.600	471.796
18	1973	1973	472.740	472.618	472.279	471.608	471.183	470.646	470.100	470.181	472.020	472.740	472.740	472.739	471.799
19	1974	1974	472.722	472.482	471.953	471.028	470.542	469.865	469.510	469.786	472.057	472.740	472.740	472.740	471.514
20	1975	1975	472.740	472.677	472.300	471.592	471.146	470.660	470.117	471.550	472.600	472.740	472.740	472.740	471.967
21	1976	1976	472.740	472.740	472.464	472.000	471.406	470.750	470.123	470.828	472.600	472.740	472.740	472.740	471.989
22	1977	1977	472.740	472.740	472.662	472.000	471.447	470.750	470.100	470.923	472.600	472.740	472.740	472.740	472.015
23	1978	1978	472.740	472.740	472.382	471.825	471.233	470.665	470.183	471.824	472.692	472.740	472.740	472.740	472.042
24	1979	1979	472.740	472.740	472.588	472.000	471.400	470.750	470.164	471.477	472.683	472.740	472.740	472.740	472.063
25	1980	1980	472.740	472.740	472.519	472.000	471.427	470.750	470.185	471.131	472.740	472.740	472.740	472.740	472.038
26	1981	1981	472.740	472.665	472.289	471.644	471.044	470.397	470.021	470.849	472.600	472.740	472.740	472.740	471.872
27	1982	1982	472.740	472.608	472.194	471.406	470.886	470.452	470.100	471.600	472.600	472.740	472.740	472.740	471.901
28	1983	1983	472.740	472.740	472.740	472.000	471.400	470.750	470.142	471.323	472.600	472.740	472.740	472.740	472.055
29	1984	1984	472.740	472.740	472.354	471.737	471.198	470.625	470.100	470.167	471.606	472.111	472.293	472.323	471.666
30	1985	1985	472.200	471.951	471.397	470.457	469.768	469.050	469.036	470.780	471.561	472.201	472.276	472.480	471.096
31	1986	1986	472.417	472.082	471.373	470.655	470.037	469.490	470.008	470.961	471.323	471.690	472.042	472.288	471.197
32	1987	1987	472.373	472.382	471.867	471.306	470.708	470.249	470.055	471.067	472.204	472.486	472.524	472.719	471.661
33	1988	1988	472.740	472.647	471.958	471.028	470.597	470.143	470.060	470.852	471.745	471.735	471.683	471.755	471.412
34	1989	1989	472.055	472.167	471.744	470.904	470.317	469.782	469.536	470.024	471.435	471.841	471.814	471.913	471.128
35	1990	1990	472.214	472.072	471.592	470.778	470.141	469.484	469.142	469.301	470.499	470.993	470.988	470.949	470.679
36	1991	1991	470.884	470.871	470.185	469.344	468.636	468.030	467.723	468.036	470.277	471.191	471.634	472.105	469.910
37	1992	1992	472.156	471.798	471.082	470.168	469.515	468.743	468.417	469.225	469.988	470.188	470.142	470.242	470.139
38	1993	1993	470.406	470.070	469.355	468.358	467.668	467.110	465.949	467.402	468.998	469.789	470.269	470.637	468.834
39	1994	1994	470.854	470.768	470.131	469.228	468.643	467.954	467.746	468.868	469.567	469.877	469.649	469.488	469.398
40	1995	1995	469.405	469.387	468.749	467.766	467.249	464.787	464.051	467.376	468.966	469.717	470.051	469.976	468.123
41	1996	1996	469.669	469.776	469.417	468.563	467.857	467.232	466.419	467.517	469.501	470.674	471.405	471.731	469.147
AVERAGE			472.189	472.093	471.649	470.909	470.337	469.689	469.258	470.077	471.545	471.982	472.106	472.180	471.168
MAXIMUM			472.740	472.740	472.740	472.000	471.465	470.750	470.244	471.824	472.740	472.740	472.740	472.740	472.063
MINIMUM			469.405	469.387	468.749	467.766	467.249	464.787	464.051	467.376	468.966	469.717	469.649	469.488	468.123

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 7 West Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
2	1957	1957	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	308.626	241.096
3	1958	1958	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
4	1959	1959	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
5	1960	1960	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
6	1961	1961	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
7	1962	1962	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
8	1963	1963	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
9	1964	1964	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
10	1965	1965	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	308.626	173.750	254.882
11	1966	1966	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
12	1967	1967	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	277.894	238.535
13	1968	1968	308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	205.963	173.750	255.453
14	1969	1969	308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	250.645
15	1970	1970	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
16	1971	1971	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
17	1972	1972	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
18	1973	1973	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
19	1974	1974	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
20	1975	1975	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
21	1976	1976	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
22	1977	1977	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	308.626	173.750	254.882
23	1978	1978	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	241.519
24	1979	1979	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	241.519
25	1980	1980	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	308.626	308.626	148.274	173.750	250.962
26	1981	1981	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
27	1982	1982	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
28	1983	1983	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	241.519
29	1984	1984	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
30	1985	1985	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
31	1986	1986	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
32	1987	1987	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
33	1988	1988	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
34	1989	1989	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
35	1990	1990	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
36	1991	1991	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
37	1992	1992	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
38	1993	1993	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
39	1994	1994	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
40	1995	1995	199.110	239.186	289.444	289.444	289.444	289.444	150.932	221.934	195.306	168.678	148.274	173.750	221.246
41	1996	1996	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
AVERAGE			204.452	239.186	289.444	289.444	289.444	289.444	251.743	221.934	198.070	195.985	157.503	179.580	233.853
MAXIMUM			308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	308.626	308.626	308.626	308.626	255.453
MINIMUM			199.110	239.186	289.444	289.444	289.444	289.444	150.932	221.934	195.306	168.678	148.274	173.750	221.246

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 7 West Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
2	1957	1957	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	452.929	452.044
3	1958	1958	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
4	1959	1959	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
5	1960	1960	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
6	1961	1961	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
7	1962	1962	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
8	1963	1963	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
9	1964	1964	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
10	1965	1965	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	452.929	451.100	452.245
11	1966	1966	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
12	1967	1967	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	452.562	452.014
13	1968	1968	452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	451.608	451.100	452.254
14	1969	1969	452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.170
15	1970	1970	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
16	1971	1971	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
17	1972	1972	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
18	1973	1973	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
19	1974	1974	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
20	1975	1975	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
21	1976	1976	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
22	1977	1977	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	452.929	451.100	452.245
23	1978	1978	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.051
24	1979	1979	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.051
25	1980	1980	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	452.929	452.929	450.600	451.100	452.175
26	1981	1981	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
27	1982	1982	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
28	1983	1983	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.051
29	1984	1984	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
30	1985	1985	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
31	1986	1986	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
32	1987	1987	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
33	1988	1988	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
34	1989	1989	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
35	1990	1990	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
36	1991	1991	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
37	1992	1992	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
38	1993	1993	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
39	1994	1994	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
40	1995	1995	451.500	452.100	452.700	452.700	452.700	452.700	450.656	451.860	451.440	451.020	450.600	451.100	451.756
41	1996	1996	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
AVERAGE			451.570	452.100	452.700	452.700	452.700	452.700	452.240	451.860	451.476	451.392	450.738	451.180	451.946
MAXIMUM			452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	452.929	452.929	452.929	452.929	452.254
MINIMUM			451.500	452.100	452.700	452.700	452.700	452.700	450.656	451.860	451.440	451.020	450.600	451.100	451.756

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 8 East Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
2	1957	1957	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
3	1958	1958	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
4	1959	1959	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
5	1960	1960	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
6	1961	1961	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
7	1962	1962	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
8	1963	1963	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
9	1964	1964	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
10	1965	1965	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
11	1966	1966	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
12	1967	1967	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
13	1968	1968	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
14	1969	1969	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
15	1970	1970	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
16	1971	1971	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
17	1972	1972	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
18	1973	1973	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
19	1974	1974	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
20	1975	1975	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
21	1976	1976	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
22	1977	1977	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
23	1978	1978	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
24	1979	1979	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
25	1980	1980	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
26	1981	1981	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
27	1982	1982	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
28	1983	1983	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
29	1984	1984	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
30	1985	1985	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
31	1986	1986	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
32	1987	1987	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
33	1988	1988	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
34	1989	1989	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
35	1990	1990	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
36	1991	1991	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
37	1992	1992	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
38	1993	1993	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
39	1994	1994	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
40	1995	1995	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
41	1996	1996	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
AVERAGE			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
MAXIMUM			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
MINIMUM			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 8 East Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
2	1957	1957	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
3	1958	1958	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
4	1959	1959	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
5	1960	1960	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
6	1961	1961	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
7	1962	1962	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
8	1963	1963	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
9	1964	1964	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
10	1965	1965	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
11	1966	1966	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
12	1967	1967	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
13	1968	1968	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
14	1969	1969	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
15	1970	1970	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
16	1971	1971	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
17	1972	1972	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
18	1973	1973	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
19	1974	1974	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
20	1975	1975	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
21	1976	1976	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
22	1977	1977	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
23	1978	1978	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
24	1979	1979	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
25	1980	1980	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
26	1981	1981	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
27	1982	1982	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
28	1983	1983	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
29	1984	1984	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
30	1985	1985	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
31	1986	1986	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
32	1987	1987	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
33	1988	1988	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
34	1989	1989	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
35	1990	1990	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
36	1991	1991	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
37	1992	1992	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
38	1993	1993	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
39	1994	1994	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
40	1995	1995	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
41	1996	1996	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
AVERAGE			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
MAXIMUM			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
MINIMUM			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 10 Gull Island Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
2	1957	1957	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
3	1958	1958	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
4	1959	1959	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
5	1960	1960	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
6	1961	1961	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
7	1962	1962	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
8	1963	1963	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
9	1964	1964	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
10	1965	1965	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
11	1966	1966	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
12	1967	1967	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
13	1968	1968	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
14	1969	1969	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
15	1970	1970	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
16	1971	1971	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
17	1972	1972	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
18	1973	1973	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
19	1974	1974	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
20	1975	1975	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
21	1976	1976	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
22	1977	1977	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
23	1978	1978	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
24	1979	1979	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
25	1980	1980	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
26	1981	1981	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
27	1982	1982	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
28	1983	1983	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
29	1984	1984	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
30	1985	1985	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
31	1986	1986	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
32	1987	1987	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
33	1988	1988	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
34	1989	1989	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
35	1990	1990	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
36	1991	1991	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
37	1992	1992	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
38	1993	1993	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
39	1994	1994	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
40	1995	1995	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
41	1996	1996	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
AVERAGE			580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
MAXIMUM			580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000
MINIMUM			580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000	580.000

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 10 Gull Island Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
2	1957	1957	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
3	1958	1958	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
4	1959	1959	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
5	1960	1960	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
6	1961	1961	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
7	1962	1962	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
8	1963	1963	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
9	1964	1964	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
10	1965	1965	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
11	1966	1966	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
12	1967	1967	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
13	1968	1968	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
14	1969	1969	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
15	1970	1970	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
16	1971	1971	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
17	1972	1972	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
18	1973	1973	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
19	1974	1974	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
20	1975	1975	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
21	1976	1976	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
22	1977	1977	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
23	1978	1978	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
24	1979	1979	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
25	1980	1980	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
26	1981	1981	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
27	1982	1982	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
28	1983	1983	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
29	1984	1984	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
30	1985	1985	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
31	1986	1986	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
32	1987	1987	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
33	1988	1988	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
34	1989	1989	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
35	1990	1990	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
36	1991	1991	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
37	1992	1992	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
38	1993	1993	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
39	1994	1994	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
40	1995	1995	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
41	1996	1996	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
AVERAGE			125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
MAXIMUM			125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000
MINIMUM			125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000	125.000

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR VOLUME (mcm): 11 Muskrat Falls Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	1957	1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	1958	1958	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	1959	1959	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	1960	1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	1961	1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	1962	1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	1963	1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1964	1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	1965	1965	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
11	1966	1966	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
12	1967	1967	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
13	1968	1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14	1969	1969	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
15	1970	1970	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16	1971	1971	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
17	1972	1972	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
18	1973	1973	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
19	1974	1974	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
20	1975	1975	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
21	1976	1976	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
22	1977	1977	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
23	1978	1978	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
24	1979	1979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
25	1980	1980	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
26	1981	1981	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
27	1982	1982	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
28	1983	1983	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
29	1984	1984	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
30	1985	1985	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
31	1986	1986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
32	1987	1987	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
33	1988	1988	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
34	1989	1989	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
35	1990	1990	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
36	1991	1991	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
37	1992	1992	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
38	1993	1993	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
39	1994	1994	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
40	1995	1995	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
41	1996	1996	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
AVERAGE			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAXIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MINIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0014

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD-END RESERVOIR ELEVATION (m.): 11 Muskrat Falls Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
2	1957	1957	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
3	1958	1958	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
4	1959	1959	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
5	1960	1960	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
6	1961	1961	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
7	1962	1962	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
8	1963	1963	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
9	1964	1964	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
10	1965	1965	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
11	1966	1966	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
12	1967	1967	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
13	1968	1968	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
14	1969	1969	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
15	1970	1970	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
16	1971	1971	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
17	1972	1972	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
18	1973	1973	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
19	1974	1974	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
20	1975	1975	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
21	1976	1976	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
22	1977	1977	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
23	1978	1978	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
24	1979	1979	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
25	1980	1980	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
26	1981	1981	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
27	1982	1982	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
28	1983	1983	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
29	1984	1984	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
30	1985	1985	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
31	1986	1986	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
32	1987	1987	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
33	1988	1988	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
34	1989	1989	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
35	1990	1990	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
36	1991	1991	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
37	1992	1992	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
38	1993	1993	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
39	1994	1994	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
40	1995	1995	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
41	1996	1996	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
AVERAGE			39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
MAXIMUM			39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000
MINIMUM			39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000	39.000

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0015

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD CAPACITY POTENTIAL (MW): 2 Churchill Falls Station

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
2	1957	1957	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
3	1958	1958	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
4	1959	1959	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
5	1960	1960	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
6	1961	1961	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
7	1962	1962	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
8	1963	1963	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
9	1964	1964	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
10	1965	1965	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
11	1966	1966	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
12	1967	1967	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
13	1968	1968	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
14	1969	1969	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
15	1970	1970	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
16	1971	1971	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
17	1972	1972	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
18	1973	1973	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
19	1974	1974	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
20	1975	1975	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
21	1976	1976	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
22	1977	1977	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
23	1978	1978	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
24	1979	1979	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
25	1980	1980	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
26	1981	1981	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
27	1982	1982	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
28	1983	1983	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
29	1984	1984	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
30	1985	1985	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
31	1986	1986	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
32	1987	1987	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
33	1988	1988	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
34	1989	1989	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
35	1990	1990	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
36	1991	1991	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
37	1992	1992	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
38	1993	1993	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
39	1994	1994	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
40	1995	1995	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
41	1996	1996	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
AVERAGE			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MAXIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MINIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 2 Churchill Falls Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1954.68	3232.17	4151.41	4573.26	4526.09	3876.61	3022.46	2274.81	1095.45	1977.07	2307.32	3323.06	3017.80
2	1957	1957	2696.89	3562.27	4316.01	4589.91	5278.72	5140.57	5158.68	1374.15	3907.47	4825.94	4770.57	4825.94	4193.34
3	1958	1958	3866.92	3466.17	4265.31	4617.26	4542.20	3902.90	4761.41	1297.55	2159.49	4672.01	3051.16	2087.64	3554.22
4	1959	1959	2139.76	3100.34	4059.47	4524.61	4430.32	3796.92	4620.44	1340.36	1897.39	2442.37	2379.64	4813.51	3282.68
5	1960	1960	3020.95	3435.44	4277.79	4612.68	4541.56	3887.65	5158.68	1929.02	1863.27	2459.45	2392.04	2018.92	3291.56
6	1961	1961	1954.19	3448.20	4255.15	4547.24	4493.34	3864.65	3054.76	1613.34	1318.91	2498.55	2400.51	2051.91	2951.15
7	1962	1962	2359.82	3524.98	4301.35	4648.47	4542.52	3867.83	2999.86	1330.11	1489.11	2298.05	2294.07	1899.01	2955.26
8	1963	1963	2123.33	3318.85	4270.63	4601.08	4512.90	3830.87	2926.62	1350.43	1318.97	2449.33	2249.16	1904.57	2897.40
9	1964	1964	2222.05	3470.63	4268.54	4641.78	4568.76	3849.14	2996.68	1577.10	1233.01	2246.00	2329.13	2730.07	3002.69
10	1965	1965	2649.73	3488.15	4334.03	4667.79	4536.25	3881.12	4879.06	2365.00	1807.36	4825.94	4770.57	4825.94	3916.03
11	1966	1966	4327.71	4939.99	4206.29	4588.69	5324.82	4580.63	5090.74	1753.48	1468.26	2457.49	2275.79	1985.61	3571.30
12	1967	1967	2136.42	3308.08	4151.89	4617.25	4499.70	3828.69	2921.59	1265.39	1667.67	2358.35	3081.15	4825.94	3211.79
13	1968	1968	4992.05	3886.74	4221.82	4581.32	5204.45	4459.46	4691.07	1557.68	1599.37	4825.94	4770.57	4825.94	4130.11
14	1969	1969	4992.05	3552.90	4000.03	5216.32	5324.82	5126.26	5158.68	2083.92	1555.84	4825.94	4718.00	2182.45	4061.45
15	1970	1970	2174.25	3422.04	4317.30	4631.33	4524.16	3855.97	2898.68	1239.98	1627.44	4825.94	4602.81	2454.54	3380.36
16	1971	1971	3806.66	3314.56	4158.48	4581.87	4467.14	3785.19	2931.58	2133.89	1108.59	2380.88	2265.59	1897.72	3066.14
17	1972	1972	2360.45	3470.08	4182.70	4472.34	4371.12	3842.67	2986.02	1127.12	1700.58	2265.57	2367.21	1987.58	2920.22
18	1973	1973	2171.63	3386.12	4214.66	4540.27	4300.09	3825.84	4461.52	1837.00	1193.64	2402.55	2371.39	2005.35	3052.23
19	1974	1974	2114.34	3489.03	4266.60	4590.79	4531.00	3899.83	3034.97	1810.96	1165.66	4167.59	3114.86	2947.34	3257.24
20	1975	1975	2201.24	3439.84	4264.83	4614.77	4443.50	3848.17	5158.68	1218.30	4404.14	3291.35	3710.33	4825.94	3772.31
21	1976	1976	3194.10	3476.35	4287.65	4634.79	5324.82	4159.13	5158.68	1532.04	2564.26	4825.94	4353.18	4825.94	4017.65
22	1977	1977	3382.83	4112.68	4235.76	5124.54	5324.82	4252.45	5059.20	1480.79	3196.46	4825.94	4770.57	4632.66	4190.09
23	1978	1978	2640.65	3501.39	4250.34	4626.82	4500.04	3835.67	5158.68	5047.96	4881.31	4825.94	4770.57	4825.94	4402.62
24	1979	1979	3377.04	3972.64	4236.55	4612.98	5117.19	4699.27	5158.68	1203.50	4881.31	4825.94	4770.57	2185.10	4078.67
25	1980	1980	3218.97	3438.47	4243.42	4592.25	5324.82	4490.00	5158.68	1451.74	4881.31	4825.94	4770.57	2466.46	4062.52
26	1981	1981	2060.42	3515.33	4278.04	4626.82	4549.84	3872.65	3022.62	1744.35	1902.42	4825.94	3222.20	3648.26	3434.51
27	1982	1982	2237.62	3487.41	4291.18	4626.81	4549.84	3872.65	4894.22	4286.81	2795.90	4825.94	3655.02	3470.31	3913.72
28	1983	1983	3763.89	3480.40	4291.19	4633.72	5051.46	4388.89	5158.68	1189.66	2605.86	4825.94	4770.57	2688.09	3899.21
29	1984	1984	2207.59	3529.31	4291.91	4626.82	4548.39	3884.48	4602.88	1898.13	1270.53	2310.93	2241.01	1921.59	3102.39
30	1985	1985	2109.53	3466.42	4278.04	4633.72	4548.38	3870.58	2887.80	1404.77	1885.09	2314.43	2318.18	1872.62	2957.59
31	1986	1986	2151.71	3473.41	4264.18	4606.06	4500.03	3800.82	2873.77	1716.44	1985.17	2424.42	2332.22	1886.63	2993.81
32	1987	1987	1983.25	3264.35	4132.83	4516.32	4410.25	3772.93	2971.63	1334.31	1190.76	2409.01	2499.48	2026.74	2869.00
33	1988	1988	2151.70	3354.75	4291.90	4626.81	4549.83	3872.66	3022.62	1807.95	1702.09	2451.04	2390.50	1947.51	3007.05
34	1989	1989	2199.86	3402.85	4242.03	4634.13	4494.97	3739.16	3004.89	1667.85	1664.64	2438.45	2346.86	1777.74	2960.77
35	1990	1990	2087.45	3503.43	4304.79	4686.53	4490.04	3871.17	3049.56	1879.42	1600.14	2274.52	2351.02	1944.99	2996.62
36	1991	1991	2158.55	3445.83	4312.43	4675.33	4539.37	3871.07	3076.66	1761.83	1496.82	2451.27	2168.22	1774.31	2970.61
37	1992	1992	2097.42	3457.81	4344.78	4632.27	4553.87	3852.07	3016.11	1474.05	1941.14	2368.47	2149.16	1877.67	2971.93
38	1993	1993	1902.59	3455.34	4207.25	4674.21	4522.46	3837.85	2949.46	1493.69	1608.05	2334.06	2240.03	1736.19	2905.43
39	1994	1994	2140.74	3392.69	4299.80	4610.72	4499.47	3752.47	2873.76	1413.87	2025.37	2369.12	2494.03	2024.47	2983.50
40	1995	1995	2110.74	3353.04	4278.37	4571.51	4400.20	3789.53	2951.49	1743.06	1584.56	2301.32	2301.50	1998.74	2941.97
41	1996	1996	2182.13	3295.58	4134.99	4619.56	4576.42	3719.11	2957.34	1494.42	1325.99	2126.20	2248.30	1802.88	2865.37
AVERAGE			2624.97	3503.32	4243.46	4635.41	4666.83	4003.80	3851.70	1744.05	2062.70	3260.41	3106.97	2774.48	3366.11
MAXIMUM			4992.05	4939.99	4344.78	5216.32	5324.82	5140.57	5158.68	5047.96	4881.31	4825.94	4770.57	4825.94	4402.62
MINIMUM			1902.59	3100.34	4000.03	4472.34	4300.09	3719.11	2873.76	1127.12	1095.45	1977.07	2149.16	1736.19	2865.37

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0017

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD CAPACITY POTENTIAL (MW): 3 CF2 Station

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
2	1957	1957	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
3	1958	1958	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
4	1959	1959	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
5	1960	1960	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
6	1961	1961	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
7	1962	1962	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
8	1963	1963	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
9	1964	1964	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
10	1965	1965	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
11	1966	1966	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
12	1967	1967	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
13	1968	1968	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
14	1969	1969	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
15	1970	1970	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
16	1971	1971	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
17	1972	1972	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
18	1973	1973	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
19	1974	1974	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
20	1975	1975	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
21	1976	1976	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
22	1977	1977	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
23	1978	1978	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
24	1979	1979	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
25	1980	1980	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
26	1981	1981	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
27	1982	1982	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
28	1983	1983	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
29	1984	1984	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
30	1985	1985	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
31	1986	1986	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
32	1987	1987	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
33	1988	1988	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
34	1989	1989	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
35	1990	1990	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
36	1991	1991	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
37	1992	1992	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
38	1993	1993	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
39	1994	1994	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
40	1995	1995	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
41	1996	1996	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
AVERAGE			1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
MAXIMUM			1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
MINIMUM			1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 3 CF2 Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
2	1957	1957	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
3	1958	1958	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
4	1959	1959	1055.34	1102.20	1125.63	1125.62	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
5	1960	1960	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
6	1961	1961	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
7	1962	1962	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.79	1020.14	1008.37	1020.14	1033.12
8	1963	1963	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
9	1964	1964	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
10	1965	1965	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
11	1966	1966	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
12	1967	1967	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
13	1968	1968	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
14	1969	1969	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
15	1970	1970	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
16	1971	1971	1055.34	1102.20	1125.63	1125.63	1125.63	1125.62	586.30	1067.00	1031.80	1020.14	1008.36	1020.14	1033.12
17	1972	1972	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
18	1973	1973	1055.34	1102.20	1125.62	1125.62	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
19	1974	1974	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.29	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
20	1975	1975	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
21	1976	1976	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
22	1977	1977	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
23	1978	1978	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
24	1979	1979	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
25	1980	1980	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
26	1981	1981	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
27	1982	1982	1055.34	1102.20	1125.63	1125.62	1125.62	1125.63	586.30	1067.00	1030.24	1020.14	1008.37	1020.14	1033.00
28	1983	1983	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
29	1984	1984	1055.34	1102.20	1125.62	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.12
30	1985	1985	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.29	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
31	1986	1986	1055.33	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
32	1987	1987	1055.34	1102.19	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.13	1008.37	1020.14	1033.12
33	1988	1988	1055.34	1102.20	1125.63	1125.63	1125.63	1125.62	586.30	1067.00	1031.79	1020.14	1008.37	1020.14	1033.12
34	1989	1989	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.29	1066.99	1031.79	1020.14	1008.37	1020.13	1033.12
35	1990	1990	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.79	1020.14	1008.37	1020.14	1033.12
36	1991	1991	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.79	1020.14	1008.37	1020.13	1033.12
37	1992	1992	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
38	1993	1993	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.79	1020.14	1008.37	1020.13	1033.12
39	1994	1994	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.29	1066.99	1031.80	1020.14	1008.37	1020.14	1033.12
40	1995	1995	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.79	1020.14	1008.37	1020.14	1033.12
41	1996	1996	1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1066.99	1031.80	1020.14	1008.37	1020.13	1033.12
AVERAGE			1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.76	1020.14	1008.37	1020.14	1033.12
MAXIMUM			1055.34	1102.20	1125.63	1125.63	1125.63	1125.63	586.30	1067.00	1031.80	1020.14	1008.37	1020.14	1033.13
MINIMUM			1055.33	1102.19	1125.62	1125.62	1125.62	1125.62	586.29	1066.99	1030.24	1020.13	1008.36	1020.13	1033.00

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD CAPACITY POTENTIAL (MW): 5 Gull Island Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
2	1957	1957	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
3	1958	1958	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
4	1959	1959	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
5	1960	1960	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
6	1961	1961	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
7	1962	1962	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
8	1963	1963	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
9	1964	1964	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
10	1965	1965	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
11	1966	1966	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
12	1967	1967	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
13	1968	1968	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
14	1969	1969	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
15	1970	1970	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
16	1971	1971	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
17	1972	1972	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
18	1973	1973	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
19	1974	1974	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
20	1975	1975	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
21	1976	1976	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
22	1977	1977	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
23	1978	1978	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
24	1979	1979	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
25	1980	1980	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
26	1981	1981	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
27	1982	1982	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
28	1983	1983	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
29	1984	1984	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
30	1985	1985	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
31	1986	1986	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
32	1987	1987	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
33	1988	1988	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
34	1989	1989	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
35	1990	1990	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
36	1991	1991	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
37	1992	1992	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
38	1993	1993	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
39	1994	1994	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
40	1995	1995	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
41	1996	1996	2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
AVERAGE			2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
MAXIMUM			2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89
MINIMUM			2037.60	2128.16	2173.44	2173.44	2173.44	2150.80	2105.52	2060.24	1992.32	1969.68	1947.04	1969.68	2072.89

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 5 Gull Island Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1249.71	1546.16	1634.90	1662.45	1606.58	1413.19	1048.22	1066.73	1992.32	1534.66	1178.89	1472.74	1448.56
2	1957	1957	1321.29	1325.70	1524.14	1651.23	1820.28	1808.31	1712.40	1677.29	1992.32	1969.68	1947.04	1969.68	1725.59
3	1958	1958	1619.75	1389.65	1558.16	1632.80	1595.74	1414.18	1518.18	1753.86	1651.55	1654.14	1186.62	895.87	1489.71
4	1959	1959	1126.68	1635.07	1696.95	1695.31	1671.16	1466.27	1542.33	1711.05	1324.11	1223.70	1130.85	1929.39	1510.40
5	1960	1960	1391.66	1410.13	1549.76	1635.89	1596.18	1405.83	1671.05	1296.99	1346.84	1212.36	1122.59	941.60	1380.41
6	1961	1961	1250.04	1401.62	1564.99	1680.02	1628.65	1421.14	1026.65	1508.16	1766.85	1186.36	1116.93	919.63	1371.51
7	1962	1962	979.71	1350.50	1533.93	1611.77	1595.53	1419.03	1063.33	1721.30	1598.22	1319.74	1187.67	1021.57	1366.17
8	1963	1963	1137.59	1487.85	1554.59	1643.69	1615.47	1443.65	1112.30	1700.97	1766.79	1219.09	1217.54	1017.87	1408.79
9	1964	1964	1071.69	1386.67	1556.00	1616.26	1577.85	1431.48	1065.45	1532.60	1852.76	1354.41	1164.39	1496.33	1423.97
10	1965	1965	1316.68	1375.04	1512.14	1598.76	1599.76	1433.66	1553.02	1006.50	1384.12	1969.68	1947.04	1811.67	1541.99
11	1966	1966	1921.53	2122.91	1597.91	1652.04	1813.42	1602.02	1616.85	1413.97	1617.52	1213.66	1199.84	963.79	1559.01
12	1967	1967	1128.91	1495.06	1634.57	1632.80	1624.36	1445.12	1115.67	1785.99	1477.74	1279.60	1434.91	1969.68	1500.89
13	1968	1968	2037.60	1584.29	1587.44	1657.03	1806.60	1629.60	1526.66	1545.72	1992.32	1969.68	1947.04	1969.68	1770.88
14	1969	1969	2037.60	1785.45	1737.14	1899.91	1866.23	1817.55	1659.66	1193.92	1553.13	1969.68	1882.08	1088.17	1708.28
15	1970	1970	1103.69	1419.06	1523.27	1623.31	1607.88	1426.93	1131.00	1811.40	1504.84	1875.15	1785.58	1164.36	1499.26
16	1971	1971	1705.66	1490.72	1630.12	1656.65	1646.33	1474.12	1108.98	1160.72	1992.32	1264.63	1206.62	1022.44	1445.44
17	1972	1972	1385.69	1387.06	1613.80	1730.60	1711.12	1435.81	1072.57	1924.28	1455.58	1341.39	1139.09	962.49	1429.95
18	1973	1973	1105.43	1443.01	1592.27	1684.74	1759.16	1447.01	1443.75	1358.27	1892.14	1250.19	1136.33	950.62	1419.02
19	1974	1974	1143.57	1374.44	1557.30	1650.63	1603.28	1397.71	1039.85	1375.62	1920.12	1720.66	1323.56	1351.30	1453.98
20	1975	1975	1085.62	1407.20	1558.49	1634.48	1662.26	1432.13	1765.62	1833.10	1992.32	1374.59	1662.78	1969.68	1612.62
21	1976	1976	1393.40	1382.89	1543.15	1620.98	1804.95	1487.18	1618.22	1563.03	1992.32	1786.56	1885.98	1969.68	1668.82
22	1977	1977	1583.49	1642.32	1578.07	1827.30	1874.54	1529.29	1554.51	1597.64	1992.32	1969.68	1683.35	1798.35	1717.66
23	1978	1978	1443.99	1366.20	1568.25	1626.35	1624.15	1440.46	1778.30	2060.24	1992.32	1969.68	1947.04	1923.66	1728.84
24	1979	1979	1462.24	1647.36	1577.52	1635.67	1768.63	1652.97	1640.47	1847.90	1992.32	1969.68	1813.46	1059.11	1672.44
25	1980	1980	1425.35	1408.13	1572.92	1649.66	1845.78	1608.22	1725.84	1617.29	1992.32	1969.68	1924.92	1199.10	1660.97
26	1981	1981	1179.40	1356.95	1549.60	1626.35	1590.59	1415.85	1048.11	1420.05	1992.32	1969.68	1367.56	1599.65	1509.13
27	1982	1982	1061.30	1375.52	1540.76	1626.34	1590.59	1415.85	1681.62	2060.24	1625.16	1969.48	1414.31	1425.82	1565.80
28	1983	1983	1673.81	1380.18	1540.77	1621.68	1757.01	1547.44	1640.47	1861.74	1986.46	1969.68	1728.27	1348.92	1671.57
29	1984	1984	1081.37	1347.63	1540.27	1626.35	1591.57	1407.94	1460.49	1317.54	1815.23	1311.17	1222.97	1006.50	1392.32
30	1985	1985	1146.77	1389.49	1549.60	1621.68	1591.57	1417.19	1138.20	1649.07	1332.30	1308.84	1171.66	1039.20	1362.60
31	1986	1986	1118.75	1384.83	1558.92	1640.33	1624.15	1463.67	1147.54	1438.74	1265.67	1235.64	1162.33	1029.84	1338.31
32	1987	1987	1230.72	1524.49	1647.42	1700.89	1684.72	1482.30	1082.19	1717.11	1895.01	1245.90	1050.72	936.37	1431.89
33	1988	1988	1118.76	1463.91	1540.27	1626.34	1590.59	1415.85	1048.11	1377.63	1454.54	1217.95	1123.62	989.20	1329.43
34	1989	1989	1086.55	1431.85	1573.84	1621.41	1627.57	1504.80	1059.96	1471.44	1479.74	1226.31	1152.61	1102.69	1360.40
35	1990	1990	1161.43	1364.85	1531.60	1586.13	1630.87	1416.82	1030.13	1330.02	1523.24	1335.42	1149.84	990.88	1336.40
36	1991	1991	1114.19	1403.19	1526.52	1593.66	1597.64	1416.86	1012.04	1408.38	1592.99	1217.78	1271.38	1104.98	1353.81
37	1992	1992	1154.80	1395.24	1504.93	1622.66	1587.88	1429.53	1052.46	1602.22	1294.97	1272.87	1284.08	1035.83	1352.93
38	1993	1993	1284.40	1396.85	1597.26	1594.42	1609.02	1439.00	1097.03	1588.94	1517.91	1295.76	1223.62	1130.31	1397.37
39	1994	1994	1126.03	1438.61	1534.96	1637.18	1624.53	1495.93	1147.53	1642.92	1238.93	1272.44	1054.36	937.90	1345.35
40	1995	1995	1145.96	1465.05	1549.38	1663.65	1691.49	1471.19	1095.67	1420.92	1533.75	1317.58	1182.73	955.03	1372.99
41	1996	1996	1098.41	1503.48	1645.96	1631.22	1572.71	1518.24	1091.76	1588.52	1759.77	1434.34	1217.99	1085.78	1428.59
AVERAGE			1297.83	1460.65	1572.92	1650.02	1665.57	1481.50	1315.71	1560.00	1691.30	1516.32	1389.03	1281.89	1489.37
MAXIMUM			2037.60	2122.91	1737.14	1899.91	1874.54	1817.55	1778.30	2060.24	1992.32	1969.68	1947.04	1969.68	1770.88
MINIMUM			979.71	1325.70	1504.93	1586.13	1572.71	1397.71	1012.04	1006.50	1238.93	1186.36	1050.72	895.87	1329.43

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Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD CAPACITY POTENTIAL (MW): 6 Muskrat Falls Station

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	723.124	716.880	708.640	716.880	754.281
2	1957	1957	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
3	1958	1958	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
4	1959	1959	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
5	1960	1960	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
6	1961	1961	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
7	1962	1962	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
8	1963	1963	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
9	1964	1964	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
10	1965	1965	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	701.576	708.640	716.880	753.146
11	1966	1966	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
12	1967	1967	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
13	1968	1968	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	720.207	697.413	708.640	716.880	752.388
14	1969	1969	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
15	1970	1970	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
16	1971	1971	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	709.977	716.880	708.640	716.880	753.201
17	1972	1972	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
18	1973	1973	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
19	1974	1974	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
20	1975	1975	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
21	1976	1976	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
22	1977	1977	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	709.739	716.816	708.640	716.880	753.176
23	1978	1978	741.600	774.560	791.040	791.040	791.040	782.800	766.320	730.511	725.120	716.880	708.640	716.880	752.804
24	1979	1979	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	714.833	716.880	708.640	716.880	753.600
25	1980	1980	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	701.658	707.979	708.640	716.880	751.761
26	1981	1981	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
27	1982	1982	741.600	774.560	791.040	791.040	791.040	782.800	766.320	733.509	725.120	716.880	708.640	716.880	753.058
28	1983	1983	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
29	1984	1984	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
30	1985	1985	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
31	1986	1986	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
32	1987	1987	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
33	1988	1988	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
34	1989	1989	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
35	1990	1990	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
36	1991	1991	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
37	1992	1992	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
38	1993	1993	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
39	1994	1994	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
40	1995	1995	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
41	1996	1996	741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
AVERAGE			741.600	774.560	791.040	791.040	791.040	782.800	766.320	748.970	723.384	715.813	708.640	716.880	754.138
MAXIMUM			741.600	774.560	791.040	791.040	791.040	782.800	766.320	749.840	725.120	716.880	708.640	716.880	754.445
MINIMUM			741.600	774.560	791.040	791.040	791.040	782.800	766.320	730.511	701.658	697.413	708.640	716.880	751.761

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Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 6 Muskrat Falls Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	552.666	667.685	691.314	696.350	671.667	593.170	445.907	459.691	723.124	686.267	513.281	633.688	610.668
2	1957	1957	572.964	558.072	637.494	690.935	755.389	752.419	718.045	749.840	725.119	716.880	708.640	716.880	691.503
3	1958	1958	690.982	590.202	654.148	682.022	666.406	593.166	636.202	749.840	725.116	692.916	503.173	383.423	630.853
4	1959	1959	490.624	710.618	721.192	712.164	702.881	619.782	649.995	749.840	589.396	531.926	488.984	716.880	639.554
5	1960	1960	600.306	600.463	650.073	683.506	666.608	589.488	699.232	575.232	600.792	526.189	484.841	406.403	589.782
6	1961	1961	552.830	596.194	657.477	704.812	682.354	597.183	435.175	679.708	725.120	513.093	482.024	395.385	584.830
7	1962	1962	417.533	570.536	642.336	671.830	666.291	596.108	453.394	749.840	723.551	580.201	517.729	446.342	586.065
8	1963	1963	496.142	639.308	652.404	687.289	675.976	608.452	477.671	749.840	725.120	529.571	532.773	444.478	601.302
9	1964	1964	463.323	588.708	653.082	674.020	657.726	602.352	454.463	691.514	725.120	597.584	505.957	655.335	605.337
10	1965	1965	571.622	582.847	631.480	665.534	668.347	602.800	650.237	429.736	619.417	701.569	708.640	716.880	628.625
11	1966	1966	741.600	774.560	673.427	691.342	751.482	668.602	675.732	633.787	725.120	526.847	523.840	417.515	649.513
12	1967	1967	491.728	642.873	691.156	682.021	680.281	609.171	479.330	749.840	665.488	560.052	620.512	716.880	632.120
13	1968	1968	741.600	673.455	668.375	693.719	750.505	683.391	641.498	697.821	720.206	697.407	708.640	716.880	699.164
14	1969	1969	741.600	770.653	740.468	787.849	774.842	756.862	694.053	523.402	701.922	716.880	708.640	472.384	698.939
15	1970	1970	479.127	604.937	637.049	677.423	672.299	600.069	486.928	749.840	678.617	716.880	708.640	503.389	626.522
16	1971	1971	731.105	640.751	689.021	693.539	690.881	623.685	476.034	506.629	709.977	552.503	527.275	446.757	607.087
17	1972	1972	609.631	588.895	681.115	729.117	722.101	604.519	458.010	749.840	654.736	591.043	493.189	416.861	608.181
18	1973	1973	480.007	616.901	670.696	707.076	745.108	610.128	606.619	605.965	725.120	545.259	491.770	410.949	600.243
19	1974	1974	499.160	582.571	653.716	690.640	670.064	585.433	441.751	614.661	725.120	716.875	567.150	583.209	610.680
20	1975	1975	470.216	598.994	654.306	682.832	698.594	602.679	742.187	749.840	725.120	587.896	708.638	716.880	660.835
21	1976	1976	597.949	586.793	646.828	676.297	747.632	622.957	675.119	706.146	725.120	716.875	708.640	716.880	676.706
22	1977	1977	683.042	695.936	663.808	761.288	777.709	641.103	647.669	722.786	709.732	716.815	704.611	716.880	702.957
23	1978	1978	632.046	578.437	659.033	678.916	680.168	606.845	747.908	730.506	725.120	716.880	708.640	716.880	681.682
24	1979	1979	627.131	700.732	663.562	683.419	734.907	689.780	685.300	749.840	714.825	716.880	708.640	458.731	677.759
25	1980	1980	612.610	599.432	661.296	690.169	766.054	673.067	724.151	732.193	701.652	707.979	708.640	519.757	674.421
26	1981	1981	517.244	573.760	649.980	678.916	663.925	594.500	445.863	636.838	725.120	716.880	586.037	686.302	622.777
27	1982	1982	458.155	583.107	645.672	678.914	663.924	594.500	708.771	733.503	712.809	716.880	600.193	608.836	641.802
28	1983	1983	717.389	585.439	645.673	676.661	730.806	647.003	685.300	749.840	725.120	716.880	708.640	586.844	681.283
29	1984	1984	468.111	569.086	645.448	678.916	664.399	590.565	611.913	585.568	725.120	575.898	535.495	438.829	590.224
30	1985	1985	500.758	590.105	649.980	676.661	664.398	595.202	490.581	747.392	593.508	574.729	509.631	455.092	587.306
31	1986	1986	486.613	587.772	654.509	685.669	680.167	618.480	495.294	646.028	560.056	537.937	504.922	450.452	575.372
32	1987	1987	543.091	657.187	697.361	714.850	709.379	627.775	462.776	749.840	725.120	543.100	449.273	403.807	606.612
33	1988	1988	486.613	627.371	645.448	678.915	663.923	594.500	445.863	615.662	654.234	529.009	485.355	430.213	571.016
34	1989	1989	470.650	611.312	661.748	676.525	681.809	639.009	451.725	661.920	666.487	533.242	499.995	486.501	586.321
35	1990	1990	508.182	577.730	641.228	659.409	683.436	594.988	436.893	591.800	687.489	588.053	498.607	431.052	574.470
36	1991	1991	484.316	596.988	638.674	663.073	667.333	595.039	427.890	631.023	721.066	528.942	559.871	487.659	583.075
37	1992	1992	504.838	592.972	627.908	677.135	662.586	601.374	448.020	724.957	574.785	556.651	566.240	453.422	582.632
38	1993	1993	570.071	593.818	673.110	663.433	672.866	606.125	470.098	718.589	684.916	568.179	535.824	500.448	604.696
39	1994	1994	490.293	614.714	642.863	684.164	680.346	634.576	495.292	744.443	546.598	556.442	451.083	404.553	578.641
40	1995	1995	500.360	627.925	649.865	696.909	712.653	622.247	469.428	637.253	692.567	579.100	515.235	413.146	592.538
41	1996	1996	476.518	646.958	696.667	681.282	655.212	645.619	467.487	718.278	725.120	637.453	533.178	478.246	613.532
AVERAGE			554.408	619.434	661.244	689.403	695.937	622.798	556.483	675.637	688.046	617.625	575.197	530.779	623.601
MAXIMUM			741.600	774.560	740.468	787.849	777.709	756.862	747.908	749.840	725.120	716.880	708.640	716.880	702.957
MINIMUM			417.533	558.072	627.908	659.409	655.212	585.433	427.890	429.736	546.598	513.093	449.273	383.423	571.016

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD CAPACITY POTENTIAL (MW): 0 TOTAL INTEGRATED POWER SYSTEM

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8628.55	8532.64	8434.62	8532.64	8938.98
2	1957	1957	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
3	1958	1958	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
4	1959	1959	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
5	1960	1960	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
6	1961	1961	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
7	1962	1962	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
8	1963	1963	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
9	1964	1964	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
10	1965	1965	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8517.33	8434.62	8532.64	8937.85
11	1966	1966	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
12	1967	1967	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
13	1968	1968	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8625.63	8513.17	8434.62	8532.64	8937.09
14	1969	1969	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
15	1970	1970	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
16	1971	1971	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8615.40	8532.64	8434.62	8532.64	8937.90
17	1972	1972	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
18	1973	1973	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
19	1974	1974	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
20	1975	1975	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
21	1976	1976	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
22	1977	1977	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8615.17	8532.57	8434.62	8532.64	8937.88
23	1978	1978	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8905.71	8630.55	8532.64	8434.62	8532.64	8937.50
24	1979	1979	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8620.26	8532.64	8434.62	8532.64	8938.30
25	1980	1980	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8607.08	8523.74	8434.62	8532.64	8936.46
26	1981	1981	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
27	1982	1982	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8908.71	8630.55	8532.64	8434.62	8532.64	8937.76
28	1983	1983	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
29	1984	1984	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
30	1985	1985	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
31	1986	1986	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
32	1987	1987	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
33	1988	1988	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
34	1989	1989	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
35	1990	1990	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
36	1991	1991	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
37	1992	1992	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
38	1993	1993	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
39	1994	1994	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
40	1995	1995	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
41	1996	1996	8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
AVERAGE			8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8924.17	8628.81	8531.57	8434.62	8532.64	8938.84
MAXIMUM			8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8925.04	8630.55	8532.64	8434.62	8532.64	8939.15
MINIMUM			8826.59	9218.99	9414.93	9414.93	9414.93	9328.67	8616.84	8905.71	8607.08	8513.17	8434.62	8532.64	8936.46

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0024

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 0 TOTAL INTEGRATED POWER SYSTEM

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.24	4842.70	5218.14	5007.85	6449.62	6110.15
2	1957	1957	5646.48	6548.23	7603.27	8057.71	8980.01	8826.93	8175.42	4868.28	7656.71	8532.64	8434.62	8532.64	7643.56
3	1958	1958	7232.98	6548.23	7603.25	8057.71	7929.98	7035.88	7502.09	4868.25	5567.96	8039.21	5749.33	4387.07	6707.90
4	1959	1959	4812.41	6548.23	7603.25	8057.71	7929.98	7008.60	7399.07	4868.25	4842.70	5218.14	5007.84	8479.92	6465.75
5	1960	1960	6068.25	6548.23	7603.25	8057.71	7929.98	7008.60	8115.26	4868.24	4842.70	5218.14	5007.84	4387.06	6294.88
6	1961	1961	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.20	4842.68	5218.14	5007.84	4387.06	5940.61
7	1962	1962	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.25	4842.67	5218.14	5007.84	4387.06	5940.62
8	1963	1963	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.25	4842.68	5218.14	5007.84	4387.06	5940.62
9	1964	1964	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.20	4842.69	5218.14	5007.84	5901.88	6065.12
10	1965	1965	5593.37	6548.23	7603.27	8057.71	7929.98	7043.21	7668.62	4868.24	4842.70	8517.32	8434.62	8374.62	7119.77
11	1966	1966	8046.18	8939.66	7603.26	8057.71	9015.35	7976.88	7969.62	4868.23	4842.70	5218.14	5007.84	4387.06	6812.95
12	1967	1967	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.90	4868.21	4842.70	5218.14	6144.94	8532.64	6377.93
13	1968	1968	8826.59	7246.69	7603.26	8057.70	8887.18	7898.08	7445.53	4868.21	5343.69	8513.16	8434.62	8532.64	7633.28
14	1969	1969	8826.59	7211.21	7603.26	9029.71	9091.51	8826.30	8098.69	4868.24	4842.70	8532.64	8317.08	4763.15	7501.79
15	1970	1970	4812.41	6548.24	7603.25	8057.69	7929.97	7008.60	5102.90	4868.22	4842.70	8438.11	8105.40	5142.43	6539.26
16	1971	1971	7298.76	6548.24	7603.25	8057.69	7929.97	7008.62	5102.90	4868.24	4842.69	5218.15	5007.84	4387.06	6151.79
17	1972	1972	5411.11	6548.23	7603.25	8057.69	7929.97	7008.63	5102.89	4868.25	4842.70	5218.15	5007.86	4387.06	5991.48
18	1973	1973	4812.41	6548.23	7603.25	8057.71	7929.99	7008.61	7098.19	4868.24	4842.69	5218.14	5007.85	4387.06	6104.62
19	1974	1974	4812.41	6548.24	7603.25	8057.69	7929.97	7008.60	5102.87	4868.24	4842.70	7625.26	6013.94	5901.99	6355.03
20	1975	1975	4812.41	6548.23	7603.24	8057.71	7929.99	7008.61	8252.79	4868.24	8153.38	6273.98	7090.12	8532.64	7078.89
21	1976	1976	6240.79	6548.23	7603.25	8057.70	9003.03	7394.89	8038.31	4868.21	6313.50	8349.51	7956.17	8532.64	7396.31
22	1977	1977	6704.71	7553.14	7603.26	8838.76	9102.70	7548.48	7847.68	4868.21	6930.31	8532.57	8166.90	8168.03	7643.83
23	1978	1978	5772.03	6548.23	7603.24	8057.71	7929.99	7008.61	8271.18	8905.71	8630.55	8532.64	8434.62	8486.61	7846.27
24	1979	1979	6521.75	7422.93	7603.26	8057.70	8746.36	8167.66	8070.75	4868.24	8620.25	8532.64	8301.04	4723.08	7462.00
25	1980	1980	6312.27	6548.22	7603.26	8057.70	9062.28	7896.92	8194.97	4868.22	8607.08	8523.74	8412.49	5205.46	7431.04
26	1981	1981	4812.41	6548.24	7603.25	8057.71	7929.99	7008.63	5102.89	4868.23	5651.66	8532.64	6184.17	6954.35	6599.54
27	1982	1982	4812.41	6548.24	7603.25	8057.69	7929.98	7008.62	7870.91	8147.55	6164.10	8532.43	6677.89	6525.11	7154.32
28	1983	1983	7210.42	6548.21	7603.26	8057.70	8664.90	7708.97	8070.75	4868.24	6349.24	8532.64	8215.84	5643.99	7285.18
29	1984	1984	4812.41	6548.23	7603.24	8057.71	7929.99	7008.61	7261.58	4868.24	4842.68	5218.14	5007.84	4387.06	6118.05
30	1985	1985	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.87	4868.22	4842.70	5218.14	5007.84	4387.06	5940.62
31	1986	1986	4812.41	6548.21	7603.25	8057.69	7929.97	7008.60	5102.90	4868.20	4842.70	5218.14	5007.84	4387.06	5940.62
32	1987	1987	4812.40	6548.22	7603.25	8057.69	7929.97	7008.63	5102.89	4868.25	4842.69	5218.14	5007.84	4387.06	5940.62
33	1988	1988	4812.41	6548.23	7603.25	8057.69	7929.97	7008.63	5102.89	4868.24	4842.66	5218.14	5007.84	4387.06	5940.62
34	1989	1989	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.87	4868.20	4842.66	5218.14	5007.84	4387.07	5940.61
35	1990	1990	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.24	4842.67	5218.14	5007.84	4387.06	5940.62
36	1991	1991	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.22	4842.68	5218.14	5007.84	4387.08	5940.62
37	1992	1992	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.21	4842.70	5218.14	5007.84	4387.06	5940.62
38	1993	1993	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.21	4842.67	5218.14	5007.84	4387.08	5940.62
39	1994	1994	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.87	4868.22	4842.70	5218.14	5007.84	4387.06	5940.62
40	1995	1995	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.23	4842.67	5218.14	5007.84	4387.06	5940.62
41	1996	1996	4812.40	6548.21	7603.25	8057.69	7929.97	7008.60	5102.89	4868.21	4842.68	5218.14	5007.84	4387.03	5940.61
AVERAGE			5532.56	6685.60	7603.25	8100.46	8153.97	7233.72	6310.19	5046.69	5473.81	6414.50	6079.56	5607.29	6512.19
MAXIMUM			8826.59	8939.66	7603.27	9029.71	9102.70	8826.93	8271.18	8905.71	8630.55	8532.64	8434.62	8532.64	7846.27
MINIMUM			4812.40	6548.21	7603.24	8057.69	7929.97	7008.60	5102.87	4868.20	4842.66	5218.14	5007.84	4387.03	5940.61

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 1 St. Jean Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	25.934	17.710	14.936	8.195	6.125	6.067	5.759	26.463	112.690	49.383	22.948	18.422	26.248
2	1957	1957	30.306	20.820	17.209	17.209	14.792	22.602	27.291	75.181	70.232	39.887	37.384	56.441	35.865
3	1958	1958	34.957	18.624	11.749	8.099	6.221	5.894	8.860	75.865	74.652	24.470	12.519	8.484	24.309
4	1959	1959	40.186	39.165	25.346	10.092	10.641	8.378	8.715	77.810	56.605	32.492	41.313	26.569	31.599
5	1960	1960	26.771	20.435	14.156	9.110	6.693	5.807	8.975	53.947	84.571	30.845	34.254	20.772	26.443
6	1961	1961	39.262	20.290	16.150	13.174	6.722	6.808	8.455	44.885	77.040	31.432	21.552	13.000	24.994
7	1962	1962	10.959	17.190	13.472	7.646	6.086	4.921	8.879	76.799	76.096	58.406	44.308	23.516	29.185
8	1963	1963	21.388	30.941	16.775	8.860	6.635	5.653	8.946	71.012	77.088	36.170	30.094	19.087	27.825
9	1964	1964	22.033	15.235	17.209	14.339	8.022	9.004	5.759	60.871	132.152	30.440	25.577	27.975	30.745
10	1965	1965	34.042	19.135	13.992	9.014	7.954	7.791	12.702	44.471	126.808	46.051	40.822	31.375	32.890
11	1966	1966	46.821	52.387	36.825	13.761	9.466	6.741	5.508	36.161	83.954	22.794	25.048	12.548	29.396
12	1967	1967	18.586	26.434	16.015	7.820	7.309	6.279	21.687	80.391	65.397	24.913	27.619	33.021	28.030
13	1968	1968	28.938	30.267	17.016	11.363	10.160	8.898	8.012	32.511	148.552	36.450	30.566	32.039	32.845
14	1969	1969	37.278	44.674	30.363	16.034	16.679	10.699	10.131	70.376	94.162	43.528	28.206	24.730	35.641
15	1970	1970	30.065	18.355	8.946	6.462	6.038	5.479	27.060	103.002	46.330	33.223	24.528	28.033	28.288
16	1971	1971	41.284	28.062	16.082	7.357	6.308	6.953	6.905	28.177	145.606	39.974	25.635	27.696	31.655
17	1972	1972	49.132	17.748	11.257	7.097	7.145	6.770	7.290	94.769	74.372	37.750	20.945	18.971	29.619
18	1973	1973	27.147	21.205	18.923	11.383	7.608	6.510	6.731	39.444	93.815	36.690	21.956	18.278	25.856
19	1974	1974	28.765	17.238	16.515	9.043	6.385	8.003	8.917	54.438	85.736	35.410	27.137	22.611	26.774
20	1975	1975	20.868	19.559	17.373	9.023	9.033	7.588	17.267	105.689	56.335	18.326	34.755	59.485	31.382
21	1976	1976	32.578	19.838	12.750	10.294	8.397	7.540	10.901	82.491	104.707	22.582	22.207	27.282	30.194
22	1977	1977	41.968	29.372	17.007	16.535	10.920	7.983	7.454	73.843	102.145	34.206	15.803	21.928	31.672
23	1978	1978	46.224	18.480	8.195	8.619	8.677	9.428	28.697	88.452	48.054	40.716	32.877	33.301	31.147
24	1979	1979	32.328	27.118	12.307	8.840	6.818	5.730	8.811	90.185	88.461	37.682	34.764	34.851	32.452
25	1980	1980	39.830	20.984	11.749	8.898	14.185	12.452	12.615	102.261	125.450	37.615	23.738	16.072	35.572
26	1981	1981	38.587	25.625	20.059	8.523	6.308	5.547	6.154	49.286	105.622	47.476	23.632	24.219	30.169
27	1982	1982	17.334	21.138	11.171	9.312	8.888	7.983	35.660	141.099	57.559	30.344	27.657	37.856	33.992
28	1983	1983	33.888	25.587	15.389	9.235	7.222	6.693	12.750	108.819	83.694	34.360	19.270	22.929	31.804
29	1984	1984	20.849	14.146	9.486	6.558	5.701	5.335	6.857	35.689	65.051	38.944	33.657	18.114	21.783
30	1985	1985	26.444	15.129	8.253	6.866	7.309	4.661	14.917	66.360	32.819	36.007	20.358	27.571	22.343
31	1986	1986	27.436	14.368	7.222	4.921	4.073	3.958	30.508	42.719	38.770	26.020	32.771	27.128	21.736
32	1987	1987	39.608	28.351	17.623	8.340	6.934	6.625	11.806	92.304	65.388	34.398	13.809	15.456	28.543
33	1988	1988	35.727	25.712	9.842	6.202	4.796	4.256	5.662	81.778	51.636	26.752	40.677	38.761	27.807
34	1989	1989	31.452	32.742	11.421	6.327	4.757	4.574	5.951	59.321	42.536	24.114	18.076	14.965	21.460
35	1990	1990	24.508	15.812	9.678	6.028	5.297	5.056	5.576	55.719	67.468	35.381	18.230	12.326	21.853
36	1991	1991	23.709	19.366	8.080	6.260	5.297	4.603	6.279	47.457	43.152	32.790	33.455	29.776	21.787
37	1992	1992	28.254	19.597	7.396	4.651	3.727	3.496	5.826	57.491	43.133	30.190	23.690	28.380	21.432
38	1993	1993	39.810	20.002	11.517	6.404	5.036	5.489	7.078	75.018	82.365	51.386	36.286	36.016	31.529
39	1994	1994	32.713	23.728	10.786	6.693	5.422	4.998	9.794	84.089	48.121	19.530	11.219	12.683	22.609
40	1995	1995	39.030	39.560	14.320	6.491	7.011	5.489	8.147	62.576	67.352	52.878	28.919	13.867	28.945
41	1996	1996	21.032	38.780	25.760	8.012	5.354	3.380	4.680	72.437	91.678	39.926	20.695	27.195	29.996
AVERAGE			31.415	24.168	14.886	9.002	7.516	6.881	11.463	68.821	78.960	35.169	27.048	25.457	28.498
MAXIMUM			49.132	52.387	36.825	17.209	16.679	22.602	35.660	141.099	148.552	58.406	44.308	59.485	35.865
MINIMUM			10.959	14.146	7.222	4.651	3.727	3.380	4.680	26.463	32.819	18.326	11.219	8.484	21.432

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.26 10:20:23 PAGE 0026

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 2 Diversion Channel St. Jean to Romaine

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	22.834	15.310	13.436	7.295	5.325	5.367	4.659	19.563	104.790	45.883	20.248	15.922	23.405
2	1957	1957	27.206	18.420	15.709	16.309	13.992	21.902	26.191	68.281	62.332	36.387	34.684	53.941	33.022
3	1958	1958	31.857	16.224	10.249	7.199	5.421	5.194	7.760	68.965	66.752	20.970	9.819	5.984	21.466
4	1959	1959	37.086	36.765	23.846	9.192	9.841	7.678	7.615	70.910	48.705	28.992	38.613	24.069	28.756
5	1960	1960	23.671	18.035	12.656	8.210	5.893	5.107	7.875	47.047	76.671	27.345	31.554	18.272	23.600
6	1961	1961	36.162	17.890	14.650	12.274	5.922	6.108	7.355	37.985	69.140	27.932	18.852	10.500	22.151
7	1962	1962	7.859	14.790	11.972	6.746	5.286	4.221	7.779	69.899	68.196	54.906	41.608	21.016	26.342
8	1963	1963	18.288	28.541	15.275	7.960	5.835	4.953	7.846	64.112	69.188	32.670	27.394	16.587	24.982
9	1964	1964	18.933	12.835	15.709	13.439	7.222	8.304	4.659	53.971	124.252	26.940	22.877	25.475	27.902
10	1965	1965	30.942	16.735	12.492	8.114	7.154	7.091	11.602	37.571	118.908	42.551	38.122	28.875	30.047
11	1966	1966	43.721	49.987	35.325	12.861	8.666	6.041	4.408	29.261	76.054	19.294	22.348	10.048	26.553
12	1967	1967	15.486	24.034	14.515	6.920	6.509	5.579	20.587	73.491	57.497	21.413	24.919	30.521	25.187
13	1968	1968	25.838	27.867	15.516	10.463	9.360	8.198	6.912	25.611	140.652	32.950	27.866	29.539	30.002
14	1969	1969	34.178	42.274	28.863	15.134	15.879	9.999	9.031	63.476	86.262	40.028	25.506	22.230	32.798
15	1970	1970	26.965	15.955	7.446	5.562	5.238	4.779	25.960	96.102	38.430	29.723	21.828	25.533	25.445
16	1971	1971	38.184	25.662	14.582	6.457	5.508	6.253	5.805	21.277	137.706	36.474	22.935	25.196	28.812
17	1972	1972	46.032	15.348	9.757	6.197	6.345	6.070	6.190	87.869	66.472	34.250	18.245	16.471	26.776
18	1973	1973	24.047	18.805	17.423	10.483	6.808	5.810	5.631	32.544	85.915	33.190	19.256	15.778	23.013
19	1974	1974	25.665	14.838	15.015	8.143	5.585	7.303	7.817	47.538	77.836	31.910	24.437	20.111	23.931
20	1975	1975	17.768	17.159	15.873	8.123	8.233	6.888	16.167	98.789	48.436	14.826	32.055	56.985	28.539
21	1976	1976	29.478	17.438	11.250	9.394	7.597	6.840	9.801	75.591	96.807	19.082	19.507	24.782	27.351
22	1977	1977	38.868	26.972	15.507	15.635	10.120	7.283	6.354	66.943	94.245	30.706	13.103	19.428	28.829
23	1978	1978	43.124	16.080	6.695	7.719	7.877	8.728	27.597	81.552	40.154	37.216	30.177	30.801	28.304
24	1979	1979	29.228	24.718	10.807	7.940	6.018	5.030	7.711	83.285	80.561	34.182	32.064	32.351	29.609
25	1980	1980	36.730	18.584	10.249	7.998	13.385	11.752	11.515	95.361	117.550	34.115	21.038	13.572	32.729
26	1981	1981	35.487	23.225	18.559	7.623	5.508	4.847	5.054	42.386	97.722	43.976	20.932	21.719	27.326
27	1982	1982	14.234	18.738	9.671	8.412	8.088	7.283	34.560	134.199	49.659	26.844	24.957	35.356	31.149
28	1983	1983	30.788	23.187	13.889	8.335	6.423	5.993	11.650	101.919	75.794	30.860	16.570	20.429	28.961
29	1984	1984	17.749	11.746	7.986	5.658	4.901	4.635	5.757	28.789	57.151	35.444	30.957	15.614	18.940
30	1985	1985	23.344	12.729	6.753	5.966	6.509	3.961	13.817	59.460	24.919	32.507	17.658	25.071	19.500
31	1986	1986	24.336	11.968	5.722	4.021	3.273	3.258	29.408	35.819	30.870	22.520	30.071	24.628	18.893
32	1987	1987	36.508	25.951	16.123	7.440	6.134	5.925	10.706	85.404	57.488	30.898	11.109	12.956	25.700
33	1988	1988	32.627	23.312	8.342	5.302	3.996	3.556	4.562	74.878	43.736	23.252	37.977	36.261	24.964
34	1989	1989	28.352	30.342	9.921	5.427	3.957	3.874	4.851	52.421	34.636	20.614	15.376	12.465	18.617
35	1990	1990	21.408	13.412	8.178	5.128	4.497	4.356	4.476	48.819	59.568	31.881	15.530	9.826	19.010
36	1991	1991	20.609	16.966	6.580	5.359	4.497	3.903	5.179	40.557	35.252	29.290	30.755	27.276	18.944
37	1992	1992	25.154	17.197	5.896	3.751	2.927	2.796	4.726	50.591	35.233	26.690	20.990	25.880	18.589
38	1993	1993	36.710	17.602	10.017	5.504	4.236	4.789	5.978	68.118	74.465	47.886	33.586	33.516	28.686
39	1994	1994	29.613	21.328	9.286	5.793	4.622	4.298	8.694	77.189	40.221	16.030	8.519	10.183	19.766
40	1995	1995	35.930	37.160	12.820	5.591	6.211	4.789	7.047	55.676	59.452	49.378	26.219	11.367	26.102
41	1996	1996	17.932	36.380	24.260	7.112	4.554	2.680	3.580	65.537	83.778	36.426	17.995	24.695	27.153
AVERAGE			28.315	21.768	13.386	8.102	6.716	6.181	10.363	61.921	71.060	31.669	24.348	22.957	25.655
MAXIMUM			46.032	49.987	35.325	16.309	15.879	21.902	34.560	134.199	140.652	54.906	41.608	56.985	33.022
MINIMUM			7.859	11.746	5.722	3.751	2.927	2.680	3.580	19.563	24.919	14.826	8.519	5.984	18.589

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 3 Romaine Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	160.190	109.391	92.260	50.621	37.832	37.475	35.571	163.462	696.082	305.034	141.750	113.793	162.134
2	1957	1957	187.196	128.604	106.298	106.298	91.367	139.609	168.578	464.392	433.817	246.383	230.917	348.636	221.537
3	1958	1958	215.927	115.042	72.570	50.026	38.427	36.404	54.725	468.615	461.120	151.149	77.329	52.405	150.157
4	1959	1959	248.227	241.921	156.562	62.339	65.730	51.751	53.833	480.631	349.647	200.699	255.186	164.116	195.187
5	1960	1960	165.366	126.225	87.441	56.272	41.341	35.869	55.439	333.229	522.388	190.527	211.585	128.307	163.335
6	1961	1961	242.516	125.333	99.755	81.374	41.520	42.055	52.227	277.255	475.872	194.156	133.125	80.303	154.389
7	1962	1962	67.693	106.179	83.218	47.230	37.594	30.396	54.844	474.385	470.043	360.770	273.686	145.260	180.277
8	1963	1963	132.114	191.122	103.621	54.725	40.984	34.917	55.261	438.635	476.169	223.422	185.887	117.897	171.874
9	1964	1964	136.099	94.104	106.298	88.572	49.550	55.618	35.571	375.998	816.299	188.029	157.990	172.801	189.911
10	1965	1965	210.276	118.195	86.430	55.677	49.134	48.123	78.459	274.697	783.285	284.452	252.153	193.799	203.161
11	1966	1966	289.211	323.593	227.467	85.003	58.473	41.639	34.025	223.362	518.581	140.799	154.718	77.508	181.580
12	1967	1967	114.804	163.284	98.922	48.301	45.148	38.784	133.958	496.572	403.956	153.885	170.600	203.971	173.143
13	1968	1968	178.749	186.958	105.108	70.191	62.756	54.963	49.491	200.818	917.600	225.147	188.802	197.903	202.885
14	1969	1969	230.263	275.946	187.553	99.041	103.026	66.087	62.577	434.709	581.635	268.868	174.229	152.755	220.152
15	1970	1970	185.709	113.377	55.261	39.914	37.296	33.846	167.150	636.241	286.178	205.220	151.506	173.158	174.736
16	1971	1971	255.008	173.336	99.338	45.446	38.962	42.947	42.650	174.050	899.398	246.918	158.346	171.076	195.530
17	1972	1972	303.487	109.629	69.537	43.840	44.137	41.817	45.029	585.382	459.395	233.177	129.378	117.183	182.954
18	1973	1973	167.685	130.984	116.886	70.310	46.992	40.211	41.579	243.646	579.493	226.634	135.624	112.901	159.713
19	1974	1974	177.679	106.476	102.015	55.855	39.438	49.431	55.082	336.263	529.586	218.723	167.626	139.668	165.381
20	1975	1975	128.902	120.812	107.309	55.737	55.796	46.873	106.655	652.837	347.981	113.198	214.678	367.433	193.847
21	1976	1976	201.234	122.537	78.757	63.588	51.870	46.576	67.336	509.540	646.770	139.490	137.170	168.518	186.505
22	1977	1977	259.231	181.426	105.049	102.134	67.455	49.312	46.041	456.123	630.947	211.287	97.613	135.445	195.638
23	1978	1978	285.523	114.150	50.621	53.238	53.595	58.235	177.262	546.361	296.825	251.498	203.078	205.696	192.394
24	1979	1979	199.688	167.507	76.021	54.606	42.115	35.393	54.428	557.068	546.420	232.761	214.737	215.273	200.456
25	1980	1980	246.026	129.616	72.570	54.963	87.620	76.913	77.924	631.661	774.898	232.345	146.628	99.279	219.724
26	1981	1981	238.352	158.287	123.905	52.643	38.962	34.263	38.010	304.439	652.421	293.256	145.974	149.602	186.352
27	1982	1982	107.071	130.567	69.001	57.521	54.904	49.312	220.269	871.560	355.536	187.434	170.838	233.832	209.968
28	1983	1983	209.324	158.049	95.055	57.045	44.613	41.341	78.757	672.169	516.975	212.239	119.027	141.631	196.449
29	1984	1984	128.783	87.382	58.592	40.509	35.215	32.954	42.353	220.448	401.814	240.553	207.897	111.889	134.551
30	1985	1985	163.343	93.449	50.978	42.412	45.148	28.790	92.141	409.904	202.721	222.411	125.749	170.303	138.010
31	1986	1986	169.470	88.750	44.613	30.396	25.162	24.448	188.445	263.871	239.483	160.726	202.424	167.566	134.264
32	1987	1987	244.658	175.121	108.856	51.513	42.828	40.925	72.927	570.154	403.896	212.477	85.300	95.472	176.307
33	1988	1988	220.686	158.822	60.793	38.308	29.623	26.292	34.977	505.138	318.953	165.247	251.260	239.423	171.765
34	1989	1989	194.275	202.246	70.548	39.081	29.385	28.255	36.761	366.421	262.741	148.948	111.651	92.438	132.556
35	1990	1990	151.387	97.673	59.781	37.237	32.716	31.229	34.441	344.174	416.745	218.544	112.603	76.140	134.985
36	1991	1991	146.450	119.622	49.907	38.665	32.716	28.433	38.784	293.137	266.548	202.543	206.647	183.925	134.580
37	1992	1992	174.526	121.050	45.684	28.731	23.020	21.593	35.988	355.119	266.429	186.482	146.331	175.299	132.384
38	1993	1993	245.907	123.548	71.143	39.557	31.110	33.906	43.721	463.380	508.767	317.407	224.136	222.470	194.753
39	1994	1994	202.067	146.569	66.622	41.341	33.489	30.872	60.495	519.414	297.242	120.634	69.299	78.340	139.657
40	1995	1995	241.089	244.360	88.453	40.092	43.304	33.906	50.323	386.527	416.031	326.627	178.630	85.657	178.791
41	1996	1996	129.913	239.542	159.120	49.491	33.073	20.879	28.909	447.439	566.288	246.621	127.831	167.983	185.282
AVERAGE			194.051	149.287	91.949	55.606	46.425	42.503	70.805	425.103	487.731	217.237	167.072	157.245	176.031
MAXIMUM			303.487	323.593	227.467	106.298	103.026	139.609	220.269	871.560	917.600	360.770	273.686	367.433	221.537
MINIMUM			67.693	87.382	44.613	28.731	23.020	20.879	28.909	163.462	202.721	113.198	69.299	52.405	132.384

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 5 Diverted Flow Romaine to Ossokmanuan

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	340.333	162.811	96.496	52.316	38.557	38.542	33.130	140.525	.000	107.108	621.381	.000	137.686
2	1957	1957	.000	549.263	386.586	218.722	.000	.000	.000	.000	202.832	261.070	248.901	386.877	188.336
3	1958	1958	228.384	566.359	511.868	334.535	39.248	.000	.000	.000	.000	43.377	70.448	323.557	177.105
4	1959	1959	273.377	602.011	463.312	323.877	70.971	14.828	.000	188.812	.000	534.169	74.428	.000	213.985
5	1960	1960	.000	510.102	465.847	279.925	42.634	10.647	.000	134.320	137.506	512.227	404.519	321.561	236.441
6	1961	1961	263.935	128.323	105.204	88.048	42.842	43.864	52.482	272.740	.000	442.343	339.049	110.732	159.332
7	1962	1962	56.152	106.068	85.990	48.377	38.280	30.317	55.523	320.949	.000	492.370	489.180	391.217	177.752
8	1963	1963	263.630	204.763	109.697	57.085	42.220	35.570	56.007	72.720	.000	604.440	448.362	340.330	187.813
9	1964	1964	167.471	92.038	112.807	96.411	52.172	59.622	33.130	299.231	.000	.000	664.161	.000	133.169
10	1965	1965	.000	636.767	445.537	245.311	51.688	.000	.000	291.798	.000	83.701	273.574	206.973	187.115
11	1966	1966	313.532	358.680	734.704	327.215	.000	.000	.000	303.818	.000	619.284	451.621	312.774	288.765
12	1967	1967	110.890	172.418	104.237	49.621	47.058	40.062	147.445	.000	.000	55.283	47.403	218.792	82.492
13	1968	1968	185.188	199.925	704.259	102.800	.000	.000	.000	249.333	473.743	236.396	199.968	211.742	215.284
14	1969	1969	245.040	303.320	724.775	.000	.000	.000	.000	382.637	517.335	287.195	183.035	159.285	235.346
15	1970	1970	656.619	510.715	351.089	52.084	37.934	34.326	186.010	.000	.000	13.361	156.633	182.991	182.578
16	1971	1971	273.792	723.465	483.351	302.340	39.870	44.900	41.355	152.828	.000	339.494	594.809	428.110	287.236
17	1972	1972	.000	449.796	280.294	44.437	45.883	43.587	44.119	.000	.000	565.903	543.647	383.064	201.118
18	1973	1973	218.771	193.306	125.109	75.193	49.200	41.721	.000	272.508	.000	288.977	311.130	387.250	164.740
19	1974	1974	291.434	106.414	107.831	58.398	40.423	52.434	55.800	291.834	.000	.000	.000	.000	84.543
20	1975	1975	602.676	498.296	356.508	111.003	59.429	49.462	.000	.000	.912	106.324	230.032	408.717	202.844
21	1976	1976	211.313	561.520	518.527	274.445	.000	.000	.000	73.330	249.001	136.872	139.977	177.600	196.252
22	1977	1977	278.699	193.498	704.244	.000	.000	.000	.000	161.888	676.392	220.293	94.016	139.173	206.864
23	1978	1978	309.247	554.930	511.101	323.588	56.872	62.663	.000	.000	.000	166.053	216.555	220.796	203.095
24	1979	1979	209.516	177.325	697.029	38.199	.000	.000	.000	125.906	578.181	245.243	230.102	231.924	212.462
25	1980	1980	263.355	451.390	564.301	273.311	.000	.000	.000	6.198	755.800	244.759	150.966	97.151	234.849
26	1981	1981	587.687	574.408	410.481	206.197	39.870	34.810	35.964	286.253	.000	.000	5.892	155.622	196.074
27	1982	1982	641.997	483.873	342.356	65.798	58.392	52.296	.000	46.360	356.394	192.578	179.095	253.487	223.514
28	1983	1983	220.712	175.778	676.128	44.838	.000	.000	.000	326.605	543.970	221.399	118.897	146.360	207.806
29	1984	1984	507.549	372.178	422.414	173.089	35.515	33.289	.000	246.423	.000	384.090	365.916	239.294	234.122
30	1985	1985	167.287	91.278	48.531	42.778	47.058	28.451	98.858	.000	.000	493.744	375.533	273.276	139.907
31	1986	1986	174.406	85.818	41.136	28.817	23.835	23.406	201.023	.000	230.469	351.235	284.084	176.494	135.554
32	1987	1987	261.766	186.172	115.779	53.353	44.362	42.550	76.534	.000	.000	470.251	530.319	360.891	179.848
33	1988	1988	240.917	215.418	59.935	38.009	29.019	25.548	32.439	103.717	5.015	534.247	412.297	357.768	172.566
34	1989	1989	311.724	240.808	71.269	38.908	28.742	27.829	34.512	297.293	.000	371.972	205.823	89.203	144.685
35	1990	1990	153.395	96.185	58.760	36.765	32.613	31.285	31.817	293.221	64.905	351.936	352.166	115.980	136.392
36	1991	1991	147.659	121.688	47.287	38.424	32.613	28.036	36.862	188.507	.000	343.586	345.608	287.639	135.921
37	1992	1992	180.280	123.347	42.380	26.882	21.347	20.088	33.614	250.300	51.006	375.761	274.586	185.479	133.369
38	1993	1993	263.217	126.250	71.960	39.461	30.747	34.395	42.599	318.462	.000	283.063	555.012	433.512	184.834
39	1994	1994	356.584	259.399	66.708	41.534	33.511	30.870	62.089	.000	8.540	562.508	377.829	135.789	162.821
40	1995	1995	257.619	266.620	92.073	40.083	44.915	34.395	50.270	29.625	.000	288.622	586.808	410.824	176.151
41	1996	1996	259.595	261.022	174.180	51.003	33.027	19.259	25.389	136.514	.000	187.763	635.069	440.786	186.591
AVERAGE			255.994	309.604	304.685	115.687	32.460	26.074	35.780	152.797	118.341	293.146	311.923	236.659	184.082
MAXIMUM			656.619	723.465	734.704	334.535	70.971	62.663	201.023	382.637	755.800	619.284	664.161	440.786	288.765
MINIMUM			.000	85.818	41.136	.000	.000	.000	.000	.000	.000	.000	.000	.000	82.492

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 7 Lac Joseph Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	175.896	115.132	69.968	54.714	46.771	42.611	44.534	97.324	618.332	316.809	201.646	208.958	166.154
2	1957	1957	194.334	117.369	102.745	91.935	80.148	78.257	88.437	328.250	548.995	251.915	211.195	236.976	194.562
3	1958	1958	166.347	115.447	83.016	60.103	48.977	44.849	43.903	294.526	547.387	229.980	168.584	104.321	159.377
4	1959	1959	141.228	96.694	71.890	56.289	48.347	41.665	38.167	210.565	418.577	204.199	200.700	250.655	148.491
5	1960	1960	207.382	120.553	81.755	61.710	53.421	49.954	61.395	227.742	287.845	230.925	118.630	92.881	133.417
6	1961	1961	169.845	128.495	87.460	52.161	39.774	33.408	31.485	78.887	488.892	189.890	144.411	156.482	133.458
7	1962	1962	98.585	72.836	58.212	46.771	39.113	34.984	35.614	140.282	462.480	212.488	156.797	126.289	123.845
8	1963	1963	101.453	80.778	66.469	55.974	51.845	44.849	46.771	247.156	458.352	166.977	159.035	176.527	138.147
9	1964	1964	159.350	95.433	69.968	58.842	53.106	52.161	52.161	149.170	563.303	378.204	241.735	285.954	180.232
10	1965	1965	192.443	108.450	83.016	68.077	56.289	50.270	48.662	178.103	639.638	359.420	236.976	180.340	183.853
11	1966	1966	204.829	198.494	82.385	71.575	68.392	48.977	57.266	174.321	350.816	192.443	168.900	90.013	142.627
12	1967	1967	133.601	149.800	78.257	76.649	62.971	60.103	73.151	345.741	440.198	191.812	172.398	276.404	171.959
13	1968	1968	230.295	168.900	110.373	72.521	56.289	50.585	41.035	191.497	597.027	407.452	204.514	200.385	194.742
14	1969	1969	247.156	143.781	111.948	97.009	76.019	64.263	63.286	149.485	628.197	292.951	142.488	126.604	178.764
15	1970	1970	99.562	75.704	56.605	48.032	37.852	30.855	42.958	395.696	440.860	317.754	181.632	134.861	155.960
16	1971	1971	208.327	52.791	38.167	31.801	28.933	41.350	38.797	63.286	600.210	245.549	106.559	119.292	131.312
17	1972	1972	183.208	105.298	59.473	25.119	52.791	69.337	44.534	405.529	312.333	179.395	73.151	73.781	132.625
18	1973	1973	182.578	123.421	123.421	66.469	62.656	43.556	54.083	115.447	545.181	245.549	114.186	93.511	147.583
19	1974	1974	134.231	108.135	85.884	21.936	61.395	27.357	30.225	149.485	650.133	321.568	179.080	175.266	162.021
20	1975	1975	120.017	94.992	92.156	63.790	51.782	42.516	42.737	404.332	470.612	178.292	183.082	258.975	167.340
21	1976	1976	223.613	115.667	94.015	77.469	29.405	45.794	36.717	246.967	571.655	236.062	191.151	198.463	172.783
22	1977	1977	233.572	164.802	116.613	81.598	46.834	33.187	43.651	269.691	620.507	394.026	186.927	161.083	196.703
23	1978	1978	184.595	126.320	75.735	43.903	31.076	28.964	88.279	552.020	480.981	347.475	252.577	202.906	202.378
24	1979	1979	190.142	185.635	105.992	76.334	30.351	36.875	69.274	328.943	548.522	262.789	159.413	141.039	178.518
25	1980	1980	156.892	126.289	98.428	72.363	29.059	45.763	66.375	268.115	700.465	345.426	179.489	109.490	183.707
26	1981	1981	140.818	105.424	86.483	61.521	4.822	14.971	73.435	132.876	556.023	322.513	174.005	182.956	155.066
27	1982	1982	119.418	96.032	79.770	55.186	20.896	29.910	86.735	542.502	474.205	274.292	164.456	174.131	177.397
28	1983	1983	235.180	159.571	109.490	71.512	27.924	32.431	69.999	316.210	488.797	324.405	167.355	149.611	180.206
29	1984	1984	113.713	106.811	86.672	65.965	21.778	21.022	74.979	77.973	428.411	250.403	190.205	115.163	129.740
30	1985	1985	141.039	130.323	78.414	66.217	18.690	13.017	57.014	316.494	321.726	228.435	147.468	150.052	139.782
31	1986	1986	151.943	101.485	73.119	51.877	18.248	20.297	105.487	277.160	256.801	170.034	229.192	159.539	135.322
32	1987	1987	168.553	150.557	122.381	63.759	25.308	38.167	53.516	281.352	379.339	232.028	111.129	128.589	146.869
33	1988	1988	150.525	140.692	90.769	52.129	2.364	15.002	70.850	237.386	329.605	125.721	111.633	133.601	122.155
34	1989	1989	205.176	179.741	110.278	68.234	28.870	9.676	55.911	176.369	393.238	199.314	128.054	139.494	141.562
35	1990	1990	190.772	160.453	97.766	56.699	21.558	22.062	49.482	131.741	310.726	281.447	123.673	99.657	129.430
36	1991	1991	157.680	169.971	89.886	68.928	23.827	27.798	33.187	210.660	422.202	263.860	208.107	201.866	157.037
37	1992	1992	160.453	113.682	66.816	44.534	38.041	1.135	34.007	191.182	315.107	172.430	119.544	112.579	114.425
38	1993	1993	178.607	124.145	85.411	64.610	12.103	23.669	62.088	154.213	405.592	285.670	246.999	214.032	155.422
39	1994	1994	176.936	130.890	88.657	61.868	54.966	9.203	37.789	289.862	323.617	160.390	135.397	65.335	128.383
40	1995	1995	114.092	137.383	95.024	58.716	28.554	29.437	61.616	260.740	384.003	288.853	201.110	96.379	147.036
41	1996	1996	121.593	191.151	139.904	73.151	29.626	30.761	50.774	227.048	489.207	305.526	243.658	154.875	172.056
AVERAGE			167.463	126.574	87.922	61.416	39.541	36.123	55.131	239.910	470.002	258.163	171.640	157.544	156.401
MAXIMUM			247.156	198.494	139.904	97.009	80.148	78.257	105.487	552.020	700.465	407.452	252.577	285.954	202.378
MINIMUM			98.585	52.791	38.167	21.936	2.364	1.135	30.225	63.286	256.801	125.721	73.151	65.335	114.425

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 8 General Flow Lac Joseph to Ossokmanuan

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	175.896	115.132	69.968	54.714	46.771	42.611	44.534	97.324	618.332	316.809	201.646	208.958	166.154
2	1957	1957	194.334	117.369	102.745	91.935	80.148	78.257	88.437	328.250	548.995	251.915	211.195	236.976	194.562
3	1958	1958	166.347	115.447	83.016	60.103	48.977	44.849	43.903	294.526	547.387	229.980	168.584	104.321	159.377
4	1959	1959	141.228	96.694	71.890	56.289	48.347	41.665	38.167	210.565	418.577	204.199	200.700	250.655	148.491
5	1960	1960	207.382	120.553	81.755	61.710	53.421	49.954	61.395	227.742	287.845	230.925	118.630	92.881	133.417
6	1961	1961	169.845	128.495	87.460	52.161	39.774	33.408	31.485	78.887	488.892	189.890	144.411	156.482	133.458
7	1962	1962	98.585	72.836	58.212	46.771	39.113	34.984	35.614	140.282	462.480	212.488	156.797	126.289	123.845
8	1963	1963	101.453	80.778	66.469	55.974	51.845	44.849	46.771	247.156	458.352	166.977	159.035	176.527	138.147
9	1964	1964	159.350	95.433	69.968	58.842	53.106	52.161	52.161	149.170	563.303	378.204	241.735	285.954	180.232
10	1965	1965	192.443	108.450	83.016	68.077	56.289	50.270	48.662	178.103	639.638	359.420	236.976	180.340	183.853
11	1966	1966	204.829	198.494	82.385	71.575	68.392	48.977	57.266	174.321	350.816	192.443	168.900	90.013	142.627
12	1967	1967	133.601	149.800	78.257	76.649	62.971	60.103	73.151	345.741	440.198	191.812	172.398	276.404	171.959
13	1968	1968	230.295	168.900	110.373	72.521	56.289	50.585	41.035	191.497	597.027	407.452	204.514	200.385	194.742
14	1969	1969	247.156	143.781	111.948	97.009	76.019	64.263	63.286	149.485	628.197	292.951	142.488	126.604	178.764
15	1970	1970	99.562	75.704	56.605	48.032	37.852	30.855	42.958	395.696	440.860	317.754	181.632	134.861	155.960
16	1971	1971	208.327	52.791	38.167	31.801	28.933	41.350	38.797	63.286	600.210	245.549	106.559	119.292	131.312
17	1972	1972	183.208	105.298	59.473	25.119	52.791	69.337	44.534	405.529	312.333	179.395	73.151	73.781	132.625
18	1973	1973	182.578	123.421	123.421	66.469	62.656	43.556	54.083	115.447	545.181	245.549	114.186	93.511	147.583
19	1974	1974	134.231	108.135	85.884	21.936	61.395	27.357	30.225	149.485	650.133	321.568	179.080	175.266	162.021
20	1975	1975	120.017	94.992	92.156	63.790	51.782	42.516	42.737	404.332	470.612	178.292	183.082	258.975	167.340
21	1976	1976	223.613	115.667	94.015	77.469	29.405	45.794	36.717	246.967	571.655	236.062	191.151	198.463	172.783
22	1977	1977	233.572	164.802	116.613	81.598	46.834	33.187	43.651	269.691	620.507	394.026	186.927	161.083	196.703
23	1978	1978	184.595	126.320	75.735	43.903	31.076	28.964	88.279	552.020	480.981	347.475	252.577	202.906	202.378
24	1979	1979	190.142	185.635	105.992	76.334	30.351	36.875	69.274	328.943	548.522	262.789	159.413	141.039	178.518
25	1980	1980	156.892	126.289	98.428	72.363	29.059	45.763	66.375	268.115	700.465	345.426	179.489	109.490	183.707
26	1981	1981	140.818	105.424	86.483	61.521	4.822	14.971	73.435	132.876	556.023	322.513	174.005	182.956	155.066
27	1982	1982	119.418	96.032	79.770	55.186	20.896	29.910	86.735	542.502	474.205	274.292	164.456	174.131	177.397
28	1983	1983	235.180	159.571	109.490	71.512	27.924	32.431	69.999	316.210	488.797	324.405	167.355	149.611	180.206
29	1984	1984	113.713	106.811	86.672	65.965	21.778	21.022	74.979	77.973	428.411	250.403	190.205	115.163	129.740
30	1985	1985	141.039	130.323	78.414	66.217	18.690	13.017	57.014	316.494	321.726	228.435	147.468	150.052	139.782
31	1986	1986	151.943	101.485	73.119	51.877	18.248	20.297	105.487	277.160	256.801	170.034	229.192	159.539	135.322
32	1987	1987	168.553	150.557	122.381	63.759	25.308	38.167	53.516	281.352	379.339	232.028	111.129	128.589	146.869
33	1988	1988	150.525	140.692	90.769	52.129	2.364	15.002	70.850	237.386	329.605	125.721	111.633	133.601	122.155
34	1989	1989	205.176	179.741	110.278	68.234	28.870	9.676	55.911	176.369	393.238	199.314	128.054	139.494	141.562
35	1990	1990	190.772	160.453	97.766	56.699	21.558	22.062	49.482	131.741	310.726	281.447	123.673	99.657	129.430
36	1991	1991	157.680	169.971	89.886	68.928	23.827	27.798	33.187	210.660	422.202	263.860	208.107	201.866	157.037
37	1992	1992	160.453	113.682	66.816	44.534	38.041	1.135	34.007	191.182	315.107	172.430	119.544	112.579	114.425
38	1993	1993	178.607	124.145	85.411	64.610	12.103	23.669	62.088	154.213	405.592	285.670	246.999	214.032	155.422
39	1994	1994	176.936	130.890	88.657	61.868	54.966	9.203	37.789	289.862	323.617	160.390	135.397	65.335	128.383
40	1995	1995	114.092	137.383	95.024	58.716	28.554	29.437	61.616	260.740	384.003	288.853	201.110	96.379	147.036
41	1996	1996	121.593	191.151	139.904	73.151	29.626	30.761	50.774	227.048	489.207	305.526	243.658	154.875	172.056
AVERAGE			167.463	126.574	87.922	61.416	39.541	36.123	55.131	239.910	470.002	258.163	171.640	157.544	156.401
MAXIMUM			247.156	198.494	139.904	97.009	80.148	78.257	105.487	552.020	700.465	407.452	252.577	285.954	202.378
MINIMUM			98.585	52.791	38.167	21.936	2.364	1.135	30.225	63.286	256.801	125.721	73.151	65.335	114.425

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 9 Ossokmanuan Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	382.20	250.17	152.03	118.89	101.63	92.59	96.77	211.48	1343.57	688.39	438.15	454.04	361.03
2	1957	1957	422.27	255.03	223.25	199.76	174.15	170.04	192.16	713.25	1192.91	547.38	458.90	514.92	422.76
3	1958	1958	361.45	250.85	180.38	130.60	106.42	97.45	95.40	639.97	1189.41	499.72	366.32	226.68	346.31
4	1959	1959	306.87	210.11	156.21	122.31	105.05	90.53	82.93	457.53	909.52	443.70	436.10	544.65	322.65
5	1960	1960	450.62	261.95	177.64	134.09	116.08	108.55	133.40	494.86	625.46	501.77	257.77	201.82	289.90
6	1961	1961	369.05	279.21	190.04	113.34	86.43	72.59	68.41	171.41	1062.31	412.61	313.79	340.02	289.99
7	1962	1962	214.21	158.26	126.49	101.63	84.99	76.02	77.39	304.82	1004.92	461.71	340.70	274.41	269.10
8	1963	1963	220.45	175.52	144.43	121.63	112.65	97.45	101.63	537.04	995.95	362.82	345.57	383.57	300.18
9	1964	1964	346.25	207.37	152.03	127.86	115.39	113.34	113.34	324.13	1224.00	821.80	525.26	621.35	391.63
10	1965	1965	418.16	235.65	180.38	147.92	122.31	109.23	105.74	387.00	1389.86	780.98	514.92	391.86	399.49
11	1966	1966	445.07	431.31	179.01	155.52	148.61	106.42	124.43	378.78	762.28	418.16	367.00	195.59	309.91
12	1967	1967	290.30	325.50	170.04	166.55	136.83	130.60	158.95	751.26	956.50	416.79	374.60	600.60	373.65
13	1968	1968	500.41	367.00	239.83	157.58	122.31	109.92	89.16	416.10	1297.27	885.35	444.39	435.41	423.15
14	1969	1969	537.04	312.42	243.25	210.79	165.18	139.64	137.51	324.81	1365.00	636.55	309.61	275.10	388.43
15	1970	1970	216.34	164.50	123.00	104.37	82.25	67.04	93.34	859.80	957.94	690.45	394.67	293.04	338.89
16	1971	1971	452.67	114.71	82.93	69.10	62.87	89.85	84.30	137.51	1304.19	533.55	231.54	259.21	285.33
17	1972	1972	398.09	228.80	129.23	54.58	114.71	150.66	96.77	881.17	678.67	389.81	158.95	160.32	288.18
18	1973	1973	396.72	268.18	268.18	144.43	136.14	94.64	117.52	250.85	1184.62	533.55	248.11	203.19	320.68
19	1974	1974	291.67	234.97	186.62	47.66	133.40	59.44	65.68	324.81	1412.67	698.73	389.12	380.83	352.05
20	1975	1975	260.78	206.41	200.24	138.61	112.52	92.38	92.86	878.57	1022.59	387.41	397.82	562.72	363.61
21	1976	1976	485.89	251.33	204.28	168.33	63.89	99.51	79.78	536.63	1242.14	512.94	415.35	431.24	375.44
22	1977	1977	507.53	358.10	253.39	177.30	101.77	72.11	94.85	586.01	1348.29	856.17	406.17	350.02	427.41
23	1978	1978	401.10	274.48	164.56	95.40	67.52	62.94	191.82	1199.48	1045.12	755.03	548.82	440.89	439.75
24	1979	1979	413.16	403.36	230.31	165.87	65.95	80.13	150.53	714.76	1191.88	571.01	346.39	306.46	387.90
25	1980	1980	340.91	274.41	213.87	157.24	63.14	99.44	144.23	582.58	1522.03	750.57	390.01	237.91	399.17
26	1981	1981	305.98	229.08	187.92	133.68	10.48	32.53	159.57	288.72	1208.18	700.79	378.09	397.54	336.94
27	1982	1982	259.48	208.67	173.33	119.91	45.40	64.99	188.47	1178.80	1030.40	596.01	357.34	378.37	385.46
28	1983	1983	511.02	346.73	237.91	155.39	60.68	70.47	152.10	687.09	1062.10	704.90	363.64	325.09	391.57
29	1984	1984	247.09	232.09	188.33	143.33	47.32	45.68	162.92	169.43	930.89	544.10	413.29	250.24	281.91
30	1985	1985	306.46	283.18	170.39	143.88	40.61	28.28	123.89	687.71	699.07	496.36	320.43	326.05	303.73
31	1986	1986	330.16	220.52	158.88	112.72	39.65	44.10	229.21	602.24	558.00	369.47	498.01	346.66	294.04
32	1987	1987	366.25	327.14	265.92	138.54	54.99	82.93	116.28	611.35	824.26	504.17	241.47	279.41	319.13
33	1988	1988	327.07	305.71	197.23	113.27	5.14	32.60	153.95	515.81	716.20	273.18	242.57	290.30	265.43
34	1989	1989	445.82	390.56	239.62	148.27	62.73	21.02	121.49	383.23	854.46	433.09	278.25	303.11	307.60
35	1990	1990	414.53	348.65	212.43	123.20	46.84	47.94	107.52	286.26	675.17	611.55	268.73	216.54	281.24
36	1991	1991	342.62	369.33	195.31	149.77	51.77	60.40	72.11	457.74	917.40	573.34	452.19	438.63	341.22
37	1992	1992	348.65	247.02	145.18	96.77	82.66	2.47	73.89	415.42	684.69	374.67	259.76	244.62	248.63
38	1993	1993	388.09	269.75	185.59	140.39	26.30	51.43	134.91	335.09	881.31	620.73	536.70	465.07	337.72
39	1994	1994	384.46	284.41	192.64	134.43	119.43	20.00	82.11	629.84	703.18	348.51	294.20	141.97	278.96
40	1995	1995	247.91	298.52	206.48	127.58	62.05	63.96	133.88	566.56	834.40	627.65	436.99	209.42	319.49
41	1996	1996	264.21	415.35	304.00	158.95	64.37	66.84	110.33	493.35	1062.99	663.87	529.44	336.53	373.86
AVERAGE			363.88	275.03	191.04	133.45	85.92	78.49	119.79	521.30	1021.26	560.96	372.96	342.33	339.84
MAXIMUM			537.04	431.31	304.00	210.79	174.15	170.04	229.21	1199.48	1522.03	885.35	548.82	621.35	439.75
MINIMUM			214.21	114.71	82.93	47.66	5.14	2.47	65.68	137.51	558.00	273.18	158.95	141.97	248.63

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 10 Gabbro Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	508.01	528.11	318.50	225.92	625.56	516.43	504.47	324.41	1339.58	1448.08	1122.96	520.17	664.88
2	1957	1957	226.18	921.66	712.59	510.42	692.91	590.99	610.64	820.48	1406.72	932.61	841.28	1023.99	772.50
3	1958	1958	756.18	932.66	775.27	525.24	633.25	484.99	469.34	769.19	1265.70	1002.92	467.13	511.73	715.95
4	1959	1959	331.06	908.81	691.41	502.48	662.98	489.71	451.14	732.00	1043.48	1191.05	573.01	652.47	685.13
5	1960	1960	267.58	892.60	725.25	475.72	650.74	511.83	524.84	732.01	918.29	1106.70	642.70	473.43	659.76
6	1961	1961	412.42	536.02	382.70	253.55	607.65	492.55	482.42	398.13	1147.30	1169.24	659.03	464.40	582.78
7	1962	1962	.00	314.98	270.69	196.78	600.99	484.00	498.57	641.14	1108.22	1247.70	848.46	649.09	570.70
8	1963	1963	195.11	461.06	320.60	234.68	645.33	520.56	534.45	732.01	1102.12	1208.60	814.74	757.60	626.14
9	1964	1964	282.65	394.84	334.81	283.11	659.28	567.81	528.67	647.62	1257.74	1405.50	1333.45	764.47	705.03
10	1965	1965	220.18	980.87	708.94	461.31	668.89	502.19	484.44	731.99	1370.82	928.21	1025.47	997.79	755.27
11	1966	1966	751.87	988.48	996.10	554.32	655.61	498.09	511.74	732.01	946.05	1125.08	849.30	455.54	756.50
12	1967	1967	144.37	647.72	352.54	292.82	685.46	573.45	709.59	846.57	1172.98	739.43	456.18	549.53	594.94
13	1968	1968	915.89	735.83	1054.46	332.90	617.21	503.19	460.24	732.02	1525.65	1411.09	848.87	922.69	839.36
14	1969	1969	956.51	759.52	1079.97	307.80	679.81	546.59	530.84	732.02	1594.07	1170.26	1163.78	418.15	829.53
15	1970	1970	582.10	750.91	530.69	204.48	596.64	474.91	652.35	919.41	1241.13	763.26	950.31	468.06	677.42
16	1971	1971	544.37	890.97	604.45	403.24	570.28	518.79	494.50	228.72	1312.64	1424.80	794.69	663.78	703.88
17	1972	1972	190.88	783.90	468.99	124.14	651.99	606.27	515.46	933.89	1072.99	1017.19	637.52	474.33	621.92
18	1973	1973	407.65	584.91	516.71	286.09	686.61	522.61	501.64	513.90	1230.80	1284.51	535.21	541.12	633.00
19	1974	1974	326.91	449.51	380.33	128.00	673.83	481.92	481.74	641.22	1386.03	1408.77	429.98	413.27	598.62
20	1975	1975	593.06	799.70	648.91	313.40	662.33	527.05	465.64	932.12	1297.33	821.86	672.71	885.45	717.18
21	1976	1976	726.01	928.52	816.83	520.24	531.91	487.99	446.54	732.02	1386.03	1090.71	791.89	610.75	756.67
22	1977	1977	681.37	716.40	1074.24	258.90	587.21	447.99	468.54	809.02	1724.75	1511.57	687.12	1053.71	835.40
23	1978	1978	504.53	955.73	751.40	462.89	594.08	497.25	610.14	1154.15	1506.55	826.58	1072.33	973.05	825.59
24	1979	1979	653.49	766.33	1033.33	280.40	534.91	459.69	549.84	880.06	1631.54	975.23	1141.73	663.50	798.51
25	1980	1980	370.74	852.09	876.60	502.91	530.81	487.89	540.64	731.99	1814.09	1534.08	1149.23	404.93	817.73
26	1981	1981	644.07	908.91	684.88	401.40	493.78	425.00	599.01	582.94	1246.92	1039.11	638.09	593.29	688.08
27	1982	1982	630.48	788.57	595.46	240.90	563.30	489.88	605.24	1161.86	1667.48	1197.01	830.23	663.16	786.37
28	1983	1983	576.49	682.08	1023.53	271.74	527.21	445.59	552.14	954.10	1594.32	1052.66	1043.93	617.33	779.58
29	1984	1984	477.93	711.08	697.41	382.39	543.22	442.68	567.94	368.91	1057.94	1203.77	831.19	461.86	645.77
30	1985	1985	224.37	504.78	297.33	252.88	544.96	412.44	609.80	802.60	963.81	1083.92	705.21	606.55	583.42
31	1986	1986	266.09	407.82	273.14	193.42	520.34	430.49	865.77	742.77	924.86	752.51	873.06	539.86	564.92
32	1987	1987	406.15	663.87	504.08	255.65	563.27	506.34	576.38	749.15	1000.64	1155.03	744.70	626.06	645.85
33	1988	1988	328.10	661.82	347.93	203.41	475.12	415.83	587.28	732.01	918.30	794.92	628.27	638.84	560.15
34	1989	1989	572.30	811.11	421.17	255.41	558.95	401.22	541.95	731.98	1006.41	971.42	473.90	388.97	593.84
35	1990	1990	368.28	605.29	368.96	216.67	539.62	443.97	518.86	586.31	918.29	1106.71	606.34	289.35	547.06
36	1991	1991	257.54	660.99	332.49	257.12	546.82	458.92	472.20	732.00	1048.80	1195.74	867.68	785.31	634.18
37	1992	1992	298.96	484.05	254.38	168.18	580.65	366.37	471.56	731.99	918.29	784.64	515.66	399.85	496.43
38	1993	1993	439.50	520.15	342.96	244.46	507.75	452.18	569.64	682.85	1024.43	1177.00	1200.49	969.78	677.97
39	1994	1994	527.56	674.70	348.01	237.83	646.52	402.76	512.03	762.09	936.61	933.19	669.21	200.26	570.17
40	1995	1995	229.20	702.52	393.57	226.38	574.12	470.48	575.81	732.01	993.03	1156.76	1086.69	573.79	642.68
41	1996	1996	254.98	867.52	618.08	283.10	565.63	459.55	516.53	732.00	1147.77	1282.08	1269.95	789.36	732.51
AVERAGE			440.27	710.67	583.65	310.55	596.52	483.38	540.75	727.65	1223.67	1112.96	816.92	620.89	680.33
MAXIMUM			956.51	988.48	1079.97	554.32	692.91	606.27	865.77	1161.86	1814.09	1534.08	1333.45	1053.71	839.36
MINIMUM			.00	314.98	254.38	124.14	475.12	366.37	446.54	228.72	918.29	739.43	429.98	200.26	496.43

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 11 Flow Over Gabbro Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	1957	1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	1958	1958	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	1959	1959	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	1960	1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	1961	1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	1962	1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	1963	1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1964	1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	1965	1965	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
11	1966	1966	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
12	1967	1967	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
13	1968	1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14	1969	1969	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
15	1970	1970	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16	1971	1971	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
17	1972	1972	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
18	1973	1973	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
19	1974	1974	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
20	1975	1975	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
21	1976	1976	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
22	1977	1977	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
23	1978	1978	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
24	1979	1979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
25	1980	1980	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
26	1981	1981	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
27	1982	1982	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
28	1983	1983	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
29	1984	1984	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
30	1985	1985	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
31	1986	1986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
32	1987	1987	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
33	1988	1988	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
34	1989	1989	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
35	1990	1990	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
36	1991	1991	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
37	1992	1992	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
38	1993	1993	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
39	1994	1994	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
40	1995	1995	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
41	1996	1996	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
AVERAGE			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAXIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MINIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 13 Smallwood Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	979.50	641.20	389.70	304.60	260.40	237.30	247.90	542.00	3443.30	1764.20	1123.00	1163.70	925.27
2	1957	1957	1082.20	653.60	572.10	511.90	446.40	435.70	492.40	1827.90	3057.10	1402.80	1176.10	1319.60	1083.42
3	1958	1958	926.40	643.00	462.30	334.80	272.80	249.80	244.40	1640.10	3048.20	1280.60	938.80	581.00	887.54
4	1959	1959	786.40	538.40	400.30	313.50	269.20	232.00	212.50	1172.60	2330.90	1137.10	1117.60	1395.70	826.87
5	1960	1960	1154.90	671.30	455.20	343.60	297.60	278.10	341.80	1268.20	1603.00	1285.90	660.70	517.20	742.95
6	1961	1961	945.80	715.60	487.10	290.50	221.40	186.00	175.30	439.30	2722.40	1057.40	804.10	871.40	743.17
7	1962	1962	549.10	405.60	324.10	260.40	217.90	194.80	198.30	781.10	2575.40	1183.20	873.20	703.20	689.64
8	1963	1963	565.00	449.90	370.20	311.70	288.70	249.80	260.40	1376.20	2552.40	929.90	885.60	983.00	769.30
9	1964	1964	887.40	531.40	389.70	327.70	295.80	290.50	290.50	830.70	3136.80	2106.00	1346.10	1592.30	1003.65
10	1965	1965	1071.60	604.00	462.30	379.10	313.50	279.80	271.00	991.90	3561.90	2001.50	1319.60	1004.30	1023.82
11	1966	1966	1140.70	1105.30	458.70	398.50	380.80	272.80	318.80	970.70	1953.60	1071.60	940.50	501.30	794.22
12	1967	1967	743.90	834.20	435.70	426.80	350.70	334.80	407.40	1925.30	2451.30	1068.00	960.00	1539.20	957.57
13	1968	1968	1282.30	940.50	614.60	403.80	313.50	281.60	228.50	1066.30	3324.60	2268.90	1138.90	1115.90	1084.41
14	1969	1969	1376.20	800.60	623.40	540.20	423.30	357.80	352.50	832.50	3498.20	1631.30	793.50	704.90	995.45
15	1970	1970	554.40	421.50	315.30	267.50	210.80	171.80	239.10	2203.40	2454.90	1769.40	1011.40	751.00	868.46
16	1971	1971	1160.10	294.00	212.50	177.10	161.20	230.20	216.10	352.50	3342.30	1367.40	593.30	664.20	731.23
17	1972	1972	1020.20	586.30	331.20	139.90	294.00	386.10	247.90	2258.30	1739.30	999.00	407.40	410.90	738.55
18	1973	1973	1016.70	687.20	687.20	370.20	348.90	242.60	301.10	643.00	3035.90	1367.40	635.90	520.70	821.83
19	1974	1974	747.50	602.20	478.20	122.20	341.80	152.30	168.30	832.50	3620.30	1790.70	997.20	976.00	902.23
20	1975	1975	551.00	629.00	492.00	297.30	386.90	340.00	585.40	2415.00	2781.50	973.10	968.30	1167.90	966.81
21	1976	1976	764.30	651.10	528.30	583.80	452.90	180.00	445.70	1400.70	3401.10	1248.60	1077.60	1442.90	1014.21
22	1977	1977	873.90	1081.60	669.90	600.90	480.60	178.40	350.10	1516.10	3111.30	1435.30	1334.70	881.40	1044.04
23	1978	1978	789.60	632.60	415.90	455.60	136.70	215.90	545.40	3973.40	2384.90	1818.10	894.10	1088.60	1120.04
24	1979	1979	901.90	980.70	554.00	554.10	364.70	410.10	414.50	2244.50	2944.60	1404.90	832.50	463.80	1008.99
25	1980	1980	1125.90	711.90	564.80	473.80	496.50	258.80	460.00	1819.80	3736.40	1493.60	824.20	818.60	1066.02
26	1981	1981	450.40	519.40	464.50	340.80	274.20	172.90	10.40	1836.70	3266.90	1293.30	830.40	1045.00	876.68
27	1982	1982	527.70	504.60	489.50	230.80	389.90	487.80	705.10	3390.20	1747.00	1141.70	794.70	914.60	947.92
28	1983	1983	1111.20	891.70	906.50	247.10	348.70	313.70	375.00	1925.20	2288.40	1383.50	929.00	685.60	954.21
29	1984	1984	667.10	884.10	428.60	414.50	328.00	280.70	324.20	786.40	2410.20	954.80	657.80	632.60	730.42
30	1985	1985	635.50	551.40	533.70	70.10	184.20	150.00	576.80	3006.50	1534.70	1343.80	598.40	827.30	839.29
31	1986	1986	729.70	474.90	248.30	516.00	298.10	393.90	1232.90	1887.70	817.10	1137.70	982.40	982.30	811.86
32	1987	1987	824.50	852.60	337.30	644.40	188.20	421.30	331.30	1859.50	2033.70	594.20	554.70	873.70	795.40
33	1988	1988	838.00	665.00	182.70	51.50	661.00	574.50	526.80	1646.80	1758.40	391.10	448.60	551.10	689.52
34	1989	1989	1162.20	967.60	638.90	201.40	274.90	420.90	286.90	1042.80	2508.30	1023.90	632.70	792.80	830.61
35	1990	1990	1323.90	684.50	600.30	330.10	219.90	220.10	160.00	715.50	2066.00	930.30	548.10	675.50	708.09
36	1991	1991	745.50	875.60	396.00	380.00	212.10	392.50	328.10	730.90	3521.10	1633.10	1058.40	1161.30	953.29
37	1992	1992	902.70	346.20	332.90	242.50	215.90	141.90	277.00	1409.30	1436.70	721.40	500.10	787.90	611.65
38	1993	1993	867.20	466.40	354.50	238.50	341.90	459.90	273.20	1034.40	2366.00	1300.90	726.50	655.30	758.46
39	1994	1994	985.80	708.20	472.30	273.70	323.20	283.20	370.10	1785.50	1315.30	759.00	167.00	587.80	671.27
40	1995	1995	738.60	797.00	501.40	303.00	516.50	307.50	377.10	1662.50	2382.80	1235.10	621.20	359.20	817.52
41	1996	1996	365.10	827.00	647.80	385.30	275.80	308.70	292.20	1004.80	2829.70	1783.70	1189.90	856.60	898.99
AVERAGE			874.93	678.75	469.02	342.91	319.01	292.11	352.74	1488.99	2587.66	1304.47	851.08	867.50	870.85
MAXIMUM			1376.20	1105.30	906.50	644.40	661.00	574.50	1232.90	3973.40	3736.40	2268.90	1346.10	1592.30	1120.04
MINIMUM			365.10	294.00	182.70	51.50	136.70	141.90	10.40	352.50	817.10	391.10	167.00	359.20	611.65

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 14 Lobstick Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1045.64	1491.70	1890.44	2026.40	2010.74	1776.80	1265.16	1180.25	663.53	999.21	1134.07	1518.68	1414.00
2	1957	1957	1308.38	1609.94	1944.59	2026.52	2277.70	2227.96	2028.05	820.62	1682.25	2032.68	2017.38	2343.59	1855.92
3	1958	1958	1682.58	1575.66	1929.38	2041.50	2016.17	1785.99	1891.79	798.66	1054.93	1980.79	1405.93	1092.73	1603.49
4	1959	1959	1117.46	1447.21	1856.95	2008.71	1975.83	1748.25	1841.69	827.55	981.90	1183.83	1160.06	2048.17	1512.00
5	1960	1960	1422.48	1563.90	1934.09	2039.55	2015.24	1779.58	2032.45	1035.25	990.69	1185.65	1177.80	1070.04	1517.66
6	1961	1961	1046.37	1567.19	1925.01	2017.49	2000.01	1773.98	1278.87	946.27	764.02	1206.25	1176.64	1071.55	1395.35
7	1962	1962	1203.03	1603.82	1946.40	2054.99	2017.78	1774.93	1258.44	835.19	829.03	1130.86	1136.63	1021.66	1398.44
8	1963	1963	1117.97	1528.27	1934.00	2036.35	2005.07	1759.99	1230.43	825.25	768.94	1192.32	1120.06	1015.55	1375.35
9	1964	1964	1143.91	1580.56	1932.74	2050.57	2025.07	1765.39	1254.69	922.02	721.48	1085.43	1135.48	1293.47	1406.33
10	1965	1965	1291.78	1584.87	1954.20	2058.57	2012.92	1777.23	1933.49	1199.61	914.09	2275.77	2345.07	2002.09	1779.09
11	1966	1966	1892.57	2093.78	1908.26	2029.37	2296.30	2030.06	2008.59	981.05	839.59	1191.14	1128.09	1058.53	1617.23
12	1967	1967	1117.46	1513.39	1889.22	2038.90	1998.60	1756.71	1224.32	778.97	896.23	1155.74	1416.18	2088.73	1486.00
13	1968	1968	2198.19	1676.33	1909.27	2026.51	2254.70	1986.06	1866.79	908.28	846.66	3377.26	1987.77	2038.59	1923.77
14	1969	1969	2332.71	1560.12	1829.00	2252.40	2295.00	2224.98	2032.15	1103.38	826.14	2352.32	1957.28	1123.05	1824.98
15	1970	1970	1136.50	1566.28	1952.36	2048.49	2011.45	1771.25	1220.99	761.80	881.88	2022.08	1961.71	1219.06	1545.88
16	1971	1971	1704.47	1531.32	1898.00	2033.31	1992.24	1744.02	1233.51	1135.20	671.11	1155.21	1134.53	1022.40	1436.93
17	1972	1972	1189.55	1578.77	1903.34	1994.82	1953.74	1760.25	1252.06	719.89	928.67	1124.53	1176.21	1061.83	1384.31
18	1973	1973	1122.16	1545.66	1904.58	2012.67	1926.48	1758.38	1781.83	1020.27	710.34	1162.97	1171.11	1064.99	1429.43
19	1974	1974	1109.46	1585.18	1929.45	2038.03	2010.12	1787.67	1272.05	1005.54	683.46	1784.30	1427.18	1389.27	1500.58
20	1975	1975	1144.06	1568.68	1929.70	2040.90	1979.39	1765.34	2028.85	747.35	1870.94	1492.23	1641.01	2053.35	1683.99
21	1976	1976	1490.31	1579.62	1936.65	2042.54	2297.50	1879.47	2030.05	888.32	1189.96	2036.58	1869.49	2053.65	1770.88
22	1977	1977	1555.27	1798.00	1913.81	2220.16	2295.80	1914.37	1996.69	865.71	1420.81	2644.14	2021.82	1935.11	1879.44
23	1978	1978	1294.13	1588.33	1925.07	2043.66	2005.53	1762.83	2026.15	2087.82	2049.96	2539.98	1966.43	2061.65	1945.63
24	1979	1979	1555.39	1747.03	1916.49	2035.35	2223.60	2071.06	2030.05	749.67	2034.46	2256.22	1974.23	1127.30	1807.50
25	1980	1980	1496.64	1563.99	1918.87	2029.26	2296.90	1997.10	2030.65	850.64	2220.27	3027.68	1973.43	1223.53	1883.75
26	1981	1981	1094.47	1596.05	1933.68	2045.66	2022.33	1778.97	1268.22	962.48	957.30	2029.68	1468.49	1638.29	1564.76
27	1982	1982	1158.18	1587.40	1938.72	2047.05	2018.43	1771.67	1927.47	1823.72	1310.48	2035.98	1624.93	1577.76	1734.29
28	1983	1983	1687.69	1573.78	1930.03	2048.86	2199.90	1960.56	2031.15	751.62	1232.07	2133.43	1972.93	1302.93	1733.79
29	1984	1984	1145.03	1595.18	1940.58	2044.56	2020.10	1781.54	1831.55	1040.98	754.46	1137.57	1120.14	1031.64	1450.60
30	1985	1985	1108.64	1577.65	1933.38	2052.76	2022.60	1779.52	1210.88	809.46	997.70	1132.92	1151.46	1008.63	1395.86
31	1986	1986	1122.03	1582.96	1933.97	2036.25	2004.32	1751.26	1191.14	944.91	1050.21	1178.70	1143.39	1009.73	1409.78
32	1987	1987	1058.46	1497.77	1882.64	2000.81	1973.88	1738.69	1246.30	806.69	737.21	1179.38	1218.88	1064.24	1364.62
33	1988	1988	1119.83	1534.88	1944.88	2053.25	2017.63	1773.87	1260.32	982.36	927.91	1205.23	1181.55	1040.61	1417.79
34	1989	1989	1127.57	1544.08	1916.67	2051.20	2003.29	1729.02	1259.85	947.65	896.15	1184.33	1161.43	974.93	1397.25
35	1990	1990	1084.84	1585.37	1941.04	2067.05	2001.81	1777.33	1277.10	1033.17	886.04	1122.83	1164.82	1040.00	1412.68
36	1991	1991	1123.08	1561.04	1948.40	2061.80	2019.14	1774.20	1285.14	985.23	814.18	1174.02	1083.69	963.61	1397.04
37	1992	1992	1098.40	1578.25	1961.39	2050.13	2022.49	1772.54	1262.28	870.60	1019.36	1166.17	1093.17	1013.23	1406.05
38	1993	1993	1028.21	1575.16	1910.31	2062.30	2015.03	1762.71	1239.43	887.52	877.76	1137.05	1113.99	958.92	1377.87
39	1994	1994	1111.01	1547.42	1941.94	2040.74	2001.42	1735.12	1211.13	836.31	1052.01	1166.40	1222.23	1070.93	1408.63
40	1995	1995	1108.47	1530.76	1933.20	2027.16	1964.05	1745.88	1196.70	997.20	870.48	1125.33	1140.99	1064.73	1389.86
41	1996	1996	1140.72	1506.20	1875.82	2041.44	2031.74	1721.19	1242.26	883.48	762.84	1051.56	1108.25	982.00	1359.41
AVERAGE			1293.54	1585.94	1921.43	2048.24	2061.76	1822.77	1560.75	964.83	1038.72	1579.41	1428.92	1335.14	1551.18
MAXIMUM			2332.71	2093.78	1961.39	2252.40	2297.50	2227.96	2032.45	2087.82	2220.27	3377.26	2345.07	2343.59	1945.63
MINIMUM			1028.21	1447.21	1829.00	1994.82	1926.48	1721.19	1191.14	719.89	663.53	999.21	1083.69	958.92	1359.41

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 16 West Forebay Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	18.200	11.900	7.200	5.700	4.800	4.400	4.600	10.100	64.000	32.800	20.900	21.600	17.194
2	1957	1957	20.100	12.200	10.600	9.500	8.300	8.100	9.200	34.000	56.800	26.100	21.900	24.500	20.144
3	1958	1958	17.200	12.000	8.600	6.200	5.100	4.600	4.500	30.500	56.700	23.800	17.500	10.800	16.502
4	1959	1959	14.600	10.000	7.400	5.800	5.000	4.300	4.000	21.800	43.300	21.100	20.800	26.000	15.367
5	1960	1960	21.500	12.500	8.500	6.400	5.500	5.200	6.400	23.600	29.800	23.900	12.300	9.600	13.826
6	1961	1961	17.600	13.300	9.100	5.400	4.100	3.500	3.300	8.200	50.600	19.700	15.000	16.200	13.836
7	1962	1962	10.200	7.500	6.000	4.800	4.100	3.600	3.700	14.500	47.900	22.000	16.200	13.100	12.814
8	1963	1963	10.500	8.400	6.900	5.800	5.400	4.600	4.800	25.600	47.500	17.300	16.500	18.300	14.313
9	1964	1964	16.500	9.900	7.200	6.100	5.500	5.400	5.400	15.400	58.300	39.200	25.000	29.600	18.654
10	1965	1965	19.900	11.200	8.600	7.000	5.800	5.200	5.000	18.400	66.200	37.200	24.500	18.700	19.014
11	1966	1966	21.200	20.600	8.500	7.400	7.100	5.100	5.900	18.000	36.300	19.900	17.500	9.300	14.760
12	1967	1967	13.800	15.500	8.100	7.900	6.500	6.200	7.600	35.800	45.600	19.900	17.800	28.600	17.796
13	1968	1968	23.800	17.500	11.400	7.500	5.800	5.200	4.200	19.800	61.800	42.200	21.200	20.700	20.144
14	1969	1969	25.600	14.900	11.600	10.000	7.900	6.700	6.600	15.500	65.000	30.300	14.800	13.100	18.517
15	1970	1970	10.300	7.800	5.900	5.000	3.900	3.200	4.400	41.000	45.600	32.900	18.800	14.000	16.146
16	1971	1971	21.600	5.500	4.000	3.300	3.000	4.300	4.000	6.600	62.100	25.400	11.000	12.300	13.598
17	1972	1972	19.000	10.900	6.200	2.600	5.500	7.200	4.600	42.000	32.300	18.600	7.600	7.600	13.740
18	1973	1973	18.900	12.800	12.800	6.900	6.500	4.500	5.600	12.000	56.400	25.400	11.800	9.700	15.283
19	1974	1974	13.900	11.200	8.900	2.300	6.400	2.800	3.100	15.500	67.300	33.300	18.500	18.100	16.771
20	1975	1975	11.600	10.400	8.300	6.000	5.800	5.200	8.700	45.300	50.500	18.600	18.500	25.500	17.901
21	1976	1976	17.800	11.800	9.100	9.600	6.300	4.000	7.900	26.700	63.100	23.600	20.300	25.300	18.804
22	1977	1977	19.600	18.800	11.800	9.400	7.400	3.200	6.200	29.500	60.500	32.400	24.800	17.000	20.093
23	1978	1978	16.300	12.000	7.900	7.100	2.100	3.900	10.400	68.800	46.100	36.600	21.100	20.200	21.185
24	1979	1979	18.200	19.100	10.200	9.200	5.500	6.300	7.900	40.400	56.000	26.600	16.100	11.000	18.934
25	1980	1980	19.500	13.100	10.300	8.300	6.700	5.200	7.500	32.500	72.000	32.100	16.600	13.900	19.841
26	1981	1981	11.100	10.300	8.800	5.800	2.900	2.100	2.700	27.800	60.300	28.000	16.700	19.800	16.393
27	1982	1982	10.900	9.400	8.600	4.900	5.400	6.800	12.400	61.800	38.700	24.000	16.100	17.600	18.138
28	1983	1983	22.500	16.500	14.200	5.300	5.400	5.200	7.200	36.000	45.600	28.400	16.900	13.900	18.166
29	1984	1984	12.500	14.100	7.600	6.500	4.000	3.200	6.400	12.800	45.700	20.600	14.600	11.900	13.334
30	1985	1985	13.300	10.800	9.000	2.800	2.400	1.300	8.400	48.200	30.300	24.400	12.200	15.400	14.963
31	1986	1986	14.400	9.000	5.400	7.000	2.900	3.300	17.900	32.700	19.600	20.300	20.600	17.900	14.323
32	1987	1987	16.500	15.400	7.900	8.900	1.600	4.900	5.000	33.800	38.500	16.300	10.600	15.100	14.605
33	1988	1988	15.800	12.500	4.800	.900	5.900	5.400	7.800	29.700	33.200	9.400	9.500	12.100	12.257
34	1989	1989	21.900	17.700	11.400	3.900	2.400	3.300	4.000	19.800	45.000	19.900	12.400	15.300	14.788
35	1990	1990	23.500	14.400	10.300	5.900	2.200	2.800	3.200	13.500	36.700	21.700	11.200	11.900	13.160
36	1991	1991	15.300	16.700	7.300	6.700	2.500	4.800	4.300	17.200	59.200	29.500	21.300	21.800	17.247
37	1992	1992	17.100	8.400	6.500	4.200	3.700	1.500	5.000	24.800	29.300	15.500	10.800	13.600	11.740
38	1993	1993	17.400	9.800	7.400	6.100	1.200	4.500	4.300	18.400	43.800	26.300	18.300	16.100	14.532
39	1994	1994	19.000	13.200	8.500	5.200	4.600	2.400	5.000	33.000	27.700	15.500	7.200	10.300	12.684
40	1995	1995	13.700	14.700	9.200	4.800	5.600	4.100	6.600	30.000	43.100	26.300	15.100	8.400	15.178
41	1996	1996	9.400	17.200	12.800	6.800	3.000	3.700	4.300	21.200	53.000	33.400	23.900	16.500	17.154
AVERAGE			16.871	12.705	8.654	6.120	4.773	4.420	6.098	27.127	48.571	25.376	16.693	16.398	16.191
MAXIMUM			25.600	20.600	14.200	10.000	8.300	8.100	17.900	68.800	72.000	42.200	25.000	29.600	21.185
MINIMUM			9.400	5.500	4.000	.900	1.200	1.300	2.700	6.600	19.600	9.400	7.200	7.600	11.740

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 17 Whitefish Falls Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1054.37	1488.14	1878.88	2032.10	2015.54	1781.20	1283.33	1202.42	737.80	1041.95	1162.59	1530.45	1431.19
2	1957	1957	1319.01	1606.68	1936.43	2036.02	2286.00	2236.06	2050.83	866.69	1749.33	2068.72	2046.90	2071.59	1852.51
3	1958	1958	1740.67	1572.20	1919.21	2047.70	2021.27	1790.59	1909.86	841.23	1121.90	2014.53	1431.04	1093.70	1624.27
4	1959	1959	1122.59	1441.75	1845.59	2014.51	1980.83	1752.55	1859.26	861.42	1035.47	1214.87	1188.48	2064.34	1527.37
5	1960	1960	1434.51	1560.94	1923.82	2045.95	2020.74	1784.78	2052.43	1070.92	1030.76	1219.49	1197.72	1069.82	1531.48
6	1961	1961	1054.50	1565.03	1915.34	2022.89	2004.11	1777.48	1295.74	966.54	824.89	1235.89	1199.25	1077.92	1409.18
7	1962	1962	1203.76	1595.86	1933.63	2059.79	2021.88	1778.53	1275.71	861.76	887.20	1162.80	1160.45	1024.93	1411.25
8	1963	1963	1119.01	1521.21	1922.14	2042.15	2010.47	1764.59	1248.80	862.92	826.71	1219.57	1144.17	1024.02	1389.66
9	1964	1964	1150.94	1575.00	1921.18	2056.67	2030.57	1770.79	1273.67	949.49	790.05	1134.57	1168.10	1313.24	1424.98
10	1965	1965	1302.21	1580.61	1944.04	2065.57	2018.71	1782.43	1952.06	1230.08	990.56	2064.25	2048.16	2072.82	1753.27
11	1966	1966	1904.30	2098.92	1898.00	2036.77	2303.40	2035.16	2028.06	1011.12	886.17	1220.99	1153.20	1058.00	1631.99
12	1967	1967	1121.79	1513.43	1878.55	2046.80	2005.10	1762.91	1245.49	826.84	952.11	1185.59	1441.60	2067.32	1500.49
13	1968	1968	2142.86	1720.62	1901.90	2034.01	2260.50	1991.26	1884.56	940.15	918.74	2070.72	2047.30	2071.72	1830.51
14	1969	1969	2142.81	1601.81	1821.83	2262.40	2302.90	2231.68	2052.33	1130.95	901.41	2068.60	2031.95	1126.33	1806.39
15	1970	1970	1137.33	1558.62	1939.49	2053.49	2015.35	1774.45	1238.96	814.87	937.75	2064.92	1988.13	1223.23	1562.03
16	1971	1971	1716.60	1521.36	1883.23	2036.61	1995.24	1748.32	1251.08	1153.87	743.49	1190.55	1153.15	1024.87	1450.53
17	1972	1972	1199.09	1574.20	1890.78	1997.42	1959.24	1767.45	1270.24	773.96	971.25	1153.07	1191.43	1059.60	1398.05
18	1973	1973	1131.59	1543.00	1898.62	2019.57	1932.98	1762.88	1801.00	1044.34	777.01	1198.31	1190.53	1064.86	1444.71
19	1974	1974	1113.89	1580.92	1919.58	2040.33	2016.52	1790.47	1288.73	1033.11	761.04	1827.54	1453.30	1397.54	1517.35
20	1975	1975	1146.19	1563.62	1919.24	2046.90	1985.19	1770.54	2051.13	804.72	1931.72	1520.77	1667.13	2069.02	1701.89
21	1976	1976	1498.64	1575.96	1926.98	2052.14	2303.80	1883.47	2051.53	927.10	1263.33	2070.12	1897.40	2069.12	1789.69
22	1977	1977	1565.40	1801.34	1906.84	2229.56	2303.20	1917.57	2016.46	907.29	1491.59	2069.96	2045.33	2004.14	1851.49
23	1978	1978	1300.96	1584.87	1914.20	2050.76	2007.63	1766.73	2050.13	2168.69	2106.33	2066.84	2047.40	2072.02	1927.11
24	1979	1979	1564.12	1750.66	1907.93	2044.55	2229.10	2077.36	2051.53	802.14	2100.73	2069.85	2050.20	1128.47	1811.94
25	1980	1980	1506.67	1561.63	1910.41	2037.56	2303.60	2002.30	2051.73	895.21	2093.24	2073.61	2049.90	1227.60	1806.22
26	1981	1981	1096.10	1590.88	1923.71	2051.46	2025.23	1781.07	1284.49	1002.36	1027.87	2067.62	1492.81	1648.26	1581.15
27	1982	1982	1159.61	1581.34	1928.56	2051.95	2023.83	1778.47	1953.44	1897.59	1359.46	2069.92	1648.65	1585.53	1752.43
28	1983	1983	1700.72	1574.82	1925.46	2054.16	2205.30	1965.76	2051.93	799.69	1287.95	2067.85	2049.70	1307.00	1747.57
29	1984	1984	1148.06	1593.82	1929.42	2051.06	2024.10	1784.74	1851.52	1065.85	810.44	1168.11	1142.35	1033.71	1463.94
30	1985	1985	1112.47	1572.99	1923.61	2055.56	2025.00	1780.82	1232.85	869.73	1038.27	1167.26	1171.28	1014.20	1410.83
31	1986	1986	1126.96	1576.50	1920.61	2043.25	2007.22	1754.56	1222.61	989.68	1080.09	1208.94	1171.61	1017.81	1424.10
32	1987	1987	1065.49	1497.71	1871.77	2009.71	1975.48	1743.59	1264.87	852.56	785.99	1205.62	1237.10	1069.52	1379.22
33	1988	1988	1126.16	1531.91	1930.92	2054.15	2023.52	1779.27	1281.69	1024.13	971.39	1224.58	1198.67	1042.88	1430.05
34	1989	1989	1140.00	1546.32	1909.31	2055.10	2005.69	1732.32	1277.42	979.52	951.42	1214.17	1181.45	980.40	1412.04
35	1990	1990	1098.87	1584.30	1932.58	2072.95	2004.01	1780.13	1293.87	1058.74	933.01	1154.48	1183.64	1042.07	1425.84
36	1991	1991	1128.91	1562.28	1936.93	2068.50	2021.64	1779.00	1303.01	1014.50	883.65	1213.46	1112.61	975.58	1414.28
37	1992	1992	1106.04	1571.19	1949.12	2054.33	2026.19	1774.04	1280.85	907.48	1058.93	1191.61	1111.58	1017.00	1417.79
38	1993	1993	1036.15	1569.50	1898.94	2068.40	2016.23	1767.21	1257.30	917.99	931.83	1173.29	1139.90	965.19	1392.40
39	1994	1994	1120.54	1545.16	1931.67	2045.94	2006.02	1737.52	1229.71	881.38	1089.98	1191.84	1237.04	1071.40	1421.31
40	1995	1995	1112.70	1530.00	1923.63	2031.96	1969.65	1749.98	1256.73	1000.69	923.85	1161.57	1163.71	1063.30	1405.04
41	1996	1996	1140.65	1507.94	1869.85	2048.24	2034.74	1724.89	1260.14	916.75	826.12	1094.90	1139.77	988.67	1376.56
AVERAGE			1295.45	1585.24	1911.32	2054.36	2066.53	1827.19	1581.39	1003.08	1092.46	1507.40	1452.11	1337.30	1557.08
MAXIMUM			2142.86	2098.92	1949.12	2262.40	2303.80	2236.06	2052.43	2168.69	2106.33	2073.61	2050.20	2072.82	1927.11
MINIMUM			1036.15	1441.75	1821.83	1997.42	1932.98	1724.89	1222.61	773.96	737.80	1041.95	1111.58	965.19	1376.56

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 18 Jacopie Spillway

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	1957	1957	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	234.64	19.29
3	1958	1958	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	1959	1959	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	1960	1960	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	1961	1961	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	1962	1962	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	1963	1963	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	1964	1964	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	1965	1965	.00	.00	.00	.00	.00	.00	.00	.00	.00	206.41	321.41	.00	44.83
11	1966	1966	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	1967	1967	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	1968	1968	67.65	.00	.00	.00	.00	.00	.00	.00	.00	1306.43	.00	.00	116.70
14	1969	1969	165.15	.00	.00	.00	.00	.00	.00	.00	.00	271.71	.00	.00	37.10
15	1970	1970	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	1971	1971	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	1972	1972	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	1973	1973	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	1974	1974	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	1975	1975	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	1976	1976	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	1977	1977	.00	.00	.00	.00	.00	.00	.00	.00	.00	564.27	1.29	.00	48.03
23	1978	1978	.00	.00	.00	.00	.00	.00	.00	.00	.00	467.43	.00	.00	39.70
24	1979	1979	.00	.00	.00	.00	.00	.00	.00	.00	.00	170.66	.00	.00	14.49
25	1980	1980	.00	.00	.00	.00	.00	.00	.00	.00	165.59	986.17	.00	.00	97.37
26	1981	1981	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	1982	1982	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	1983	1983	.00	.00	.00	.00	.00	.00	.00	.00	.00	51.67	.00	.00	4.39
29	1984	1984	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	1985	1985	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	1986	1986	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32	1987	1987	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
33	1988	1988	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34	1989	1989	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35	1990	1990	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36	1991	1991	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
37	1992	1992	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
38	1993	1993	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
39	1994	1994	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
40	1995	1995	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
41	1996	1996	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AVERAGE			5.68	.00	.00	.00	.00	.00	.00	.00	4.04	98.16	7.87	5.72	10.29
MAXIMUM			165.15	.00	.00	.00	.00	.00	.00	.00	165.59	1306.43	321.41	234.64	116.70
MINIMUM			.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 19 East Forebay Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	10.100	6.600	4.000	3.200	2.700	2.500	2.600	5.600	35.600	18.200	11.600	12.000	9.564
2	1957	1957	11.200	6.800	5.900	5.300	4.600	4.500	5.100	18.900	31.600	14.500	12.200	13.600	11.204
3	1958	1958	9.600	6.700	4.800	3.500	2.800	2.600	2.500	17.000	31.500	13.200	9.700	6.000	9.183
4	1959	1959	8.100	5.600	4.100	3.200	2.800	2.400	2.200	12.100	24.100	11.800	11.600	14.400	8.547
5	1960	1960	11.900	6.900	4.700	3.600	3.100	2.900	3.500	13.100	16.600	13.300	6.800	5.300	7.674
6	1961	1961	9.800	7.400	5.000	3.000	2.300	1.900	1.800	4.500	28.200	10.900	8.300	9.000	7.676
7	1962	1962	5.700	4.200	3.400	2.700	2.300	2.000	2.100	8.100	26.600	12.200	9.000	7.300	7.141
8	1963	1963	5.800	4.700	3.800	3.200	3.000	2.600	2.700	14.200	26.400	9.600	9.200	10.200	7.957
9	1964	1964	9.200	5.500	4.000	3.400	3.100	3.000	3.000	8.600	32.400	21.800	13.900	16.500	10.383
10	1965	1965	11.100	6.200	4.800	3.900	3.200	2.900	2.800	10.300	36.800	20.700	13.600	10.400	10.581
11	1966	1966	11.800	11.400	4.700	4.100	3.900	2.800	3.300	10.000	20.200	11.100	9.700	5.200	8.198
12	1967	1967	7.700	8.600	4.500	4.400	3.600	3.500	4.200	19.900	25.400	11.000	9.900	15.900	9.895
13	1968	1968	13.300	9.700	6.400	4.200	3.200	2.900	2.400	11.000	34.400	23.500	11.800	11.500	11.221
14	1969	1969	14.200	8.300	6.400	5.600	4.400	3.700	3.600	8.600	36.200	16.900	8.200	7.300	10.293
15	1970	1970	5.700	4.400	3.300	2.800	2.200	1.800	2.500	22.800	25.400	18.300	10.500	7.800	9.002
16	1971	1971	12.000	3.000	2.200	1.800	1.700	2.400	2.200	3.600	34.600	14.100	6.100	6.900	7.553
17	1972	1972	10.600	6.100	3.400	1.400	3.000	4.000	2.600	23.400	18.000	10.300	4.200	4.300	7.645
18	1973	1973	10.500	7.100	7.100	3.800	3.600	2.500	3.100	6.700	31.400	14.100	6.600	5.400	8.496
19	1974	1974	7.700	6.200	4.900	1.300	3.500	1.600	1.700	8.600	37.400	18.500	10.300	10.100	9.315
20	1975	1975	6.500	5.800	4.600	3.400	3.200	2.900	4.800	25.200	28.100	10.300	10.300	14.200	9.961
21	1976	1976	9.900	6.600	5.100	5.400	3.500	2.200	4.400	14.900	35.100	13.100	11.300	14.100	10.474
22	1977	1977	10.900	10.400	6.500	5.200	4.100	1.800	3.500	16.400	33.700	18.000	13.800	9.400	11.165
23	1978	1978	9.100	6.700	4.400	3.900	1.200	2.200	5.800	38.300	25.600	20.300	11.700	11.200	11.779
24	1979	1979	10.100	10.600	5.700	5.100	3.000	3.500	4.400	22.500	31.200	14.800	8.900	6.100	10.525
25	1980	1980	10.800	7.300	5.700	4.600	3.700	2.900	4.200	18.100	40.100	17.900	9.200	7.700	11.035
26	1981	1981	6.200	5.700	4.900	3.200	1.600	1.200	1.500	15.500	33.500	15.600	9.300	11.000	9.120
27	1982	1982	6.100	5.200	4.800	2.700	3.000	3.800	6.900	34.400	21.500	13.300	8.900	9.800	10.082
28	1983	1983	12.500	9.200	7.900	3.000	3.000	2.900	4.000	20.000	25.400	15.800	9.400	7.700	10.108
29	1984	1984	6.900	7.800	4.200	3.600	2.200	1.800	3.600	7.100	25.400	11.500	8.100	6.600	7.405
30	1985	1985	7.400	6.000	5.000	1.600	1.300	.700	4.700	26.800	16.900	13.600	6.800	8.600	8.332
31	1986	1986	8.000	5.000	3.000	3.900	1.600	1.800	9.900	18.200	10.900	11.300	11.500	10.000	7.966
32	1987	1987	9.200	8.600	4.400	5.000	.900	2.700	2.800	18.800	21.400	9.100	5.900	8.400	8.135
33	1988	1988	8.800	6.900	2.700	.500	3.300	3.000	4.300	16.500	18.400	5.200	5.300	6.700	6.804
34	1989	1989	12.200	9.800	6.300	2.200	1.300	1.800	2.200	11.000	25.000	11.100	6.900	8.500	8.213
35	1990	1990	13.100	8.000	5.700	3.300	1.200	1.600	1.800	7.500	20.400	12.100	6.200	6.600	7.321
36	1991	1991	8.500	9.300	4.100	3.700	1.400	2.700	2.400	9.600	32.900	16.400	11.800	12.100	9.592
37	1992	1992	9.500	4.700	3.600	2.300	2.100	.800	2.800	13.800	16.300	8.600	6.000	7.600	6.530
38	1993	1993	9.700	5.500	4.100	3.400	.700	2.500	2.400	10.300	24.400	14.600	10.200	8.900	8.094
39	1994	1994	10.500	7.300	4.800	2.900	2.600	1.400	2.800	18.400	15.400	8.600	4.000	5.700	7.061
40	1995	1995	7.600	8.200	5.100	2.700	3.100	2.300	3.700	16.700	24.000	14.600	8.400	4.600	8.442
41	1996	1996	5.200	9.600	7.100	3.800	1.700	2.000	2.400	11.800	29.500	18.600	13.300	9.200	9.546
AVERAGE			9.383	7.063	4.807	3.410	2.651	2.463	3.395	15.093	27.022	14.107	9.278	9.117	9.005
MAXIMUM			14.200	11.400	7.900	5.600	4.600	4.500	9.900	38.300	40.100	23.500	13.900	16.500	11.779
MINIMUM			5.200	3.000	2.200	.500	.700	.700	1.500	3.600	10.900	5.200	4.000	4.300	6.530

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 20 Churchill Falls Power Flow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	696.22	1155.04	1487.70	1639.88	1622.86	1388.68	1080.58	812.38	390.23	704.19	822.18	1185.82	1079.12
2	1957	1957	961.58	1273.60	1547.06	1645.89	1894.78	1844.82	1849.95	490.29	1396.56	1725.82	1705.86	1727.45	1501.48
3	1958	1958	1381.03	1239.08	1528.78	1655.76	1628.67	1398.15	1706.51	462.94	769.92	1670.41	1088.37	743.68	1271.58
4	1959	1959	762.34	1107.73	1454.57	1622.32	1588.29	1359.98	1655.65	478.23	676.23	870.48	848.04	1721.35	1174.18
5	1960	1960	1077.61	1228.04	1533.28	1654.11	1628.44	1392.66	1849.95	688.56	664.04	876.59	852.47	719.13	1177.44
6	1961	1961	696.05	1232.62	1525.11	1630.49	1611.04	1384.37	1092.18	575.70	469.88	890.57	855.50	730.92	1055.26
7	1962	1962	841.00	1260.21	1541.77	1667.03	1628.79	1385.52	1072.47	474.57	530.56	818.88	817.44	676.31	1056.78
8	1963	1963	756.47	1186.17	1530.69	1649.92	1618.09	1372.20	1046.18	481.82	469.91	872.97	801.39	678.29	1036.03
9	1964	1964	791.75	1240.68	1529.94	1664.61	1638.26	1378.78	1071.33	562.76	439.26	800.27	829.97	973.41	1073.73
10	1965	1965	944.70	1246.97	1553.56	1674.00	1626.52	1390.30	1748.97	844.70	644.06	1727.26	1708.07	1725.82	1401.75
11	1966	1966	1546.62	1769.68	1507.49	1645.45	1911.45	1642.54	1825.41	625.75	523.13	875.89	810.91	707.24	1278.30
12	1967	1967	761.15	1182.30	1487.88	1655.76	1613.33	1371.42	1044.37	451.46	594.24	840.44	1099.11	1725.82	1148.65
13	1968	1968	1786.23	1390.26	1513.09	1642.79	1867.92	1598.81	1681.13	555.82	569.88	1734.94	1705.86	1725.82	1479.39
14	1969	1969	1786.93	1270.24	1433.14	1872.21	1911.45	1839.65	1849.95	744.01	554.36	1727.71	1686.93	777.56	1454.50
15	1970	1970	774.67	1223.22	1547.52	1660.84	1622.16	1381.24	1036.15	442.39	579.89	1725.82	1645.48	874.83	1209.21
16	1971	1971	1359.39	1184.63	1490.25	1642.99	1601.58	1355.75	1047.96	761.91	394.91	848.49	807.26	675.85	1096.42
17	1972	1972	841.23	1240.48	1498.99	1603.46	1566.94	1376.45	1067.50	402.10	605.97	807.27	843.59	707.94	1044.10
18	1973	1973	773.73	1210.32	1510.51	1627.97	1541.32	1370.39	1598.33	655.63	425.23	856.24	845.08	714.29	1091.58
19	1974	1974	753.26	1247.29	1529.24	1646.21	1624.63	1397.04	1085.08	646.31	415.25	1488.98	1111.19	1051.20	1164.91
20	1975	1975	784.31	1229.62	1528.60	1654.86	1593.05	1378.43	1849.95	434.65	1575.20	1174.46	1324.72	1725.82	1349.87
21	1976	1976	1139.65	1242.73	1536.83	1662.09	1911.45	1490.49	1849.95	546.67	914.75	1725.82	1555.68	1725.82	1438.06
22	1977	1977	1207.31	1471.55	1518.12	1839.02	1911.45	1524.14	1814.02	528.37	1141.29	1729.75	1705.88	1656.24	1500.39
23	1978	1978	941.46	1251.73	1523.37	1659.21	1613.45	1373.93	1849.95	1809.87	1747.06	1729.07	1705.86	1725.82	1576.55
24	1979	1979	1205.24	1421.16	1518.40	1654.22	1836.37	1685.37	1849.95	429.37	1747.06	1727.01	1705.86	778.51	1460.30
25	1980	1980	1148.57	1229.12	1520.88	1646.73	1911.45	1609.83	1849.95	517.99	1748.23	1732.69	1705.86	879.10	1454.99
26	1981	1981	733.99	1256.74	1533.36	1659.21	1631.43	1387.25	1080.64	622.49	678.03	1725.82	1149.65	1302.47	1228.44
27	1982	1982	797.31	1246.71	1538.10	1659.21	1631.43	1387.25	1754.44	1535.28	997.71	1725.82	1304.87	1238.62	1400.51
28	1983	1983	1344.04	1244.19	1538.11	1661.70	1812.60	1573.35	1849.95	424.43	929.65	1726.18	1705.86	958.38	1395.62
29	1984	1984	786.58	1261.76	1538.37	1659.21	1630.90	1391.51	1649.31	677.50	452.64	823.48	798.48	684.37	1109.69
30	1985	1985	751.54	1239.16	1533.36	1661.70	1630.90	1386.51	1032.24	501.22	671.83	824.73	826.06	666.89	1057.56
31	1986	1986	766.61	1241.68	1528.37	1651.72	1613.45	1361.38	1027.21	612.52	707.60	864.06	831.08	671.89	1070.45
32	1987	1987	706.43	1166.60	1481.01	1619.33	1581.05	1351.34	1062.33	476.06	424.20	858.55	890.89	721.93	1025.79
33	1988	1988	766.61	1199.05	1538.36	1659.21	1631.42	1387.25	1080.64	645.23	606.51	873.58	851.92	693.63	1075.24
34	1989	1989	783.82	1216.33	1520.38	1661.85	1611.62	1339.17	1074.28	595.17	593.16	869.08	836.32	633.03	1058.65
35	1990	1990	743.65	1252.46	1543.01	1680.77	1609.84	1386.72	1090.31	670.81	570.15	810.47	837.80	692.73	1071.55
36	1991	1991	769.06	1231.77	1545.77	1676.73	1627.65	1386.68	1100.04	628.73	533.31	873.66	772.46	631.81	1062.27
37	1992	1992	747.21	1236.07	1557.43	1661.18	1632.88	1379.84	1078.30	525.96	691.86	844.05	765.65	668.69	1062.71
38	1993	1993	677.62	1235.19	1507.84	1676.32	1621.54	1374.72	1054.38	532.97	572.97	831.75	798.13	618.22	1038.92
39	1994	1994	762.69	1212.68	1541.21	1653.40	1613.25	1343.97	1027.20	504.47	721.97	844.29	888.94	721.12	1066.76
40	1995	1995	751.97	1198.44	1533.48	1639.25	1577.43	1357.31	1055.11	622.03	564.60	820.05	820.10	711.93	1051.89
41	1996	1996	777.48	1177.81	1481.79	1656.59	1641.02	1331.96	1057.21	533.23	472.41	757.46	801.08	641.99	1024.54
AVERAGE			936.22	1252.47	1520.90	1662.32	1673.71	1434.56	1379.20	622.74	735.99	1164.76	1108.97	990.04	1204.27
MAXIMUM			1786.93	1769.68	1557.43	1872.21	1911.45	1844.82	1849.95	1809.87	1748.23	1734.94	1708.07	1727.45	1576.55
MINIMUM			677.62	1107.73	1433.14	1603.46	1541.32	1331.96	1027.20	402.10	390.23	704.19	765.65	618.22	1024.54

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 21 CF2 Station Power Flow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	368.251	385.869	395.176	395.416	395.389	395.020	205.349	373.298	360.082	355.962	352.010	356.632	361.638
2	1957	1957	368.632	386.050	395.267	395.425	395.823	395.744	205.974	372.958	361.273	357.396	353.239	357.733	362.226
3	1958	1958	369.241	385.997	395.238	395.440	395.398	395.037	205.858	372.944	360.387	357.320	352.377	356.017	361.875
4	1959	1959	368.345	385.797	395.123	395.387	395.334	394.974	205.816	372.952	360.256	356.193	352.047	357.390	361.734
5	1960	1960	368.799	385.980	395.245	395.437	395.398	395.026	205.974	373.117	360.239	356.201	352.053	355.983	361.722
6	1961	1961	368.251	385.987	395.235	395.401	395.370	395.013	205.358	372.999	360.121	356.220	352.057	355.999	361.602
7	1962	1962	368.458	386.029	395.261	395.459	395.398	395.015	205.343	372.950	360.149	356.121	352.005	355.923	361.610
8	1963	1963	368.337	385.916	395.244	395.432	395.382	394.994	205.321	372.954	360.121	356.196	351.983	355.926	361.585
9	1964	1964	368.388	385.999	395.242	395.455	395.413	395.004	205.342	372.993	360.106	356.095	352.022	356.336	361.634
10	1965	1965	368.608	386.009	395.276	395.469	395.395	395.025	205.893	373.345	360.210	357.692	353.695	357.396	362.106
11	1966	1966	369.482	386.814	395.205	395.424	395.846	395.423	205.956	373.025	360.147	356.200	351.996	355.966	361.889
12	1967	1967	368.344	385.910	395.176	395.441	395.374	394.992	205.320	372.938	360.182	356.151	352.392	357.396	361.735
13	1968	1968	369.935	386.233	395.215	395.421	395.780	395.354	205.837	372.989	360.170	359.280	353.239	357.396	362.343
14	1969	1969	370.080	386.048	395.088	395.787	395.846	395.736	205.974	373.198	360.163	357.786	353.212	356.064	362.188
15	1970	1970	368.363	385.971	395.270	395.449	395.388	395.008	205.312	372.934	360.175	357.396	353.154	356.199	361.823
16	1971	1971	369.209	385.913	395.180	395.421	395.356	394.965	205.322	373.224	360.084	356.161	351.987	355.922	361.665
17	1972	1972	368.460	385.999	395.194	395.359	395.301	395.000	205.339	372.913	360.188	356.105	352.039	355.966	361.590
18	1973	1973	368.362	385.953	395.209	395.395	395.260	394.991	205.769	373.070	360.099	356.173	352.042	355.976	361.626
19	1974	1974	368.332	386.009	395.241	395.426	395.392	395.033	205.351	373.056	360.094	357.059	352.409	356.444	361.757
20	1975	1975	368.376	385.982	395.237	395.438	395.341	395.003	205.974	372.930	361.530	356.616	352.703	357.396	361.976
21	1976	1976	368.889	386.002	395.251	395.451	395.846	395.183	205.974	372.985	360.591	357.396	353.027	357.396	362.099
22	1977	1977	368.986	386.358	395.223	395.735	395.846	395.236	205.946	372.975	360.909	358.207	353.243	357.297	362.265
23	1978	1978	368.604	386.016	395.228	395.446	395.374	394.996	205.974	374.773	361.778	358.068	353.239	357.396	362.346
24	1979	1979	368.983	386.280	395.223	395.439	395.730	395.491	205.974	372.927	361.778	357.641	353.239	356.066	362.166
25	1980	1980	368.901	385.981	395.226	395.427	395.846	395.372	205.974	372.970	362.019	358.816	353.239	356.205	362.267
26	1981	1981	368.305	386.023	395.248	395.445	395.402	395.017	205.349	373.024	360.258	357.396	352.462	356.796	361.830
27	1982	1982	368.395	386.008	395.255	395.443	395.400	395.017	205.897	374.363	360.162	357.396	352.677	356.705	361.998
28	1983	1983	369.186	386.005	395.255	395.451	395.693	395.314	205.974	372.925	360.611	357.470	353.239	356.315	362.056
29	1984	1984	368.380	386.032	395.252	395.446	395.401	395.024	205.811	373.101	360.113	356.127	351.979	355.935	361.651
30	1985	1985	368.330	385.997	395.248	395.451	395.402	395.016	205.307	372.961	360.250	356.129	352.016	355.910	361.602
31	1986	1986	368.348	386.001	395.240	395.435	395.374	394.976	205.306	373.018	360.300	356.184	352.023	355.917	361.611
32	1987	1987	368.265	385.885	395.165	395.384	395.323	394.959	205.334	372.951	360.099	356.173	352.105	355.986	361.571
33	1988	1988	368.351	385.935	395.256	395.447	395.403	395.014	205.349	373.054	360.186	356.197	352.052	355.947	361.617
34	1989	1989	368.376	385.962	395.227	395.451	395.371	394.941	205.342	373.009	360.180	356.191	352.030	355.871	361.597
35	1990	1990	368.319	386.017	395.263	395.481	395.369	395.016	205.357	373.092	360.168	356.109	352.033	355.946	361.616
36	1991	1991	368.355	385.986	395.267	395.474	395.397	395.016	205.365	373.027	360.150	356.197	351.943	355.871	361.605
37	1992	1992	368.324	385.992	395.286	395.450	395.405	395.006	205.347	372.974	360.278	356.156	351.934	355.913	361.606
38	1993	1993	368.224	385.991	395.207	395.474	395.387	394.997	205.328	372.977	360.170	356.139	351.978	355.864	361.579
39	1994	1994	368.346	385.956	395.260	395.437	395.374	394.949	205.302	372.963	360.320	356.156	352.103	355.986	361.614
40	1995	1995	368.331	385.935	395.248	395.415	395.317	394.970	205.329	373.023	360.166	356.123	352.008	355.973	361.588
41	1996	1996	368.367	385.904	395.166	395.442	395.418	394.930	205.330	372.978	360.122	356.036	351.982	355.875	361.563
AVERAGE			368.605	386.018	395.227	395.451	395.470	395.093	205.591	373.094	360.400	356.747	352.420	356.372	361.809
MAXIMUM			370.080	386.814	395.286	395.787	395.846	395.744	205.974	374.773	362.019	359.280	353.695	357.733	362.346
MINIMUM			368.224	385.797	395.088	395.359	395.260	394.930	205.302	372.913	360.082	355.962	351.934	355.864	361.563

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 23 East Forebay Spill

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	1957	1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	1958	1958	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	1959	1959	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	1960	1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	1961	1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	1962	1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	1963	1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1964	1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	1965	1965	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
11	1966	1966	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
12	1967	1967	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
13	1968	1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14	1969	1969	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
15	1970	1970	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16	1971	1971	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
17	1972	1972	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
18	1973	1973	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
19	1974	1974	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
20	1975	1975	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
21	1976	1976	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
22	1977	1977	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
23	1978	1978	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
24	1979	1979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
25	1980	1980	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
26	1981	1981	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
27	1982	1982	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
28	1983	1983	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
29	1984	1984	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
30	1985	1985	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
31	1986	1986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
32	1987	1987	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
33	1988	1988	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
34	1989	1989	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
35	1990	1990	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
36	1991	1991	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
37	1992	1992	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
38	1993	1993	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
39	1994	1994	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
40	1995	1995	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
41	1996	1996	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
AVERAGE			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAXIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MINIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 24 General Flow CF Station to Gull Island

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1064.47	1540.91	1882.88	2035.30	2018.24	1783.70	1285.93	1185.68	750.31	1060.15	1174.19	1542.45	1440.76
2	1957	1957	1330.21	1659.65	1942.33	2041.32	2290.60	2240.56	2055.93	863.25	1757.84	2083.22	2059.10	2319.83	1883.00
3	1958	1958	1750.27	1625.07	1924.01	2051.20	2024.07	1793.19	1912.36	835.89	1130.31	2027.73	1440.74	1099.70	1633.46
4	1959	1959	1130.69	1493.53	1849.69	2017.71	1983.63	1754.95	1861.46	851.18	1036.49	1226.67	1200.08	2078.74	1535.91
5	1960	1960	1446.41	1614.02	1928.52	2049.55	2023.84	1787.68	2055.93	1061.68	1024.27	1232.79	1204.52	1075.12	1539.16
6	1961	1961	1064.30	1618.61	1920.34	2025.89	2006.41	1779.38	1297.54	948.70	830.01	1246.79	1207.55	1086.92	1416.86
7	1962	1962	1209.46	1646.23	1937.03	2062.49	2024.18	1780.53	1277.81	847.52	890.71	1175.00	1169.45	1032.23	1418.39
8	1963	1963	1124.81	1572.08	1925.94	2045.35	2013.47	1767.19	1251.50	854.78	830.03	1229.17	1153.37	1034.22	1397.62
9	1964	1964	1160.14	1626.68	1925.18	2060.07	2033.67	1773.79	1276.67	935.75	799.37	1156.37	1182.00	1329.74	1435.37
10	1965	1965	1313.31	1632.98	1948.84	2069.47	2021.92	1785.33	1954.86	1218.04	1004.27	2291.36	2383.17	2083.22	1808.68
11	1966	1966	1916.10	2156.49	1902.70	2040.87	2307.30	2037.96	2031.36	998.77	883.28	1232.09	1162.90	1063.20	1640.19
12	1967	1967	1129.49	1568.21	1883.05	2051.20	2008.70	1766.41	1249.69	824.40	954.42	1196.59	1451.50	2083.22	1510.39
13	1968	1968	2223.81	1776.49	1908.30	2038.21	2263.70	1994.16	1886.96	928.81	930.05	3400.65	2059.10	2083.22	1958.44
14	1969	1969	2322.16	1656.29	1828.23	2268.00	2307.30	2235.38	2055.93	1117.21	914.52	2357.21	2040.15	1133.63	1853.79
15	1970	1970	1143.03	1609.19	1942.79	2056.29	2017.55	1776.25	1241.46	815.32	940.06	2083.22	1998.63	1231.03	1571.03
16	1971	1971	1728.60	1570.54	1885.43	2038.41	1996.94	1750.72	1253.28	1135.13	755.00	1204.65	1159.25	1031.77	1458.08
17	1972	1972	1209.69	1626.48	1894.18	1998.82	1962.24	1771.45	1272.84	775.02	966.16	1163.37	1195.63	1063.90	1405.69
18	1973	1973	1142.09	1596.27	1905.72	2023.37	1936.58	1765.38	1804.10	1028.70	785.33	1212.41	1197.13	1070.26	1453.21
19	1974	1974	1121.59	1633.30	1924.48	2041.63	2020.02	1792.07	1290.43	1019.37	775.35	1846.04	1463.60	1407.64	1526.67
20	1975	1975	1152.69	1615.60	1923.84	2050.30	1988.39	1773.44	2055.93	807.58	1936.73	1531.07	1677.43	2083.22	1711.85
21	1976	1976	1508.54	1628.73	1932.08	2057.54	2307.30	1885.67	2055.93	919.65	1275.34	2083.22	1908.70	2083.22	1800.16
22	1977	1977	1576.30	1857.91	1913.34	2234.76	2307.30	1919.37	2019.96	901.34	1502.20	2652.23	2060.42	2013.54	1910.69
23	1978	1978	1310.06	1637.74	1918.60	2054.66	2008.83	1768.93	2055.93	2184.64	2108.84	2554.57	2059.10	2083.22	1978.59
24	1979	1979	1574.22	1807.44	1913.63	2049.65	2232.10	2080.86	2055.93	802.29	2108.84	2255.31	2059.10	1134.57	1836.96
25	1980	1980	1517.47	1615.10	1916.11	2042.16	2307.30	2005.20	2055.93	890.96	2275.84	3077.68	2059.10	1235.30	1914.63
26	1981	1981	1102.30	1642.76	1928.61	2054.66	2026.83	1782.27	1285.99	995.51	1038.28	2083.22	1502.11	1659.26	1590.27
27	1982	1982	1165.71	1632.71	1933.36	2054.65	2026.83	1782.27	1960.34	1909.65	1357.87	2083.22	1657.55	1595.33	1762.51
28	1983	1983	1713.22	1630.19	1933.36	2057.16	2208.30	1968.66	2055.93	797.35	1290.26	2135.32	2059.10	1314.70	1762.07
29	1984	1984	1154.96	1647.79	1933.62	2054.66	2026.30	1786.54	1855.12	1050.61	812.75	1179.61	1150.45	1040.31	1471.34
30	1985	1985	1119.87	1625.16	1928.61	2057.16	2026.30	1781.52	1237.55	874.18	1032.08	1180.86	1178.08	1022.80	1419.16
31	1986	1986	1134.96	1627.68	1923.61	2047.15	2008.82	1756.36	1232.51	985.54	1067.90	1220.24	1183.11	1027.81	1432.07
32	1987	1987	1074.69	1552.48	1876.17	2014.71	1976.38	1746.29	1267.67	849.02	784.30	1214.72	1243.00	1077.92	1387.36
33	1988	1988	1134.96	1584.99	1933.62	2054.65	2026.82	1782.27	1285.99	1018.29	966.70	1229.78	1203.97	1049.58	1436.86
34	1989	1989	1152.20	1602.29	1915.61	2057.30	2006.99	1734.12	1279.62	968.18	953.34	1225.27	1188.35	988.90	1420.25
35	1990	1990	1111.97	1638.48	1938.28	2076.25	2005.21	1781.73	1295.67	1043.90	930.32	1166.58	1189.84	1048.67	1433.16
36	1991	1991	1137.41	1617.76	1941.03	2072.20	2023.04	1781.70	1305.41	1001.76	893.46	1229.86	1124.41	987.68	1423.87
37	1992	1992	1115.54	1622.06	1952.72	2056.63	2028.29	1774.84	1283.65	898.93	1052.14	1200.21	1117.58	1024.60	1424.32
38	1993	1993	1045.85	1621.18	1903.04	2071.80	2016.93	1769.71	1259.70	905.95	933.14	1187.89	1150.10	974.09	1400.50
39	1994	1994	1131.04	1598.64	1936.47	2048.84	2008.62	1738.92	1232.51	877.43	1082.29	1200.44	1241.04	1077.10	1428.38
40	1995	1995	1120.30	1584.38	1928.73	2034.66	1972.75	1752.28	1260.43	995.05	924.76	1176.17	1172.11	1067.90	1413.48
41	1996	1996	1145.85	1563.71	1876.95	2052.04	2036.44	1726.89	1262.54	906.21	832.53	1113.50	1153.07	997.87	1386.11
AVERAGE			1310.51	1638.48	1916.12	2057.77	2069.18	1829.66	1584.79	995.83	1100.43	1619.67	1469.26	1352.14	1576.37
MAXIMUM			2322.16	2156.49	1952.72	2268.00	2307.30	2240.56	2055.93	2184.64	2275.84	3400.65	2383.17	2319.83	1978.59
MINIMUM			1045.85	1493.53	1828.23	1998.82	1936.58	1726.89	1232.51	775.02	750.31	1060.15	1117.58	974.09	1386.11

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 25 Gull Island Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	559.00	469.40	243.20	126.70	70.70	52.70	74.90	199.30	2180.70	935.50	356.90	371.90	470.02
2	1957	1957	386.50	62.60	38.90	106.00	77.80	112.20	171.40	1319.20	1240.20	516.10	619.30	730.20	450.29
3	1958	1958	356.10	180.70	101.70	72.00	50.70	44.50	61.10	1446.90	1018.20	123.40	100.30	62.90	303.28
4	1959	1959	332.40	633.10	357.60	187.30	189.80	150.80	143.60	1375.50	684.10	362.80	268.40	432.90	427.96
5	1960	1960	362.10	218.50	86.20	77.70	51.50	39.10	117.30	623.50	726.00	341.90	253.20	147.00	254.80
6	1961	1961	559.60	202.80	114.30	159.10	111.40	67.40	35.20	1012.40	1469.80	294.00	242.80	106.60	365.72
7	1962	1962	62.20	108.40	57.00	33.20	50.30	63.50	102.70	1392.60	1188.20	539.80	373.10	294.00	357.18
8	1963	1963	352.50	362.00	95.10	92.10	87.10	109.00	192.80	1358.70	1469.70	354.30	428.10	287.20	433.63
9	1964	1964	231.30	175.20	97.70	41.50	17.70	86.50	106.60	1057.30	1613.10	603.70	330.20	615.60	415.63
10	1965	1965	397.40	153.70	16.70	9.20	58.10	77.80	64.10	88.50	794.70	1318.40	401.40	274.10	306.35
11	1966	1966	585.40	636.50	175.00	107.50	52.10	45.00	71.00	839.20	1220.90	344.30	395.50	187.80	389.57
12	1967	1967	336.50	375.30	242.60	72.00	103.50	111.70	199.00	1500.50	966.90	465.80	413.50	512.90	443.68
13	1968	1968	535.60	283.50	155.70	116.70	86.80	124.90	97.60	1081.40	2125.90	510.20	593.00	521.20	520.33
14	1969	1969	510.60	667.10	431.70	204.80	121.30	129.50	102.40	433.50	1105.40	361.40	409.50	279.30	397.08
15	1970	1970	290.10	235.00	37.30	54.50	73.10	78.10	227.20	1542.90	1016.70	357.30	324.60	281.10	378.29
16	1971	1971	490.20	367.30	234.40	116.00	144.00	165.30	186.70	372.30	2626.60	438.20	408.00	295.60	485.68
17	1972	1972	591.20	175.90	204.30	252.40	263.50	94.50	119.70	1731.30	926.20	579.70	283.60	185.40	453.26
18	1973	1973	293.30	279.20	164.60	167.80	352.10	115.20	72.20	736.50	1678.80	411.60	278.50	163.60	391.41
19	1974	1974	363.50	152.60	100.10	104.90	64.60	24.10	59.50	768.50	1725.50	392.30	256.00	348.20	363.49
20	1975	1975	256.90	213.10	102.30	75.10	173.40	87.70	241.10	1579.10	1069.50	255.10	485.30	492.20	420.33
21	1976	1976	302.20	168.20	74.00	50.20	41.00	47.30	48.20	1113.20	1584.40	241.20	546.20	545.30	397.63
22	1977	1977	482.80	277.90	138.40	142.90	132.20	68.60	.90	1176.80	1992.90	481.00	128.90	326.40	446.15
23	1978	1978	566.90	137.40	120.30	60.10	103.10	103.10	257.70	1520.40	882.20	343.60	566.90	420.90	426.17
24	1979	1979	326.40	335.00	137.40	77.30	68.70	68.70	77.30	1603.80	1297.10	635.70	300.60	240.50	433.06
25	1980	1980	335.00	214.80	128.90	103.10	94.50	85.90	189.00	1212.90	1606.30	420.90	446.70	322.10	431.09
26	1981	1981	429.50	120.30	85.90	60.10	41.20	57.60	74.70	850.40	1564.20	524.00	274.90	420.90	376.19
27	1982	1982	212.20	154.60	69.60	60.10	41.20	57.60	226.80	1657.00	755.90	481.00	180.40	257.70	348.65
28	1983	1983	463.90	163.20	69.60	51.50	77.30	43.00	77.30	1626.90	1297.10	506.80	189.00	438.10	418.92
29	1984	1984	249.10	103.10	68.70	60.10	43.00	43.00	43.00	661.40	1550.50	524.00	438.10	266.30	338.27
30	1985	1985	369.40	180.40	85.90	51.50	43.00	60.10	240.50	1271.30	699.20	519.70	343.60	326.40	351.63
31	1986	1986	317.80	171.80	103.10	85.90	103.10	146.00	257.70	884.80	576.40	384.80	326.40	309.20	306.99
32	1987	1987	524.00	429.50	266.30	197.60	214.80	180.40	137.40	1385.60	1683.60	403.70	121.10	137.40	474.22
33	1988	1988	317.80	317.80	68.70	60.10	41.20	57.60	74.70	772.20	924.30	352.20	255.10	234.50	290.65
34	1989	1989	258.60	258.60	130.60	51.00	109.40	222.00	96.50	944.90	970.60	367.60	308.50	443.00	347.68
35	1990	1990	396.40	134.90	52.70	-14.10	115.50	59.40	41.60	684.40	1050.50	568.70	303.40	237.60	303.42
36	1991	1991	309.40	205.70	43.30	-.20	54.20	59.50	8.30	828.90	1178.60	351.90	527.30	447.20	335.44
37	1992	1992	384.20	191.00	3.40	53.30	36.20	82.90	82.70	1185.20	630.40	453.40	550.70	320.20	333.83
38	1993	1993	622.90	194.00	173.80	1.20	75.20	100.40	164.70	1160.80	1040.70	495.60	439.30	493.80	415.66
39	1994	1994	331.20	271.10	58.90	80.10	103.80	205.60	257.70	1260.00	527.10	452.60	127.80	140.20	319.98
40	1995	1995	367.90	319.90	85.50	128.90	227.30	159.90	162.20	852.00	1069.80	535.80	364.00	171.70	370.92
41	1996	1996	280.40	390.80	263.60	69.10	8.20	246.80	155.00	1160.00	1458.00	751.00	429.00	412.00	470.96
AVERAGE			382.94	260.78	128.90	87.96	96.92	95.97	124.88	1079.80	1248.46	470.76	350.95	329.30	389.40
MAXIMUM			622.90	667.10	431.70	252.40	352.10	246.80	257.70	1731.30	2626.60	1318.40	619.30	730.20	520.33
MINIMUM			62.20	62.60	3.40	-14.10	8.20	24.10	.90	88.50	527.10	123.40	100.30	62.90	254.80

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 26 Gull Island Power Flow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1623.47	2010.31	2126.08	2162.00	2088.94	1836.40	1360.83	1384.98	2599.82	1995.65	1531.09	1914.35	1883.56
2	1957	1957	1716.71	1722.25	1981.23	2147.32	2368.40	2352.76	2227.33	2182.45	2598.94	2564.75	2535.89	2569.09	2245.91
3	1958	1958	2106.37	1805.77	2025.71	2123.20	2074.77	1837.69	1973.46	2282.79	2148.51	2151.13	1541.04	1162.60	1936.74
4	1959	1959	1463.09	2126.63	2207.29	2205.01	2173.43	1905.75	2005.06	2226.68	1720.59	1589.47	1468.48	2511.64	1963.87
5	1960	1960	1808.51	1832.52	2014.72	2127.25	2075.34	1826.78	2173.23	1685.18	1750.27	1574.69	1457.72	1222.12	1793.96
6	1961	1961	1623.90	1821.41	2034.64	2184.99	2117.81	1846.78	1332.74	1961.10	2299.81	1540.79	1450.35	1193.52	1782.58
7	1962	1962	1271.66	1754.63	1994.03	2095.69	2074.48	1844.03	1380.51	2240.12	2078.91	1714.80	1542.55	1326.23	1775.57
8	1963	1963	1477.31	1934.08	2021.04	2137.45	2100.57	1876.19	1444.30	2213.48	2299.73	1583.47	1581.47	1321.42	1831.25
9	1964	1964	1391.44	1801.88	2022.88	2101.57	2051.37	1860.29	1383.27	1993.05	2412.47	1760.07	1512.20	1945.34	1851.00
10	1965	1965	1710.71	1786.68	1965.54	2078.67	2080.01	1863.13	2018.96	1306.54	1798.97	2575.67	2536.40	2357.32	2006.12
11	1966	1966	2501.50	2792.99	2077.70	2148.37	2359.40	2082.96	2102.36	1837.97	2104.18	1576.39	1558.40	1251.00	2029.76
12	1967	1967	1465.99	1943.51	2125.65	2123.20	2112.20	1878.11	1448.69	2324.90	1921.32	1662.39	1865.00	2564.73	1951.48
13	1968	1968	2654.34	2059.99	2064.00	2154.91	2350.50	2119.06	1984.56	2010.21	2601.00	2577.36	2535.69	2564.79	2306.05
14	1969	1969	2655.06	2323.39	2259.93	2472.80	2428.60	2364.88	2158.33	1550.71	2019.92	2565.36	2449.65	1412.93	2222.76
15	1970	1970	1433.13	1844.19	1980.09	2110.79	2090.65	1854.35	1468.66	2358.22	1956.76	2440.52	2323.23	1512.13	1949.32
16	1971	1971	2218.80	1937.84	2119.83	2154.41	2140.94	1916.02	1439.98	1507.43	2605.14	1642.85	1567.25	1327.37	1879.95
17	1972	1972	1800.89	1802.38	2098.48	2251.22	2225.74	1865.95	1392.54	2506.32	1892.36	1743.07	1479.23	1249.30	1858.95
18	1973	1973	1435.39	1875.47	2070.32	2191.17	2288.68	1880.58	1876.30	1765.20	2464.13	1624.01	1475.63	1233.86	1844.62
19	1974	1974	1485.09	1785.90	2024.58	2146.53	2084.62	1816.17	1349.93	1787.87	2500.85	2238.34	1719.60	1755.84	1890.16
20	1975	1975	1409.59	1828.70	2026.14	2125.40	2161.79	1861.14	2297.03	2386.68	2598.74	1786.17	2162.73	2564.57	2097.79
21	1976	1976	1810.74	1796.93	2006.08	2107.74	2348.30	1932.97	2104.13	2032.85	2598.11	2324.42	2454.90	2564.97	2171.06
22	1977	1977	2059.10	2135.81	2051.74	2377.66	2439.50	1987.97	2020.86	2078.14	2605.23	2569.51	2189.32	2339.94	2235.83
23	1978	1978	1876.96	1775.14	2038.90	2114.76	2111.93	1872.03	2313.63	2704.98	2598.27	2566.94	2535.50	2504.12	2251.73
24	1979	1979	1900.62	2142.44	2051.03	2126.95	2300.80	2149.56	2133.23	2406.09	2603.17	2567.34	2359.70	1375.07	2176.55
25	1980	1980	1852.47	1829.90	2045.01	2145.26	2401.80	2091.10	2244.93	2103.86	2608.53	2573.07	2505.80	1557.40	2162.43
26	1981	1981	1531.80	1763.06	2014.51	2114.76	2068.03	1839.87	1360.69	1845.91	2595.48	2564.81	1777.01	2080.16	1962.29
27	1982	1982	1377.91	1787.31	2002.96	2114.75	2068.03	1839.87	2187.14	2703.29	2113.77	2564.22	1837.95	1853.03	2037.84
28	1983	1983	2177.12	1793.39	2002.96	2108.66	2285.60	2011.66	2133.23	2424.25	2587.36	2565.02	2248.10	1752.80	2174.44
29	1984	1984	1404.06	1750.89	2002.32	2114.76	2069.30	1829.54	1898.12	1712.01	2363.25	1703.61	1588.55	1306.61	1809.61
30	1985	1985	1489.27	1805.56	2014.51	2108.66	2069.30	1841.62	1478.05	2145.48	1731.28	1700.56	1521.68	1349.20	1770.79
31	1986	1986	1452.76	1799.48	2026.71	2133.05	2111.92	1902.36	1490.21	1870.34	1644.30	1605.04	1509.51	1337.01	1739.06
32	1987	1987	1598.69	1981.98	2142.47	2212.31	2191.18	1926.69	1405.07	2234.62	2467.90	1618.42	1364.10	1215.32	1861.58
33	1988	1988	1452.76	1902.79	2002.32	2114.75	2068.02	1839.87	1360.69	1790.49	1891.00	1581.98	1459.07	1284.08	1727.51
34	1989	1989	1410.80	1860.89	2046.21	2108.30	2116.39	1956.12	1376.12	1913.08	1923.94	1592.87	1496.85	1431.90	1767.93
35	1990	1990	1508.37	1773.38	1990.98	2062.15	2120.71	1841.13	1337.27	1728.30	1980.82	1735.28	1493.24	1286.27	1736.59
36	1991	1991	1446.81	1823.46	1984.33	2072.00	2077.24	1841.20	1313.71	1830.66	2072.06	1581.76	1651.71	1434.88	1759.31
37	1992	1992	1499.74	1813.06	1956.12	2109.93	2064.49	1857.74	1366.35	2084.13	1682.54	1653.61	1668.28	1344.80	1758.15
38	1993	1993	1668.75	1815.18	2076.84	2073.00	2092.13	1870.11	1424.40	2066.75	1973.84	1683.49	1589.40	1467.89	1816.16
39	1994	1994	1462.24	1869.74	1995.37	2128.94	2112.42	1944.52	1490.21	2137.43	1609.39	1653.04	1368.84	1217.30	1748.35
40	1995	1995	1488.20	1904.28	2014.23	2163.56	2200.05	1912.18	1422.63	1847.05	1994.56	1711.97	1536.11	1239.60	1784.40
41	1996	1996	1426.25	1954.51	2140.55	2121.14	2044.64	1973.69	1417.54	2066.21	2290.53	1864.50	1582.07	1409.87	1857.07
AVERAGE			1686.55	1899.26	2045.03	2145.73	2166.10	1925.63	1709.66	2030.19	2202.63	1972.89	1805.64	1666.16	1936.83
MAXIMUM			2655.06	2792.99	2259.93	2472.80	2439.50	2364.88	2313.63	2704.98	2608.53	2577.36	2536.40	2569.09	2306.05
MINIMUM			1271.66	1722.25	1956.12	2062.15	2044.64	1816.17	1313.71	1306.54	1609.39	1540.79	1364.10	1162.60	1727.51

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 27 Gull Island Spill

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.00	.00	.00	.00	.00	.00	.00	.00	331.19	.00	.00	.00	27.22
2	1957	1957	.00	.00	.00	.00	.00	.00	.00	.00	399.10	34.57	142.51	480.94	87.37
3	1958	1958	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	1959	1959	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	1960	1960	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	1961	1961	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	1962	1962	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	1963	1963	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	1964	1964	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	1965	1965	.00	.00	.00	.00	.00	.00	.00	.00	.00	1034.09	248.17	.00	108.90
11	1966	1966	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	1967	1967	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	31.39	2.58
13	1968	1968	105.07	.00	.00	.00	.00	.00	.00	.00	454.95	1333.49	116.41	39.63	172.72
14	1969	1969	177.70	.00	.00	.00	.00	.00	.00	.00	.00	153.25	.00	.00	28.11
15	1970	1970	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	1971	1971	.00	.00	.00	.00	.00	.00	.00	.00	776.46	.00	.00	.00	63.82
17	1972	1972	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	1973	1973	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	1974	1974	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	1975	1975	.00	.00	.00	.00	.00	.00	.00	.00	407.49	.00	.00	10.85	34.38
21	1976	1976	.00	.00	.00	.00	.00	.00	.00	.00	261.63	.00	.00	63.55	26.73
22	1977	1977	.00	.00	.00	.00	.00	.00	.00	.00	889.87	563.72	.00	.00	121.02
23	1978	1978	.00	.00	.00	.00	.00	.00	.00	1000.06	392.77	331.23	90.50	.00	153.04
24	1979	1979	.00	.00	.00	.00	.00	.00	.00	.00	802.78	323.67	.00	.00	93.47
25	1980	1980	.00	.00	.00	.00	.00	.00	.00	.00	1273.61	925.51	.00	.00	183.29
26	1981	1981	.00	.00	.00	.00	.00	.00	.00	.00	7.01	42.41	.00	.00	4.18
27	1982	1982	.00	.00	.00	.00	.00	.00	.00	863.36	.00	.00	.00	.00	73.33
28	1983	1983	.00	.00	.00	.00	.00	.00	.00	.00	.00	77.10	.00	.00	6.55
29	1984	1984	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	1985	1985	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	1986	1986	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32	1987	1987	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
33	1988	1988	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34	1989	1989	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35	1990	1990	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36	1991	1991	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
37	1992	1992	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
38	1993	1993	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
39	1994	1994	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
40	1995	1995	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
41	1996	1996	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AVERAGE			6.90	.00	.00	.00	.00	.00	.00	45.45	146.26	117.54	14.58	15.28	28.94
MAXIMUM			177.70	.00	.00	.00	.00	.00	.00	1000.06	1273.61	1333.49	248.17	480.94	183.29
MINIMUM			.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 28 Muskrat Falls Local Inflow

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	91.800	77.000	39.900	20.800	11.600	8.600	12.300	32.700	357.900	153.500	58.600	61.000	77.133
2	1957	1957	63.500	10.300	6.400	17.400	12.800	18.400	28.100	216.500	203.600	84.700	101.600	119.800	73.907
3	1958	1958	58.500	29.700	16.700	11.800	8.300	7.300	10.000	237.500	167.100	20.200	16.500	10.300	49.778
4	1959	1959	54.600	103.900	58.700	30.700	31.200	24.800	23.600	225.800	112.300	59.600	44.000	71.100	70.260
5	1960	1960	59.400	35.900	14.200	12.700	8.400	6.400	19.200	102.300	119.200	56.100	41.600	24.100	41.811
6	1961	1961	91.900	33.300	18.800	26.100	18.300	11.100	5.800	166.200	241.300	48.300	39.800	17.500	60.048
7	1962	1962	10.200	17.800	9.300	5.400	8.200	10.400	16.800	228.600	195.000	88.600	61.300	48.300	58.615
8	1963	1963	57.900	59.400	15.600	15.100	14.300	17.900	31.700	223.000	241.200	58.100	70.300	47.100	71.171
9	1964	1964	38.000	28.800	16.000	6.800	2.900	14.200	17.500	173.600	264.800	99.100	54.200	101.000	68.228
10	1965	1965	65.200	25.200	2.700	1.500	9.500	12.800	10.500	14.500	130.400	216.400	65.900	45.000	50.268
11	1966	1966	96.100	104.500	28.700	17.700	8.600	7.400	11.700	137.700	200.400	56.500	64.900	30.800	63.950
12	1967	1967	55.200	61.600	39.800	11.800	17.000	18.300	32.700	246.300	158.700	76.500	67.900	84.200	72.827
13	1968	1968	87.900	46.500	25.600	19.100	14.200	20.500	16.000	177.500	348.900	83.800	97.300	85.600	85.398
14	1969	1969	83.800	109.500	70.900	33.600	19.900	21.300	16.800	71.200	181.500	59.300	67.200	45.900	65.190
15	1970	1970	47.600	38.600	6.100	8.900	12.000	12.800	37.300	253.300	166.900	58.600	53.300	46.100	62.087
16	1971	1971	80.500	60.300	38.500	19.000	23.600	27.100	30.700	61.100	431.100	71.900	67.000	48.500	79.718
17	1972	1972	97.000	28.900	33.500	41.400	43.300	15.500	19.700	284.200	152.000	95.100	46.600	30.400	74.396
18	1973	1973	48.200	45.800	27.000	27.500	57.800	18.900	11.900	120.900	275.600	67.600	45.700	26.900	64.258
19	1974	1974	59.700	25.100	16.400	17.200	10.600	4.000	9.800	126.200	283.200	64.400	42.000	57.200	59.679
20	1975	1975	42.200	35.000	16.800	12.300	28.500	14.400	39.600	259.200	175.500	41.900	79.700	80.800	69.004
21	1976	1976	49.600	27.600	12.100	8.200	6.700	7.800	7.900	182.700	260.100	39.600	89.700	89.500	65.264
22	1977	1977	79.300	45.600	22.700	23.500	21.700	11.300	.100	193.200	327.100	79.000	21.100	53.600	73.240
23	1978	1978	93.100	22.600	19.700	9.900	16.900	16.900	42.300	249.600	144.800	56.400	93.100	69.100	69.964
24	1979	1979	53.600	55.000	22.600	12.700	11.300	11.300	12.700	263.200	212.900	104.300	49.300	39.500	71.086
25	1980	1980	55.000	35.200	21.100	16.900	15.500	14.100	31.000	199.100	263.700	69.100	73.300	52.900	70.752
26	1981	1981	70.500	19.700	14.100	9.900	6.800	9.400	12.300	139.600	256.800	86.000	45.100	69.100	61.753
27	1982	1982	34.800	25.400	11.400	9.900	6.800	9.400	37.200	272.000	124.100	79.000	29.600	42.300	57.232
28	1983	1983	76.100	26.800	11.400	8.500	12.700	7.100	12.700	267.100	212.900	83.200	31.000	71.900	68.770
29	1984	1984	40.900	16.900	11.300	9.900	7.100	7.100	7.100	108.600	254.500	86.000	71.900	43.700	55.538
30	1985	1985	60.600	29.600	14.100	8.500	7.100	9.900	39.500	208.700	114.800	85.300	56.400	53.600	57.732
31	1986	1986	52.200	28.200	16.900	14.100	16.900	24.000	42.300	145.200	94.600	63.200	53.600	50.800	50.398
32	1987	1987	86.000	70.500	43.700	32.400	35.200	29.600	22.600	227.400	276.400	66.300	19.900	22.600	77.844
33	1988	1988	52.200	52.200	11.300	9.900	6.800	9.400	12.300	126.800	151.700	57.800	41.900	38.500	47.725
34	1989	1989	42.400	42.400	21.400	8.400	17.900	36.400	15.800	155.100	159.400	60.400	50.600	72.700	57.057
35	1990	1990	65.100	22.100	8.700	-2.300	19.000	9.700	6.800	112.300	172.400	93.300	49.800	39.000	49.796
36	1991	1991	50.800	33.800	7.100	.000	8.900	9.800	1.400	136.100	193.500	57.800	86.600	73.400	55.086
37	1992	1992	63.100	31.300	.600	8.800	5.900	13.600	13.600	194.500	103.500	74.400	90.400	52.600	54.802
38	1993	1993	102.200	31.900	28.500	.200	12.400	16.500	27.000	190.500	170.800	81.400	72.100	81.000	68.224
39	1994	1994	54.400	44.500	9.700	13.200	17.000	33.700	42.300	206.800	86.500	74.300	21.000	23.000	52.524
40	1995	1995	60.400	52.500	14.000	21.100	37.300	26.300	26.600	139.800	175.600	87.900	59.800	28.200	60.876
41	1996	1996	46.000	64.100	43.300	11.400	1.300	40.500	25.400	190.000	239.000	123.000	71.000	68.000	77.295
AVERAGE			62.866	42.805	21.154	14.437	15.907	15.754	20.502	177.234	204.920	77.266	57.624	54.063	63.919
MAXIMUM			102.200	109.500	70.900	41.400	57.800	40.500	42.300	284.200	431.100	216.400	101.600	119.800	85.398
MINIMUM			10.200	10.300	.600	-2.300	1.300	4.000	.100	14.500	86.500	20.200	16.500	10.300	41.811

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 29 Muskrat Falls Power FLow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1715.27	2087.31	2165.98	2182.80	2100.54	1845.00	1373.13	1417.68	2329.09	2149.15	1589.69	1975.35	1909.03
2	1957	1957	1780.21	1732.55	1987.63	2164.72	2381.20	2371.16	2255.43	2364.90	2330.79	2277.01	2255.79	2302.62	2182.35
3	1958	1958	2164.87	1835.47	2042.41	2135.00	2083.07	1844.99	1983.46	2372.81	2281.52	2171.33	1557.54	1172.90	1971.19
4	1959	1959	1517.69	2230.53	2265.99	2235.71	2204.63	1930.55	2028.66	2368.50	1832.89	1649.07	1512.48	2271.74	2001.44
5	1960	1960	1867.91	1868.42	2028.92	2139.95	2083.74	1833.18	2192.43	1787.48	1869.47	1630.79	1499.32	1246.22	1835.77
6	1961	1961	1715.80	1854.71	2053.44	2211.09	2136.11	1857.88	1338.54	2127.30	2295.67	1589.09	1490.15	1211.02	1822.46
7	1962	1962	1281.86	1772.43	2003.33	2101.09	2082.68	1854.43	1397.31	2369.60	2273.91	1803.40	1603.85	1374.53	1825.77
8	1963	1963	1535.21	1993.48	2036.64	2152.55	2114.87	1894.09	1476.00	2367.42	2295.66	1641.57	1651.77	1368.52	1876.39
9	1964	1964	1429.44	1830.68	2038.88	2108.37	2054.27	1874.49	1400.77	2166.65	2302.82	1859.17	1566.40	2046.34	1888.45
10	1965	1965	1775.91	1811.88	1968.24	2080.17	2089.51	1875.93	2029.46	1321.04	1929.37	2288.19	2259.45	2261.17	1972.88
11	1966	1966	2350.88	2483.89	2106.40	2166.07	2368.00	2090.36	2114.06	1975.67	2280.82	1632.89	1623.30	1281.80	2036.81
12	1967	1967	1521.19	2005.11	2165.45	2135.00	2129.20	1896.41	1481.39	2375.56	2080.02	1738.89	1932.90	2276.82	1977.11
13	1968	1968	2364.37	2106.49	2089.60	2174.01	2364.70	2139.56	2000.56	2187.71	2325.95	2283.66	2254.21	2277.32	2213.17
14	1969	1969	2368.14	2432.89	2330.83	2506.40	2448.50	2386.18	2175.13	1621.91	2201.42	2281.92	2242.26	1458.83	2204.03
15	1970	1970	1480.73	1882.79	1986.19	2119.69	2102.65	1867.15	1505.96	2377.75	2123.66	2267.40	2233.54	1558.23	1959.73
16	1971	1971	2299.30	1998.14	2158.33	2173.41	2164.54	1943.12	1470.68	1568.53	2314.88	1714.75	1634.25	1375.87	1900.37
17	1972	1972	1897.89	1831.28	2131.98	2292.62	2269.04	1881.45	1412.24	2387.54	2044.36	1838.17	1525.83	1279.70	1899.12
18	1973	1973	1483.59	1921.27	2097.32	2218.67	2346.48	1899.48	1888.20	1886.10	2306.12	1691.61	1521.33	1260.76	1873.24
19	1974	1974	1544.79	1811.00	2040.98	2163.73	2095.22	1820.17	1359.73	1914.07	2308.47	2254.77	1761.60	1813.04	1906.68
20	1975	1975	1451.79	1863.70	2042.94	2137.70	2190.29	1875.54	2336.63	2379.62	2329.72	1828.07	2225.06	2275.56	2075.78
21	1976	1976	1860.34	1824.53	2018.18	2115.94	2355.00	1940.77	2112.03	2215.55	2326.39	2258.69	2243.68	2278.78	2127.23
22	1977	1977	2138.40	2181.41	2074.44	2401.16	2461.20	1999.27	2020.96	2271.34	2314.60	2304.66	2210.42	2260.60	2218.17
23	1978	1978	1970.06	1797.74	2058.60	2124.66	2128.83	1888.93	2355.93	2389.79	2327.26	2291.20	2252.65	2271.25	2154.59
24	1979	1979	1954.22	2197.44	2073.63	2139.65	2312.10	2160.86	2145.93	2380.91	2320.12	2293.35	2235.60	1414.57	2135.52
25	1980	1980	1907.47	1865.10	2066.11	2162.16	2417.30	2105.20	2275.93	2302.96	2305.79	2295.16	2245.45	1610.30	2128.81
26	1981	1981	1602.30	1782.76	2028.61	2124.66	2074.83	1849.27	1372.99	1985.51	2312.46	2277.49	1822.11	2149.26	1947.97
27	1982	1982	1412.71	1812.71	2014.36	2124.65	2074.83	1849.27	2224.34	2393.05	2237.87	2274.89	1867.55	1895.33	2014.34
28	1983	1983	2253.22	1820.19	2014.36	2117.16	2298.30	2018.76	2145.93	2382.10	2309.33	2279.17	2227.38	1824.70	2140.86
29	1984	1984	1444.96	1767.79	2013.62	2124.66	2076.40	1836.64	1905.22	1820.61	2299.69	1789.61	1660.45	1350.31	1839.00
30	1985	1985	1549.87	1835.16	2028.61	2117.16	2076.40	1851.52	1517.55	2354.18	1846.08	1785.86	1578.08	1402.80	1828.52
31	1986	1986	1504.96	1827.68	2043.61	2147.15	2128.82	1926.36	1532.51	2015.54	1738.90	1668.24	1563.11	1387.81	1789.46
32	1987	1987	1684.69	2052.48	2186.17	2244.71	2226.38	1956.29	1427.67	2369.15	2306.36	1684.72	1384.00	1237.92	1895.54
33	1988	1988	1504.96	1954.99	2013.62	2124.65	2074.82	1849.27	1372.99	1917.29	2042.70	1639.78	1500.97	1322.58	1775.23
34	1989	1989	1453.20	1903.29	2067.61	2116.70	2134.29	1992.52	1391.92	2068.18	2083.34	1653.27	1547.45	1504.60	1824.99
35	1990	1990	1573.47	1795.48	1999.68	2059.85	2139.71	1850.83	1344.07	1840.60	2153.22	1828.58	1543.04	1325.27	1786.39
36	1991	1991	1497.61	1857.26	1991.43	2072.00	2086.14	1851.00	1315.11	1966.76	2265.56	1639.56	1738.31	1508.28	1814.40
37	1992	1992	1562.84	1844.36	1956.72	2118.73	2070.39	1871.34	1379.95	2278.63	1786.04	1728.01	1758.68	1397.40	1812.95
38	1993	1993	1770.95	1847.08	2105.34	2073.20	2104.53	1886.61	1451.40	2257.25	2144.64	1764.89	1661.50	1548.89	1884.38
39	1994	1994	1516.64	1914.24	2005.07	2142.14	2129.42	1978.22	1532.51	2344.23	1695.89	1727.34	1389.84	1240.30	1800.88
40	1995	1995	1548.60	1956.78	2028.23	2184.66	2237.35	1938.48	1449.23	1986.85	2170.16	1799.87	1595.91	1267.80	1845.28
41	1996	1996	1472.25	2018.61	2183.85	2132.54	2045.94	2014.19	1442.94	2256.21	2295.07	1987.50	1653.07	1477.87	1915.09
AVERAGE			1725.14	1931.98	2066.18	2160.17	2182.00	1941.38	1730.17	2125.23	2178.98	1940.55	1795.61	1652.80	1951.50
MAXIMUM			2368.14	2483.89	2330.83	2506.40	2461.20	2386.18	2355.93	2393.05	2330.79	2304.66	2259.45	2302.62	2218.17
MINIMUM			1281.86	1732.55	1956.72	2059.85	2045.94	1820.17	1315.11	1321.04	1695.89	1589.09	1384.00	1172.90	1775.23

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 30 Muskrat Falls Spill

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.00	.00	.00	.00	.00	.00	.00	.00	959.82	.00	.00	.00	78.89
2	1957	1957	.00	.00	.00	.00	.00	.00	.00	34.05	870.85	407.01	524.20	867.21	224.83
3	1958	1958	.00	.00	.00	.00	.00	.00	.00	147.48	34.09	.00	.00	.00	15.33
4	1959	1959	.00	.00	.00	.00	.00	.00	.00	83.98	.00	.00	.00	311.00	32.69
5	1960	1960	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	1961	1961	.00	.00	.00	.00	.00	.00	.00	.00	245.43	.00	.00	.00	20.17
7	1962	1962	.00	.00	.00	.00	.00	.00	.00	99.12	.00	.00	.00	.00	8.42
8	1963	1963	.00	.00	.00	.00	.00	.00	.00	69.05	245.26	.00	.00	.00	26.02
9	1964	1964	.00	.00	.00	.00	.00	.00	.00	.00	374.44	.00	.00	.00	30.78
10	1965	1965	.00	.00	.00	.00	.00	.00	.00	.00	.00	1537.97	591.03	141.15	192.42
11	1966	1966	246.73	413.61	.00	.00	.00	.00	.00	.00	23.75	.00	.00	.00	56.90
12	1967	1967	.00	.00	.00	.00	.00	.00	.00	195.63	.00	.00	.00	403.50	49.78
13	1968	1968	482.95	.00	.00	.00	.00	.00	.00	.00	1078.90	1710.99	495.19	412.70	350.99
14	1969	1969	548.42	.00	.00	.00	.00	.00	.00	.00	.00	495.99	274.59	.00	112.02
15	1970	1970	.00	.00	.00	.00	.00	.00	.00	233.77	.00	231.72	142.99	.00	51.68
16	1971	1971	.00	.00	.00	.00	.00	.00	.00	.00	1497.82	.00	.00	.00	123.11
17	1972	1972	.00	.00	.00	.00	.00	.00	.00	402.98	.00	.00	.00	.00	34.23
18	1973	1973	.00	.00	.00	.00	.00	.00	.00	.00	433.60	.00	.00	.00	35.64
19	1974	1974	.00	.00	.00	.00	.00	.00	.00	.00	475.58	47.97	.00	.00	43.16
20	1975	1975	.00	.00	.00	.00	.00	.00	.00	266.26	852.01	.00	17.37	380.66	125.40
21	1976	1976	.00	.00	.00	.00	.00	.00	.00	.00	793.45	105.33	300.93	439.24	135.82
22	1977	1977	.00	.00	.00	.00	.00	.00	.00	.00	1507.60	907.57	.00	132.94	211.92
23	1978	1978	.00	.00	.00	.00	.00	.00	.00	1564.86	808.59	663.37	466.45	301.97	320.14
24	1979	1979	.00	.00	.00	.00	.00	.00	.00	288.39	1298.72	701.96	173.40	.00	205.58
25	1980	1980	.00	.00	.00	.00	.00	.00	.00	.00	1840.05	1272.53	333.65	.00	287.65
26	1981	1981	.00	.00	.00	.00	.00	.00	.00	.00	546.82	415.73	.00	.00	80.25
27	1982	1982	.00	.00	.00	.00	.00	.00	.00	1445.60	.00	368.33	.00	.00	154.06
28	1983	1983	.00	.00	.00	.00	.00	.00	.00	309.25	490.93	446.15	51.72	.00	108.90
29	1984	1984	.00	.00	.00	.00	.00	.00	.00	.00	318.06	.00	.00	.00	26.14
30	1985	1985	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	1986	1986	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32	1987	1987	.00	.00	.00	.00	.00	.00	.00	92.87	437.94	.00	.00	.00	43.88
33	1988	1988	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34	1989	1989	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35	1990	1990	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36	1991	1991	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
37	1992	1992	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
38	1993	1993	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
39	1994	1994	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
40	1995	1995	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
41	1996	1996	.00	.00	.00	.00	.00	.00	.00	.00	234.46	.00	.00	.00	19.27
AVERAGE			31.17	10.09	.00	.00	.00	.00	.00	127.64	374.83	227.14	82.23	82.69	78.20
MAXIMUM			548.42	413.61	.00	.00	.00	.00	.00	1564.86	1840.05	1710.99	591.03	867.21	350.99
MINIMUM			.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 31 Power Control Channel

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1715.27	2087.31	2165.98	2182.80	2100.54	1845.00	1373.13	1417.68	3288.91	2149.15	1589.69	1975.35	1987.92
2	1957	1957	1780.21	1732.55	1987.63	2164.72	2381.20	2371.16	2255.43	2398.95	3201.64	2684.02	2780.00	3169.83	2407.19
3	1958	1958	2164.87	1835.47	2042.41	2135.00	2083.07	1844.99	1983.46	2520.29	2315.61	2171.33	1557.54	1172.90	1986.52
4	1959	1959	1517.69	2230.53	2265.99	2235.71	2204.63	1930.55	2028.66	2452.48	1832.89	1649.07	1512.48	2582.74	2034.13
5	1960	1960	1867.91	1868.42	2028.92	2139.95	2083.74	1833.18	2192.43	1787.48	1869.47	1630.79	1499.32	1246.22	1835.77
6	1961	1961	1715.80	1854.71	2053.44	2211.09	2136.11	1857.88	1338.54	2127.30	2541.11	1589.09	1490.15	1211.02	1842.63
7	1962	1962	1281.86	1772.43	2003.33	2101.09	2082.68	1854.43	1397.31	2468.72	2273.91	1803.40	1603.85	1374.53	1834.19
8	1963	1963	1535.21	1993.48	2036.64	2152.55	2114.87	1894.09	1476.00	2436.48	2540.93	1641.57	1651.77	1368.52	1902.42
9	1964	1964	1429.44	1830.68	2038.88	2108.37	2054.27	1874.49	1400.77	2166.65	2677.27	1859.17	1566.40	2046.34	1919.22
10	1965	1965	1775.91	1811.88	1968.24	2080.17	2089.51	1875.93	2029.46	1321.04	1929.37	3826.16	2850.47	2402.32	2165.30
11	1966	1966	2597.60	2897.49	2106.40	2166.07	2368.00	2090.36	2114.06	1975.67	2304.58	1632.89	1623.30	1281.80	2093.71
12	1967	1967	1521.19	2005.11	2165.45	2135.00	2129.20	1896.41	1481.39	2571.20	2080.02	1738.89	1932.90	2680.32	2026.89
13	1968	1968	2847.31	2106.49	2089.60	2174.01	2364.70	2139.56	2000.56	2187.71	3404.85	3994.65	2749.40	2690.02	2564.16
14	1969	1969	2916.56	2432.89	2330.83	2506.40	2448.50	2386.18	2175.13	1621.91	2201.42	2777.91	2516.85	1458.83	2316.06
15	1970	1970	1480.73	1882.79	1986.19	2119.69	2102.65	1867.15	1505.96	2611.52	2123.66	2499.12	2376.53	1558.23	2011.40
16	1971	1971	2299.30	1998.14	2158.33	2173.41	2164.54	1943.12	1470.68	1568.53	3812.70	1714.75	1634.25	1375.87	2023.48
17	1972	1972	1897.89	1831.28	2131.98	2292.62	2269.04	1881.45	1412.24	2790.52	2044.36	1838.17	1525.83	1279.70	1933.35
18	1973	1973	1483.59	1921.27	2097.32	2218.67	2346.48	1899.48	1888.20	1886.10	2739.73	1691.61	1521.33	1260.76	1908.88
19	1974	1974	1544.79	1811.00	2040.98	2163.73	2095.22	1820.17	1359.73	1914.07	2784.05	2302.74	1761.60	1813.04	1949.84
20	1975	1975	1451.79	1863.70	2042.94	2137.70	2190.29	1875.54	2336.63	2645.88	3181.73	1828.07	2242.43	2656.22	2201.18
21	1976	1976	1860.34	1824.53	2018.18	2115.94	2355.00	1940.77	2112.03	2215.55	3119.84	2364.02	2544.60	2718.02	2263.05
22	1977	1977	2138.40	2181.41	2074.44	2401.16	2461.20	1999.27	2020.96	2271.34	3822.20	3212.23	2210.42	2393.54	2430.09
23	1978	1978	1970.06	1797.74	2058.60	2124.66	2128.83	1888.93	2355.93	3954.64	3135.84	2954.57	2719.10	2573.22	2474.73
24	1979	1979	1954.22	2197.44	2073.63	2139.65	2312.10	2160.86	2145.93	2669.29	3618.84	2995.31	2409.00	1414.57	2341.10
25	1980	1980	1907.47	1865.10	2066.11	2162.16	2417.30	2105.20	2275.93	2302.96	4145.84	3567.68	2579.10	1610.30	2416.47
26	1981	1981	1602.30	1782.76	2028.61	2124.66	2074.83	1849.27	1372.99	1985.51	2859.28	2693.22	1822.11	2149.26	2028.22
27	1982	1982	1412.71	1812.71	2014.36	2124.65	2074.83	1849.27	2224.34	3838.65	2237.87	2643.22	1867.55	1895.33	2168.40
28	1983	1983	2253.22	1820.19	2014.36	2117.16	2298.30	2018.76	2145.93	2691.35	2800.26	2725.32	2279.10	1824.70	2249.76
29	1984	1984	1444.96	1767.79	2013.62	2124.66	2076.40	1836.64	1905.22	1820.61	2617.75	1789.61	1660.45	1350.31	1865.15
30	1985	1985	1549.87	1835.16	2028.61	2117.16	2076.40	1851.52	1517.55	2354.18	1846.08	1785.86	1578.08	1402.80	1828.52
31	1986	1986	1504.96	1827.68	2043.61	2147.15	2128.82	1926.36	1532.51	2015.54	1738.90	1668.24	1563.11	1387.81	1789.46
32	1987	1987	1684.69	2052.48	2186.17	2244.71	2226.38	1956.29	1427.67	2462.02	2744.30	1684.72	1384.00	1237.92	1939.43
33	1988	1988	1504.96	1954.99	2013.62	2124.65	2074.82	1849.27	1372.99	1917.29	2042.70	1639.78	1500.97	1322.58	1775.23
34	1989	1989	1453.20	1903.29	2067.61	2116.70	2134.29	1992.52	1391.92	2068.18	2083.34	1653.27	1547.45	1504.60	1824.99
35	1990	1990	1573.47	1795.48	1999.68	2059.85	2139.71	1850.83	1344.07	1840.60	2153.22	1828.58	1543.04	1325.27	1786.39
36	1991	1991	1497.61	1857.26	1991.43	2072.00	2086.14	1851.00	1315.11	1966.76	2265.56	1639.56	1738.31	1508.28	1814.40
37	1992	1992	1562.84	1844.36	1956.72	2118.73	2070.39	1871.34	1379.95	2278.63	1786.04	1728.01	1758.68	1397.40	1812.95
38	1993	1993	1770.95	1847.08	2105.34	2073.20	2104.53	1886.61	1451.40	2257.25	2144.64	1764.89	1661.50	1548.89	1884.38
39	1994	1994	1516.64	1914.24	2005.07	2142.14	2129.42	1978.22	1532.51	2344.23	1695.89	1727.34	1389.84	1240.30	1800.88
40	1995	1995	1548.60	1956.78	2028.23	2184.66	2237.35	1938.48	1449.23	1986.85	2170.16	1799.87	1595.91	1267.80	1845.28
41	1996	1996	1472.25	2018.61	2183.85	2132.54	2045.94	2014.19	1442.94	2256.21	2529.53	1987.50	1653.07	1477.87	1934.36
AVERAGE			1756.31	1942.07	2066.18	2160.17	2182.00	1941.38	1730.17	2252.87	2553.81	2167.69	1877.84	1735.50	2029.69
MAXIMUM			2916.56	2897.49	2330.83	2506.40	2461.20	2386.18	2355.93	3954.64	4145.84	3994.65	2850.47	3169.83	2564.16
MINIMUM			1281.86	1732.55	1956.72	2059.85	2045.94	1820.17	1315.11	1321.04	1695.89	1589.09	1384.00	1172.90	1775.23

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 32 St. Jean Environmental Releases

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
2	1957	1957	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
3	1958	1958	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
4	1959	1959	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
5	1960	1960	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
6	1961	1961	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
7	1962	1962	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
8	1963	1963	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
9	1964	1964	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
10	1965	1965	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
11	1966	1966	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
12	1967	1967	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
13	1968	1968	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
14	1969	1969	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
15	1970	1970	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
16	1971	1971	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
17	1972	1972	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
18	1973	1973	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
19	1974	1974	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
20	1975	1975	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
21	1976	1976	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
22	1977	1977	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
23	1978	1978	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
24	1979	1979	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
25	1980	1980	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
26	1981	1981	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
27	1982	1982	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
28	1983	1983	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
29	1984	1984	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
30	1985	1985	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
31	1986	1986	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
32	1987	1987	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
33	1988	1988	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
34	1989	1989	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
35	1990	1990	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
36	1991	1991	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
37	1992	1992	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
38	1993	1993	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
39	1994	1994	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
40	1995	1995	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
41	1996	1996	3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
AVERAGE			3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
MAXIMUM			3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843
MINIMUM			3.100	2.400	1.500	.900	.800	.700	1.100	6.900	7.900	3.500	2.700	2.500	2.843

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 35 Romaine Environmental Releases

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
2	1957	1957	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
3	1958	1958	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
4	1959	1959	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
5	1960	1960	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
6	1961	1961	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
7	1962	1962	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
8	1963	1963	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
9	1964	1964	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
10	1965	1965	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
11	1966	1966	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
12	1967	1967	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
13	1968	1968	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
14	1969	1969	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
15	1970	1970	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
16	1971	1971	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
17	1972	1972	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
18	1973	1973	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
19	1974	1974	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
20	1975	1975	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
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24	1979	1979	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
25	1980	1980	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
26	1981	1981	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
27	1982	1982	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
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29	1984	1984	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
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35	1990	1990	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
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37	1992	1992	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
38	1993	1993	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
39	1994	1994	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
40	1995	1995	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
41	1996	1996	19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
AVERAGE			19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
MAXIMUM			19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603
MINIMUM			19.400	14.900	9.200	5.600	4.600	4.300	7.100	42.500	48.800	21.700	16.700	15.700	17.603

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)

Hydrologic Sequence = 000; Draft Rate = 5940.5 MWc; Start Condition = 73.9% Full

RESERVOIR WATER BALANCE

NAME	NET EVAP (EVAP-PREC) (cms)	LOCAL INFLOW (cms)	REGULATED INFLOW (cms)	TOTAL INFLOW (cms)	POWER OUTFLOW (cms)	SPILL OUTFLOW (cms)	OTHER OUTFLOW (cms)	TOTAL OUTFLOW (cms)	STORAGE ADJUSTMENT (cms)	CHANNEL STORAGE (cms)	WATER BALANCE (cms)
Romaine Diversion	.00	176.03	25.65	201.69	.00	.00	201.69	201.69	.00	.00	.00
Ossokmanuan Reser	.00	339.84	340.48	680.33	.00	.00	680.33	680.33	.00	.00	.00
Smallwood Reservo	.00	870.85	680.33	1551.18	.00	.00	1551.18	1551.18	.00	.00	.00
West Forebay	.00	16.19	1551.18	1567.37	.00	.00	1567.37	1567.37	.00	.00	.00
East Forebay	.00	9.01	1557.08	1566.08	1566.08	.00	.00	1566.08	.00	.00	.00
Gull Island Reser	.00	389.40	1576.37	1965.77	1936.83	28.94	.00	1965.77	.00	.00	.00
Muskrat Falls Res	.00	63.92	1965.77	2029.69	1951.50	78.20	.00	2029.69	.00	.00	.00
Extern Node 1	.00	28.50	.00	28.50	.00	.00	28.50	28.50	.00	.00	.00
Extern Node 3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Extern Node 4	.00	156.40	.00	156.40	.00	.00	156.40	156.40	.00	.00	.00
Extern Node 9	.00	.00	1576.37	1576.37	.00	.00	1576.37	1576.37	.00	.00	.00
Extern Node 12	.00	.00	2029.69	2029.69	.00	.00	2029.69	2029.69	.00	.00	.00
Sink Node	.00	.00	2050.14	2050.14	.00	.00	.00	.00	.00	.00	2050.14
Source Node	.00	.00	.00	.00	.00	.00	2050.14	2050.14	.00	.00	-2050.14

POWER STATION ENERGY ADJUSTMENT

NAME	INSTALLED CAPACITY (MW)	AVERAGE ANNUAL ENERGY (GWH)	ENERGY COEFFICIENT (GWH/(cms))	ENERGY ADJUSTMENT (GWH)	ADJUSTED ENERGY (GWH)
Churchill Falls	5324.8	29487.1	24.485	.028	29487.1
CF2 Station	1125.6	9050.1	25.014	.029	9050.2
Gull Island Sta	2173.4	13046.8	6.736	.008	13046.9
Muskrat Falls S	791.0	5462.7	2.799	.003	5462.7
TOTAL SYSTEM	9414.9	57046.8		.1	57046.9

CF1 - 5428.5 MW + Diversions +
CF2 - 1100 MW + GI - 2264 MW +
MF - 824 MW

(Proposed Churchill River Complex)

(b) Input File

********** RUN CONTROL DATA ********

Jan 21/99 : Churchill River Optimization Study : P12859.00
Control Structure Atikonak : Oct 56-Sep 97 : TW crv CF1 adj.
Use HQ Inflows : CF1(5428.5)+CF2(1100)+GI(2264)+MF(824)
Units of analysis is METRIC
MONTHLY

Number of simulation cycles (e.g., years): 41
Number of time periods per simulation cycle: 12
Number of first time period to simulate: 1
Number of periods per cycle to simulate: 12
ID of first cycle (e.g., Gregorian year): 1956
Alias of first cycle (e.g., hydrologic year): 1956

Level of debug output: 0
First time step of debug output: 16
Last time step of debug output: 17

Max. number of physical flow constraint iterations: 4

Nominal efficiency parameters used to calculate power in simulation time steps.
Nominal efficiency parameters used to calculate power in decision time steps.

Output table flags (1 = print, 0 = do not print):

Flag for reservoir losses table: 0
Flag for reservoir volumes table: 1
Flag for reservoir elevations table: 1
Flag for hydro plant power/energy tables: 1
Flag for power system summary tables: 1
Flag for irrigation deficit tables: 0
Flag for selected channel flow tables: 1
Flag for energy and water balance tables: 1
Flag for ASCII routing/power detail file: 0
Flag for binary power detail file: 0

Global flag for fixing water level and flow bounds: 0
(1 = enable, 0 = disable --> see manual for more info)

Time unit is 86400. seconds
Routing option is NO
Decision time step is 0 time units
Hydrologic time step is 0 time units

Output flow units are cms
Generation units are MWC

Use evaporation coefficient factors? 0 (0 = No, 1 = Yes)

Type of ARSP analysis: 0 --> Standard Analysis

Minimum draft rate: 5940.00 MWc
Maximum draft rate: 5941.00 MWc
Draft rate increment: .10 MWc

Number of starting conditions: 1

Percentiles for statistical analysis:

STUDY TIME HORIZON

Period	Days	Rout	Period	Days	Rout	Period	Days	Rout
Oct	31.0	0	Nov	30.0	0	Dec	31.0	0
Jan	31.0	0	Feb	28.0	0	Mar	31.0	0
Apr	30.0	0	May	31.0	0	Jun	30.0	0
Jul	31.0	0	Aug	31.0	0	Sep	30.0	0

Using Historical Time Series Data

The following 1 hydrologic sequence(s) will be simulated:

000

```
********** GENERAL RESERVOIR DATA ********
  DrawDown Strategy  =     3
    where
        1 - Equal
        2 - Equal %
        3 - Priority
  DrawDown Parameter =     0
    where
        1 - Elevation
        2 - Volume
  Reference Position =     0
    where
        1 - Zone Limit
        2 - Rule Curve
        3 - FSL


  Reservoir Zones:
  ---------------
   1  Spill Zone
   2  Target Zone
   3  Target Zone
   4  Dead Storage

  Rule Curve is at bottom of zone  2.
```

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Romaine Diversion Headpond
RESERVOIR NUMBER : 2
RESERVOIR STATUS : On
STARTING WATER LEVEL : 494.592 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 497.000
FULL SUPPLY LEVEL (m.) : 496.999
DEAD STORAGE LEVEL (m.) : 494.001
RESERVOIR BOTTOM (m.) : 430.000
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	430.00	447.00	467.00	472.00	487.00
INPUT VOLUME (mcm)	-	273.00	1217.00	3819.00	4926.00	13224.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	55.53	130.10	221.40	553.20	858.71

ELEVATION (m.)	-	494.00	497.00	504.00
INPUT VOLUME (mcm)	-	19235.00	22335.00	30870.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	1033.33	1219.29	1219.29

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	800000.0
Target Zone	5000.0
Target Zone	5000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition
2	1 497.00 12 497.00

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Ossokmanuan Reservoir
RESERVOIR NUMBER : 5
RESERVOIR STATUS : On
STARTING WATER LEVEL : 477.800 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 480.400
FULL SUPPLY LEVEL (m.) : 479.150
DEAD STORAGE LEVEL (m.) : 475.031
RESERVOIR BOTTOM (m.) : 475.030
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	475.03	476.00	478.00	478.75	479.00
INPUT VOLUME (mcm)	-	.00	586.00	1923.00	2490.00	2701.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	604.12	668.50	756.00	844.00	893.33

ELEVATION (m.)	-	479.15	479.50	479.99
INPUT VOLUME (mcm)	-	2835.00	3176.00	3734.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	974.29	1138.78	1138.78

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	40000.0
Target Zone	40000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition							
2	1	479.15	4	479.15	7	475.03	12	477.80

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Smallwood Reservoir
RESERVOIR NUMBER : 6
RESERVOIR STATUS : On
STARTING WATER LEVEL : 471.731 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 473.230
FULL SUPPLY LEVEL (m.) : 472.740
DEAD STORAGE LEVEL (m.) : 464.051
RESERVOIR BOTTOM (m.) : 464.050
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	464.05	467.10	469.00	470.50	471.50
INPUT VOLUME (mcm)	-	.00	2618.00	10375.00	17185.00	22135.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	858.36	4082.63	4540.00	4950.00	5416.00

ELEVATION (m.)	-	472.50	472.74	473.04
INPUT VOLUME (mcm)	-	27551.00	28941.00	30756.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	5791.67	6050.00	6050.00

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	10000.0
Target Zone	10000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition									
2	1	472.74	2	472.74	3	472.74	4	472.00	5	471.40
	6	470.75	7	470.10	8	471.60	9	472.60	10	472.74
	11	472.74	12	472.74						

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : West Forebay
RESERVOIR NUMBER : 7
RESERVOIR STATUS : On
STARTING WATER LEVEL : 451.100 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 452.930
FULL SUPPLY LEVEL (m.) : 452.929
DEAD STORAGE LEVEL (m.) : 450.500
RESERVOIR BOTTOM (m.) : 445.000
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	445.00	445.50	446.00	447.00	448.00
INPUT VOLUME (mcm)	-	.00	6.52	13.36	31.11	54.02
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	13.04	13.68	17.75	22.91	28.83

ELEVATION (m.)	-	449.00	450.00	451.00	452.00	452.93
INPUT VOLUME (mcm)	-	82.85	119.57	167.41	230.81	308.71
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	36.72	47.84	63.40	83.76	96.50

ELEVATION (m.)	-	452.99				
INPUT VOLUME (mcm)	-	314.50				
INPUT AREA (sq.km.)	-	.00				
BALANCE AREA (sq.km.)	-	96.50				

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	80000.0
Target Zone	80000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition											
2	1	451.50	3	452.70	6	452.70	11	450.60	12	451.10		

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME	:	East Forebay
RESERVOIR NUMBER	:	8
RESERVOIR STATUS	:	On
STARTING WATER LEVEL	:	448.510 m.

Routing technique: 0

SURCHARGE LEVEL (m.)	:	448.670
FULL SUPPLY LEVEL (m.)	:	448.510
DEAD STORAGE LEVEL (m.)	:	447.600
RESERVOIR BOTTOM (m.)	:	443.800
RAINFALL GAUGE REFERENCE filename	:	
FULL RESERVOIR SURFACE AREA (sq.km.)	:	.00
RAINFALL / RUNOFF COEFFICIENT	:	.00

ELEVATION (m.)	-	443.80	445.00	447.10	448.70	448.99
INPUT VOLUME (mcm)	-	.00	124.48	369.79	580.23	620.55
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	103.73	116.81	131.53	139.03	139.03

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	30000.0
Target Zone	30000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition
2	1 448.51 2 447.60 7 447.60 9 448.51 12 448.51

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Gull Island Reservoir
RESERVOIR NUMBER : 10
RESERVOIR STATUS : On
STARTING WATER LEVEL : 125.000 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 129.000
FULL SUPPLY LEVEL (m.) : 125.000
DEAD STORAGE LEVEL (m.) : 122.000
RESERVOIR BOTTOM (m.) : 121.999
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	122.00	125.00
INPUT VOLUME (mcm)	-	.00	580.00
INPUT AREA (sq.km.)	-	.00	.00
BALANCE AREA (sq.km.)	-	193.27	193.27

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	700000.0
Target Zone	700000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition			
2	1	125.00	12	125.00

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Muskrat Falls Reservoir
RESERVOIR NUMBER : 11
RESERVOIR STATUS : On
STARTING WATER LEVEL : 39.000 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 39.500
FULL SUPPLY LEVEL (m.) : 39.200
DEAD STORAGE LEVEL (m.) : 39.000
RESERVOIR BOTTOM (m.) : 38.999
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	39.00	39.50
INPUT VOLUME (mcm)	.00	.01
INPUT AREA (sq.km.)	.00	.00
BALANCE AREA (sq.km.)	.02	.02

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	700000.0
Target Zone	700000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition			
2	1	39.00	12	39.00

******** GENERAL CHANNEL DATA ********

CHANNEL/NODE EXTERNAL/INTERNAL NUMBERING SYSTEM

Chan.No. Ext	Int	U/S Node Ext	Int	D/S Node Ext	Int	Channel Type	
1	1	14	14	1	8	INFLOW	St. Jean Local Inflow
2	2	1	8	2	1	GENERAL	Diversion Channel St. Jean to Romaine
3	3	14	14	2	1	INFLOW	Romaine Local Inflow
4	4	14	14	3	9	INFLOW	Julian Local Inflow
5	5	2	1	5	2	SPILL	Diverted Flow Romaine to Ossokmanuan
6	6	3	9	5	2	GENERAL	General Flow Julian to Ossokmanuan
7	7	14	14	4	10	INFLOW	Lac Joseph Local Inflow
8	8	4	10	5	2	GENERAL	General Flow Lac Joseph to Ossokmanuan
9	9	14	14	5	2	INFLOW	Ossokmanuan Local Inflow
10	10	5	2	6	3	SPILL	Gabbro Control Structure
11	11	5	2	6	3	SPILL	Flow Over Gabbro Control Structure
12	12	5	2	9	11	SPILL	Ossokmanuan Control Structure
13	13	14	14	6	3	INFLOW	Smallwood Local Inflow
14	14	6	3	7	4	SPILL	Lobstick Control Structure
15	15	6	3	7	4	POWER	Lobstick Power Flow
16	16	14	14	7	4	INFLOW	West Forebay Local Inflow
17	17	7	4	8	5	SPILL	Whitefish Falls Control Structure
18	18	7	4	9	11	SPILL	Jacopie Spillway
19	19	14	14	8	5	INFLOW	East Forebay Local Inflow
20	20	8	5	9	11	POWER	Churchill Falls Power Flow
21	21	8	5	9	11	POWER	CF2 Station Power Flow
22	22	8	5	9	11	POWER	Power Flow 500 MW Unit2 CF Station
23	23	8	5	9	11	SPILL	East Forebay Spill
24	24	9	11	10	6	GENERAL	General Flow CF Station to Gull Island
25	25	14	14	10	6	INFLOW	Gull Island Local Inflow
26	26	10	6	11	7	POWER	Gull Island Power Flow
27	27	10	6	11	7	SPILL	Gull Island Spill
28	28	14	14	11	7	INFLOW	Muskrat Falls Local Inflow
29	29	11	7	12	12	POWER	Muskrat Falls Power FLow
30	30	11	7	12	12	SPILL	Muskrat Falls Spill
31	31	12	12	13	13	P.C.C.	Power Control Channel
32	32	1	8	13	13	DEMAND	St. Jean Environmental Releases
33	33	2	1	13	13	SPILL	Spill to Lower Romaine
34	34	1	8	13	13	SPILL	Spill to Lower St. Jean
35	35	2	1	13	13	DEMAND	Romaine Environmental Releases

******** CHANNEL CONSTRAINT DATA ********

2 Name : Diversion Channel St. Jean to Romaine
Type : GENERAL

Penalty = .000 Concern is Normal Flow Range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

5 Name : Diverted Flow Romaine to Ossokmanuan
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

6 Name : General Flow Julian to Ossokmanuan
Type : GENERAL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

8 Name : General Flow Lac Joseph to Ossokmanuan
Type : GENERAL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

10 Name : Gabbro Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

11 Name : Flow Over Gabbro Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

12 Name : Ossokmanuan Control Structure
Type : SPILL

Penalty = 220000.000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

14 Name : Lobstick Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

15 Name : Lobstick Power Flow

```
        Type : POWER

        Penalty =       .000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =       .000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   17   Name : Whitefish Falls Control Structure
        Type : SPILL

        Penalty =       .000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


   18   Name : Jacopie Spillway
        Type : SPILL

        Penalty = 200000.000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


   20   Name : Churchill Falls Power Flow
        Type : POWER

        Penalty =    100.000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  50000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   21   Name : CF2 Station Power Flow
        Type : POWER

        Penalty =     10.000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  75000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   22   Name : Power Flow 500 MW Unit2 CF Station
        Type : POWER

        Penalty =       .000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  75000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   23   Name : East Forebay Spill
        Type : SPILL
```

```
      Penalty = 210000.000     Concern is Normal flow range

       1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
       6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
      11 999999.000 12 999999.000


 24   Name : General Flow CF Station to Gull Island
      Type : GENERAL

      Penalty =       .000     Concern is Normal Flow Range

       1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
       6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
      11 999999.000 12 999999.000


 26   Name : Gull Island Power Flow
      Type : POWER

      Penalty =     10.000     Concern is Min Power

       1       .000  2       .000  3       .000  4       .000  5       .000
       6       .000  7       .000  8       .000  9       .000 10       .000
      11       .000 12       .000

      Penalty =  75000.000     Concern is Min Flow

       1       .000  2       .000  3       .000  4       .000  5       .000
       6       .000  7       .000  8       .000  9       .000 10       .000
      11       .000 12       .000


 27   Name : Gull Island Spill
      Type : SPILL

      Penalty =   1000.000     Concern is Normal flow range

       1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
       6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
      11 999999.000 12 999999.000


 29   Name : Muskrat Falls Power FLow
      Type : POWER

      Penalty =     10.000     Concern is Min Power

       1       .000  2       .000  3       .000  4       .000  5       .000
       6       .000  7       .000  8       .000  9       .000 10       .000
      11       .000 12       .000

      Penalty =  75000.000     Concern is Min Flow

       1       .000  2       .000  3       .000  4       .000  5       .000
       6       .000  7       .000  8       .000  9       .000 10       .000
      11       .000 12       .000


 30   Name : Muskrat Falls Spill
      Type : SPILL

      Penalty =   1000.000     Concern is Normal flow range

       1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
       6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
      11 999999.000 12 999999.000


 32   Name : St. Jean Environmental Releases
      Type : DEMAND

      Penalty = 950000.000     Concern is Demand

       1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
       6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
      11 999999.000 12 999999.000

      Penalty = 950000.000     Concern is Demand

       1     3.100  2     2.400  3     1.500  4      .900  5      .800
       6      .700  7     1.100  8     6.900  9     7.900 10     3.500
      11     2.700 12     2.500


 33   Name : Spill to Lower Romaine
```

Type : SPILL

Penalty = 230000.000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

34 Name : Spill to Lower St. Jean
Type : SPILL

Penalty = 650000.000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

35 Name : Romaine Environmental Releases
Type : DEMAND

Penalty = 900000.000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

Penalty = 900000.000 Concern is Fishery Flow

1	19.400	2	14.900	3	9.200	4	5.600	5	4.600
6	4.300	7	7.100	8	42.500	9	48.800	10	21.700
11	16.700	12	15.700						

Inflow Channel Descriptions

Channel Number	Proration Factor	Inflow Units	Inflow Series	File Name
1	.0963	FLW	1	Qroma.HST
3	.5948	FLW	2	Qroma.HST
4	1.0000	FLW	3	Qjuli.HST
7	.3152	FLW	4	Qoinf.HST
9	.6848	FLW	5	Qoinf.HST
13	1.0000	FLW	6	Qsinf.HST
16	1.0000	FLW	7	Qwinf.HST
19	1.0000	FLW	8	Qeinf.HST
25	1.0000	FLW	9	Qgull.HST
28	1.0000	FLW	10	Qmusk.HST

Power Control Channel Descriptions

31 Name : Power Control Channel
Type : P.C.C.

Channel Geometry Descriptions

Ext Chn Num	Int Chn Num	Frst Arc Num	No. of Arcs	Zero Cost Arc	Arc Costs and Directions
1	1	1	1	1	.0
					1
2	2	2	1	1	.0
					1
3	3	3	1	1	.0
					1
4	4	4	1	1	.0
					1
5	5	5	1	1	.0
					1
6	6	6	1	1	.0
					1
7	7	7	1	1	.0
					1
8	8	8	1	1	.0
					1
9	9	9	1	1	.0
					1
10	10	10	1	1	.0
					1
11	11	11	1	1	.0
					1
12	12	12	1	1	220000.0
					1
13	13	13	1	1	.0
					1
14	14	14	1	1	.0
					1
15	15	15	2	1	.0 .0
					1 -1
16	16	17	1	1	.0
					1
17	17	18	1	1	.0
					1
18	18	19	1	1	200000.0
					1
19	19	20	1	1	.0
					1
20	20	21	2	1	100.0 50000.0
					1 -1
21	21	23	2	1	10.0 75000.0
					1 -1
22	22	25	2	1	.0 75000.0
					1 -1
23	23	27	1	1	210000.0
					1
24	24	28	1	1	.0
					1
25	25	29	1	1	.0
					1
26	26	30	2	1	10.0 75000.0
					1 -1
27	27	32	1	1	1000.0
					1
28	28	33	1	1	.0
					1
29	29	34	2	1	10.0 75000.0
					1 -1
30	30	36	1	1	1000.0
					1
31	31	37	3	2	500000.0 .0500000.0
					1 1 -1
32	32	40	2	1	950000.0950000.0
					1 -1
33	33	42	1	1	230000.0
					1
34	34	43	1	1	650000.0
					1
35	35	44	2	1	900000.0900000.0
					1 -1

NOTE: Largest internal node is the source,
second largest internal node is the sink.

Reservoir Geometry Descriptions

	Res Num	Channel Numbers Upstream of Reservoir	Channel Numbers Downstream of Reservoir
Int:	1	2 3	5 33 35
Ext:	2	2 3	5 33 35
Int:	2	5 6 8 9	10 11 12
Ext:	5	5 6 8 9	10 11 12
Int:	3	10 11 13	14 15
Ext:	6	10 11 13	14 15
Int:	4	14 15 16	17 18
Ext:	7	14 15 16	17 18
Int:	5	17 19	20 21 22 23
Ext:	8	17 19	20 21 22 23
Int:	6	24 25	26 27
Ext:	10	24 25	26 27
Int:	7	26 27 28	29 30
Ext:	11	26 27 28	29 30
Int:	8	1	2 32 34
Ext:	1	1	2 32 34
Int:	9	4	6
Ext:	3	4	6
Int:	10	7	8
Ext:	4	7	8
Int:	11	12 18 20 21 22 23	24
Ext:	9	12 18 20 21 22 23	24
Int:	12	29 30	31
Ext:	12	29 30	31
Int:	13	31 32 33 34 35	
Ext:	0	31 32 33 34 35	
Int:	14		1 3 4 7 9 13 16 19 25 28
Ext:	0		1 3 4 7 9 13 16 19 25 28

********** GENERAL HYDROELECTRIC DATA ********

Power Channel No. 2: Churchill Falls Station
****

Installed Capacity (MW):	5428.500
Nominal headpond level:	448.510
Design Head (m.):	311.800
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	4.400
Maximum Flow @ Design Head:	2008.000
Best Eff Flow @ Design Head:	2008.000
Eff @ Max Q and Design Head:	.9030
Eff @ Best Q and Design Head:	.9030

Plant Availability (fraction):

Oct	.91960
Nov	.96050
Dec	.98090
Jan	.98090
Feb	.98090
Mar	.97070
Apr	.95030
May	.92990
Jun	.89920
Jul	.88900
Aug	.87880
Sep	.88900

Power Channel Number: 20
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	1000.0	1600.0	2800.0
Tailwater (m.):	126.85	126.90	127.16	127.90	129.41

Channels contributing to tailwater level:

12 Ossokmanuan Control Structure
18 Jacopie Spillway
20 Churchill Falls Power Flow
21 CF2 Station Power Flow
22 Power Flow 500 MW Unit2 CF Station
23 East Forebay Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	2008.0	2008.0
Efficiency:	.9030	.9030	.9030

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

Power Channel No. 3: CF2 Station
****

Installed Capacity (MW):	1100.000
Nominal headpond level:	448.510
Design Head (m.):	315.000
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	3.800
Maximum Flow @ Design Head:	412.000
Best Eff Flow @ Design Head:	412.000
Eff @ Max Q and Design Head:	.9200
Eff @ Best Q and Design Head:	.9200

Plant Availability (fraction):

Oct	.95940
Nov	1.00200
Dec	1.02330
Jan	1.02330
Feb	1.02330
Mar	1.02330
Apr	.53300
May	.97000
Jun	.93800
Jul	.92740
Aug	.91670
Sep	.92740

Power Channel Number: 21
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	1000.0	1600.0	2800.0
Tailwater (m.):	126.85	126.90	127.16	127.90	129.41

Channels contributing to tailwater level:

12 Ossokmanuan Control Structure
18 Jacopie Spillway
20 Churchill Falls Power Flow
21 CF2 Station Power Flow
22 Power Flow 500 MW Unit2 CF Station
23 East Forebay Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	412.0	412.0
Efficiency:	.9200	.9200	.9200

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

Power Channel No. 4: New Unit#2 at Churchill Falls
****

Installed Capacity (MW):	500.000
Nominal headpond level:	448.510
Design Head (m.):	312.400
Maximum Net Head (m.):	320.000
Minimum Net Head (m.):	305.000
Head Loss (m.):	.000
Maximum Flow @ Design Head:	195.000
Best Eff Flow @ Design Head:	177.000
Eff @ Max Q and Design Head:	.9220
Eff @ Best Q and Design Head:	.9220

Plant Availability (fraction):

Oct	1.00000
Nov	1.00000
Dec	1.00000
Jan	1.00000
Feb	1.00000
Mar	1.00000
Apr	1.00000
May	1.00000
Jun	1.00000
Jul	1.00000
Aug	1.00000
Sep	.50000

Power Channel Number: 22
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	600.0	800.0	1000.0	1200.0	1600.0
Tailwater (m.):	125.00	125.30	125.50	125.80	126.10	126.40	127.10

Discharge (cms):	2000.0	2800.0
Tailwater (m.):	127.80	129.10

Channels contributing to tailwater level:

12 Ossokmanuan Control Structure
18 Jacopie Spillway
20 Churchill Falls Power Flow
21 CF2 Station Power Flow
22 Power Flow 500 MW Unit2 CF Station
23 East Forebay Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	177.0	195.0
Efficiency:	.9220	.9220	.9220

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	.5000	1.5000

Power Channel No. 5: Gull Island Station
****

Installed Capacity (MW):	2264.000
Nominal headpond level:	125.000
Design Head (m.):	84.000
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	2.000
Maximum Flow @ Design Head:	3030.000
Best Eff Flow @ Design Head:	2670.000
Eff @ Max Q and Design Head:	.9110
Eff @ Best Q and Design Head:	.9360

Plant Availability (fraction):

Oct	.90000
Nov	.94000
Dec	.96000
Jan	.96000
Feb	.96000
Mar	.95000
Apr	.93000
May	.91000
Jun	.88000
Jul	.87000
Aug	.86000
Sep	.87000

Power Channel Number: 26
Spill Channel Number: 27

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	283.0	566.0	850.0	1133.0	1699.0	2265.0
Tailwater (m.):	38.98	39.00	39.03	39.06	39.09	39.18	39.29

Discharge (cms):	2832.0	5663.0
Tailwater (m.):	39.41	40.33

Channels contributing to tailwater level:

26 Gull Island Power Flow
27 Gull Island Spill
28 Muskrat Falls Local Inflow

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	2670.0	3030.0
Efficiency:	.9360	.9360	.9110

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

Power Channel No. 6: Muskrat Falls Station

****

Installed Capacity (MW):	824.000
Nominal headpond level:	39.000
Design Head (m.):	35.000
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	.500
Maximum Flow @ Design Head:	2667.000
Best Eff Flow @ Design Head:	2437.000
Eff @ Max Q and Design Head:	.9000
Eff @ Best Q and Design Head:	.9180

Plant Availability (fraction):

Oct	.90000
Nov	.94000
Dec	.96000
Jan	.96000
Feb	.96000
Mar	.95000
Apr	.93000
May	.91000
Jun	.88000
Jul	.87000
Aug	.86000
Sep	.87000

Power Channel Number: 29
Spill Channel Number: 30

TAILWATER CURVE (TYPE 1)

Discharge (cms):	1000.0	1500.0	2000.0	2500.0	3000.0	4000.0
Tailwater (m.):	2.00	2.60	2.90	3.40	3.80	4.60

Channels contributing to tailwater level:

29 Muskrat Falls Power FLow
30 Muskrat Falls Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	2437.0	2667.0
Efficiency:	.9180	.9180	.9000

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

POWER DEMANDS -- Minimum generation (MW)

Period	Power Plant Number(s) 2	3	4	5	6
Oct	.00	.00	.00	.00	.00
Nov	.00	.00	.00	.00	.00
Dec	.00	.00	.00	.00	.00
Jan	.00	.00	.00	.00	.00
Feb	.00	.00	.00	.00	.00
Mar	.00	.00	.00	.00	.00
Apr	.00	.00	.00	.00	.00
May	.00	.00	.00	.00	.00
Jun	.00	.00	.00	.00	.00
Jul	.00	.00	.00	.00	.00
Aug	.00	.00	.00	.00	.00
Sep	.00	.00	.00	.00	.00

POWER DEMANDS -- Minimum power flow (cms)

Period	Power Plant Number(s) 2	3	4	5	6
Oct	.00	.00	.00	.00	.00
Nov	.00	.00	.00	.00	.00
Dec	.00	.00	.00	.00	.00
Jan	.00	.00	.00	.00	.00
Feb	.00	.00	.00	.00	.00
Mar	.00	.00	.00	.00	.00
Apr	.00	.00	.00	.00	.00
May	.00	.00	.00	.00	.00
Jun	.00	.00	.00	.00	.00
Jul	.00	.00	.00	.00	.00
Aug	.00	.00	.00	.00	.00
Sep	.00	.00	.00	.00	.00

Power channels downstream of reservoir Romaine Diversion Headpond
There are 5 downstream power channels: 26 29 20 21 22

Power channels downstream of reservoir Ossokmanuan Reservoir
There are 5 downstream power channels: 26 29 20 21 22

Power channels downstream of reservoir Smallwood Reservoir
There are 5 downstream power channels: 26 29 20 21 22

Power channels downstream of reservoir West Forebay
There are 5 downstream power channels: 26 29 20 21 22

Power channels downstream of reservoir East Forebay
There are 5 downstream power channels: 20 21 22 26 29

Power channels downstream of reservoir Gull Island Reservoir
There are 2 downstream power channels: 26 29

Power channels downstream of reservoir Muskrat Falls Reservoir
There is one downstream power channel, number 29.

For inflow channel 1 the next storage reservoir downstream is number 2
There are no intermediate power plants.

For inflow channel 3 the next storage reservoir downstream is number 2
There are no intermediate power plants.

For inflow channel 4 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 7 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 9 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 13 the next storage reservoir downstream is number 6
There are no intermediate power plants.

For inflow channel 16 the next storage reservoir downstream is number 7
There are no intermediate power plants.

For inflow channel 19 the next storage reservoir downstream is number 8
There are no intermediate power plants.

For inflow channel 25 the next storage reservoir downstream is number 10
There are no intermediate power plants.

For inflow channel 28 the next storage reservoir downstream is number 11
There are no intermediate power plants.

********** GENERAL STRUCTURE DATA ********

Gabbro Control Structure

Structure number : 1
Channel number : 10
Reservoir number : 5
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	472.90	473.35	473.96	474.88	476.40	477.32	478.54
Discharges (cms) :	.0	169.9	339.8	566.3	1076.0	1415.8	1868.9

Elevations (m.) :	479.76
Discharges (cms) :	2491.9

Flow Over Gabbro Control Structure

Structure number : 2
Channel number : 11
Reservoir number : 5
Structure type : 5

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	472.90	479.76	479.91	480.06	480.36	480.67	480.97
Discharges (cms) :	.0	.0	5.9	16.8	47.5	87.3	134.5

Elevations (m.) :	481.28
Discharges (cms) :	160.5

Ossokmanuan Control Structure

Structure number : 3
Channel number : 12
Reservoir number : 5
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	474.20	475.50	476.30	477.00	477.80	478.50	479.15
Discharges (cms) :	.0	311.0	623.0	962.0	1472.0	2066.0	2348.0

Elevations (m.) :	480.50
Discharges (cms) :	3679.0

Lobstick Control Structure

Structure number : 4
Channel number : 14
Reservoir number : 6
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	457.20	463.30	466.34	469.39	470.92	472.44	472.74
Discharges (cms) :	.0	2124.0	3330.0	4604.0	5326.0	6133.0	6329.0

Elevations (m.) :	473.96
Discharges (cms) :	7127.0

Whitefish Control Structure

Structure number : 5
Channel number : 17
Reservoir number : 7
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	448.00	448.50	449.00	449.60	451.10	451.40	451.70
Discharges (cms) :	.0	1077.0	1518.0	1905.0	2601.0	2718.0	2826.0

Elevations (m.) :	452.00	452.30	452.60	452.90	453.50
Discharges (cms) :	2937.0	3045.0	3153.0	3258.0	3459.0

Jacopie Spillway

Structure number : 6
Channel number : 18
Reservoir number : 7
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	440.90	445.00	446.50	448.10	449.60	451.10	452.63
Discharges (cms) :	.0	1764.0	2307.0	2904.0	3557.0	4269.0	5045.0

Elevations (m.) :	454.15	455.00
Discharges (cms) :	5888.0	6359.4

East Forebay Spillway

Structure number : 7
Channel number : 23
Reservoir number : 8
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	436.47	438.90	440.40	441.96	443.50	445.00	446.50
Discharges (cms) :	.0	169.9	396.4	736.2	1189.3	1699.0	2265.4

Elevations (m.) :	448.06	448.67	449.28
Discharges (cms) :	2718.4	2973.3	3199.8

Atikonak Control Structure

Structure number : 8
Channel number : 5
Reservoir number : 2
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	491.00	492.70	494.17	495.49	497.00	498.45
Discharges (cms) :	.0	114.0	305.0	541.0	866.0	1193.0

Gull Island Spill

Structure number : 9
Channel number : 27
Reservoir number : 10
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	115.00	130.00
Discharges (cms) :	999999.0	999999.0

Muskrat Falls Spill

Structure number : 10
Channel number : 30
Reservoir number : 11
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	35.00	45.00
Discharges (cms) :	999999.0	999999.0

Romaine Spill

Structure number : 11
Channel number : 33
Reservoir number : 2
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	480.00	520.00
Discharges (cms) :	999999.0	999999.0

********** IRRIGATION AREA DATA ********

No irrigation areas.

********** HEDGING RULE DATA ********

********** HYDROLOGY DATA **********

Checking inflow files...

Qroma.HST
...contains 41 years of data, between 1956 and 1996
Qjuli.HST
...contains 41 years of data, between 1956 and 1996
Qoinf.HST
...contains 41 years of data, between 1956 and 1996
Qsinf.HST
...contains 41 years of data, between 1956 and 1996
Qwinf.HST
...contains 41 years of data, between 1956 and 1996
Qeinf.HST
...contains 41 years of data, between 1956 and 1996
Qgull.HST
...contains 41 years of data, between 1956 and 1996
Qmusk.HST
...contains 41 years of data, between 1956 and 1996

Checking rainfall files...

Checking demand files...

The overlapping period in the hydrology files is from 1956 to 1996.

Start date is Oct 1956 (1956)

Number of simulation years:	41
Number of time steps/year:	12
Total number of nodes in system:	14
Number of reservoirs:	7
Number of storage zones:	4
Rule curve is at bottom of zone:	2
Number of control structures:	11
Total number of channels:	35
Number of power channels:	5
Number of loss channels:	0
Number of inflow channels:	10
Number of inflow series:	8
Number of irrigation areas:	0
Restart option is:	OFF

Starting Condition: 73.89 percent full
Initial energy in storage: 28138.82

Energy Draft Rate: 5940.50 MWc

Annual draft rate(s):

Nominal:	5940.50
Oct	4812.40
Nov	6548.21
Dec	7603.25
Jan	8057.69
Feb	7929.97
Mar	7008.60
Apr	5102.89
May	4868.24
Jun	4842.70
Jul	5218.14
Aug	5007.84
Sep	4387.06

CF1 - 5428.5 MW

(Existing Case)

(a) Output File

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0001

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR VOLUME (mcm): 5 Ossokmanuan Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1948.21	1048.87	1419.08	1789.30	1709.27
2	1957	1957	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	592.59	1707.69	2317.74	2815.18	2835.00	2019.90
3	1958	1958	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	443.38	1664.48	1649.53	1419.08	1789.30	1744.70
4	1959	1959	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1072.91	1048.87	1419.08	1789.30	1636.33
5	1960	1960	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
6	1961	1961	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1382.07	1048.87	1419.08	1789.30	1662.09
7	1962	1962	2627.10	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1266.16	1048.87	1419.08	1789.30	1635.11
8	1963	1963	2651.48	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1248.02	1048.87	1419.08	1789.30	1635.63
9	1964	1964	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1707.79	1157.37	1419.08	1789.30	1698.28
10	1965	1965	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2042.48	2835.00	2835.00	2667.79	2057.17
11	1966	1966	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	768.15	1048.87	1419.08	1789.30	1610.93
12	1967	1967	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	671.35	1251.22	1048.87	1419.08	2715.90	1756.42
13	1968	1968	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1855.10	2835.00	2835.00	2835.00	2055.49
14	1969	1969	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1991.68	2835.00	1834.00	1789.30	1896.31
15	1970	1970	2635.41	2835.00	2835.00	2835.00	1773.92	856.07	.60	900.79	1309.48	1846.37	1638.58	1789.30	1771.29
16	1971	1971	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1869.00	1048.87	1419.08	1789.30	1702.67
17	1972	1972	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	945.57	733.04	1048.87	1419.08	1789.30	1658.87
18	1973	1973	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1628.57	1048.87	1419.08	1789.30	1682.63
19	1974	1974	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2089.34	1048.87	1419.08	1789.30	1721.03
20	1975	1975	2809.23	2835.00	2835.00	2835.00	1773.92	856.07	.60	940.13	1448.94	1048.87	1419.08	2189.75	1749.30
21	1976	1976	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1744.29	1796.16	1852.73	2835.00	1877.83
22	1977	1977	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1957.76	2835.00	2835.00	2183.87	2009.78
23	1978	1978	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1600.54	2835.00	2835.00	2835.00	2835.00	2242.60
24	1979	1979	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	595.67	2148.80	2835.00	2087.65	1789.30	1952.25
25	1980	1980	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	2835.00	2835.00	2238.17	1789.30	2000.27
26	1981	1981	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1675.97	1405.18	1419.08	1789.30	1716.28
27	1982	1982	2804.15	2835.00	2835.00	2835.00	1773.92	856.07	.60	1558.24	1611.67	1703.72	1419.08	1789.30	1835.15
28	1983	1983	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	539.31	1431.60	2522.19	1964.33	1789.30	1851.44
29	1984	1984	2755.67	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1116.30	1048.87	1419.08	1789.30	1633.33
30	1985	1985	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	540.57	688.28	1048.87	1419.08	1789.30	1621.39
31	1986	1986	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	366.55	678.65	1048.87	1419.08	1789.30	1606.09
32	1987	1987	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	385.09	911.15	1048.87	1419.08	1789.30	1627.01
33	1988	1988	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
34	1989	1989	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	960.60	1048.87	1419.08	1789.30	1626.97
35	1990	1990	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
36	1991	1991	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1088.91	1048.87	1419.08	1789.30	1637.66
37	1992	1992	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47
38	1993	1993	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1015.49	1048.87	1419.08	1789.30	1631.54
39	1994	1994	2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	422.74	678.65	1048.87	1419.08	1789.30	1610.77
40	1995	1995	2758.88	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	919.33	1048.87	1419.08	1789.30	1617.19
41	1996	1996	2822.63	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	1383.45	1048.87	1419.08	1789.30	1661.17
AVERAGE			2815.11	2835.00	2835.00	2835.00	1773.92	856.07	.60	476.88	1399.51	1500.34	1666.91	1954.74	1745.76
MAXIMUM			2835.00	2835.00	2835.00	2835.00	1773.92	856.07	.60	1600.54	2835.00	2835.00	2835.00	2835.00	2242.60
MINIMUM			2627.10	2835.00	2835.00	2835.00	1773.92	856.07	.60	335.17	678.65	1048.87	1419.08	1789.30	1603.47

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR ELEVATION (m.): 5 Ossokmanuan Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.033	476.692	477.246	477.800	477.597
2	1957	1957	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.010	477.678	478.522	479.128	479.150	478.025
3	1958	1958	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.764	477.613	477.591	477.246	477.800	477.652
4	1959	1959	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.728	476.692	477.246	477.800	477.489
5	1960	1960	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
6	1961	1961	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.191	476.692	477.246	477.800	477.527
7	1962	1962	478.912	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.017	476.692	477.246	477.800	477.493
8	1963	1963	478.941	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.990	476.692	477.246	477.800	477.493
9	1964	1964	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.678	476.855	477.246	477.800	477.581
10	1965	1965	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.158	479.150	479.150	478.961	478.068
11	1966	1966	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.272	476.692	477.246	477.800	477.451
12	1967	1967	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.128	476.995	476.692	477.246	479.017	477.658
13	1968	1968	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.898	479.150	479.150	479.150	478.062
14	1969	1969	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.091	479.150	477.867	477.800	477.859
15	1970	1970	478.922	479.150	479.150	479.150	477.777	476.404	475.031	476.471	477.082	477.885	477.575	477.800	477.700
16	1971	1971	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.919	476.692	477.246	477.800	477.588
17	1972	1972	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.538	476.220	476.692	477.246	477.800	477.526
18	1973	1973	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.560	476.692	477.246	477.800	477.558
19	1974	1974	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.220	476.692	477.246	477.800	477.613
20	1975	1975	479.121	479.150	479.150	479.150	477.777	476.404	475.031	476.530	477.291	476.692	477.246	478.353	477.658
21	1976	1976	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.733	477.810	477.895	479.150	477.832
22	1977	1977	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	478.046	479.150	479.150	478.345	478.007
23	1978	1978	479.150	479.150	479.150	479.150	477.777	476.404	475.031	477.518	479.150	479.150	479.150	479.150	478.327
24	1979	1979	479.150	479.150	479.150	479.150	477.777	476.404	475.031	476.014	478.299	479.150	478.218	477.800	477.941
25	1980	1980	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	479.150	479.150	478.417	477.800	477.993
26	1981	1981	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.630	477.225	477.246	477.800	477.608
27	1982	1982	479.115	479.150	479.150	479.150	477.777	476.404	475.031	477.454	477.534	477.672	477.246	477.800	477.790
28	1983	1983	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.923	477.265	478.788	478.055	477.800	477.804
29	1984	1984	479.061	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.793	476.692	477.246	477.800	477.487
30	1985	1985	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.925	476.153	476.692	477.246	477.800	477.469
31	1986	1986	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.637	476.139	476.692	477.246	477.800	477.444
32	1987	1987	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.667	476.486	476.692	477.246	477.800	477.475
33	1988	1988	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
34	1989	1989	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.560	476.692	477.246	477.800	477.475
35	1990	1990	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
36	1991	1991	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.752	476.692	477.246	477.800	477.491
37	1992	1992	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439
38	1993	1993	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.642	476.692	477.246	477.800	477.481
39	1994	1994	479.150	479.150	479.150	479.150	477.777	476.404	475.031	475.730	476.139	476.692	477.246	477.800	477.452
40	1995	1995	479.065	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.499	476.692	477.246	477.800	477.462
41	1996	1996	479.136	479.150	479.150	479.150	477.777	476.404	475.031	475.585	477.193	476.692	477.246	477.800	477.526
AVERAGE			479.127	479.150	479.150	479.150	477.777	476.404	475.031	475.807	477.204	477.327	477.589	478.016	477.644
MAXIMUM			479.150	479.150	479.150	479.150	477.777	476.404	475.031	477.518	479.150	479.150	479.150	479.150	478.327
MINIMUM			478.912	479.150	479.150	479.150	477.777	476.404	475.031	475.585	476.139	476.692	477.246	477.800	477.439

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR VOLUME (mcm): 6 Smallwood Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	18662.1	17782.8	15049.5	11740.2	9707.7	7634.2	6736.5	5922.4	15879.1	21392.0	23003.9	25018.7	14877.4
2	1957	1957	25846.5	25019.1	23067.2	20645.2	19331.9	18108.0	16250.6	20685.3	28130.2	28941.0	28941.0	28941.0	23658.9
3	1958	1958	28941.0	28069.5	25647.5	22467.0	20482.4	18422.5	15537.1	19317.0	28028.5	28941.0	28941.0	28541.3	24444.7
4	1959	1959	28102.6	26797.7	24110.0	20838.2	18839.7	16743.4	15369.0	17254.9	23477.3	25429.9	27019.0	28941.0	22743.6
5	1960	1960	28941.0	28186.7	25734.4	22592.0	20703.1	18422.5	15941.0	18236.4	21836.8	24032.3	23664.6	23000.5	22607.6
6	1961	1961	23244.4	22673.6	20357.7	16987.6	14804.3	12511.2	11312.6	10058.6	17594.5	19514.9	19761.7	20565.4	17448.9
7	1962	1962	19318.4	17255.1	14241.4	10742.5	8545.6	6290.0	5186.8	5396.6	12439.0	14782.2	15324.3	15431.4	12079.4
8	1963	1963	14228.0	12372.8	9556.3	6277.0	4354.0	2333.8	1487.7	4245.7	11211.1	12451.4	13047.2	14313.6	8823.2
9	1964	1964	14307.4	12973.5	10240.2	7029.5	5133.9	3288.0	2566.6	2988.6	11915.6	18543.7	21219.4	25010.8	11268.1
10	1965	1965	25793.3	24759.8	22337.8	19347.0	17519.6	15628.2	14826.0	15938.1	26292.0	28941.0	28941.0	28941.0	22438.7
11	1966	1966	28941.0	28941.0	26503.4	23595.9	21640.0	18670.2	16093.3	17114.7	22078.3	23445.7	24276.3	23546.4	22903.9
12	1967	1967	22925.8	22846.4	20310.5	17524.1	15840.6	14184.4	13947.5	18720.4	25599.9	27435.0	28349.0	28941.0	21385.4
13	1968	1968	28941.0	28941.0	27171.2	24286.4	21944.8	19012.8	16061.6	17492.5	27050.6	28941.0	28941.0	28941.0	24810.4
14	1969	1969	28941.0	28832.2	27099.9	24799.0	22882.5	20277.0	17839.5	18269.2	28130.2	28941.0	28941.0	28941.0	25324.5
15	1970	1970	27708.4	25719.5	22668.1	19199.7	16975.3	14621.3	13687.2	19421.7	26487.2	28941.0	28941.0	28941.0	22776.0
16	1971	1971	28941.0	26623.2	23131.7	19276.0	16859.7	14756.0	13726.1	12100.4	21718.0	25452.5	24796.4	24741.7	21010.2
17	1972	1972	25304.4	24198.0	21214.6	17199.6	15296.9	13860.6	12963.0	18887.7	23608.8	24630.1	23177.9	22073.5	20201.3
18	1973	1973	22620.9	21932.7	20473.8	17444.9	15754.7	13703.7	13026.4	12644.7	21232.9	24727.1	24253.3	23604.0	19284.9
19	1974	1974	22998.6	21957.9	19603.9	15513.3	13795.7	11358.2	10130.4	10560.0	21109.2	26876.8	27950.1	28941.0	19232.9
20	1975	1975	27705.0	26596.7	24330.6	21080.2	19395.7	17599.7	15605.5	21958.9	28181.8	28941.0	28941.0	28941.0	24106.4
21	1976	1976	28941.0	28091.6	25941.9	23590.2	21640.0	18422.5	16013.6	18840.4	28130.2	28941.0	28941.0	28941.0	24702.9
22	1977	1977	28941.0	28941.0	27373.7	24843.0	22839.1	19474.6	16868.1	20208.7	28130.2	28941.0	28941.0	28941.0	25370.2
23	1978	1978	28941.0	28132.0	25520.9	22529.8	20067.3	17818.4	16102.0	25257.5	28941.0	28941.0	28941.0	28941.0	25011.1
24	1979	1979	28941.0	28941.0	26966.5	24523.7	22105.7	19405.9	17183.8	22676.6	28941.0	28941.0	28941.0	28941.0	25542.4
25	1980	1980	28941.0	28341.7	26332.1	23636.7	21640.0	18605.9	16476.4	20629.6	28941.0	28941.0	28941.0	28941.0	25030.6
26	1981	1981	27584.4	26303.1	23917.2	20763.0	18434.6	15944.0	14660.7	17690.3	26934.6	28941.0	28941.0	28941.0	23254.6
27	1982	1982	27639.6	26208.2	23831.5	20325.0	18409.3	16908.7	15601.6	23127.3	28130.2	28941.0	28941.0	28941.0	23917.0
28	1983	1983	28941.0	28941.0	27957.0	24634.9	22159.3	19159.0	16837.6	21492.2	28036.7	28941.0	28941.0	28941.0	25415.1
29	1984	1984	28019.4	27630.8	25145.3	22229.2	20165.2	18019.4	15604.2	15291.4	21766.5	23664.6	23907.1	23734.7	22098.1
30	1985	1985	22884.8	21893.3	19625.0	15773.3	13331.7	10759.7	10832.5	18435.3	22335.1	24676.2	24386.5	25020.0	19162.8
31	1986	1986	24519.6	23085.4	19992.7	17230.9	15063.3	13214.8	15369.0	19750.3	21048.5	22314.6	23782.9	24906.3	20023.2
32	1987	1987	24809.8	24784.1	22358.9	20049.9	17665.9	16049.3	15369.0	19696.4	25018.1	25571.1	24848.8	25424.8	21803.8
33	1988	1988	25208.3	24603.3	21482.5	17453.2	16053.0	14652.1	14706.5	18123.4	22483.5	21327.7	20320.9	20089.7	19708.7
34	1989	1989	21231.5	21752.9	20047.1	16568.8	14424.7	12558.3	11852.7	13092.1	19684.9	21175.4	20813.3	21270.0	17872.6
35	1990	1990	22729.2	22345.0	20424.9	17201.5	14867.5	12566.6	11476.2	11433.4	16449.8	18113.0	17482.0	17293.3	16865.2
36	1991	1991	16887.8	17086.5	14540.0	11557.4	9223.2	7441.1	6656.7	7341.4	16726.6	20565.5	22060.9	24011.9	14508.3
37	1992	1992	24058.4	22388.6	19473.5	15904.9	13693.6	10999.8	10092.6	12460.3	15851.8	16003.1	15206.8	15422.7	15963.0
38	1993	1993	15529.8	14263.3	11567.8	8167.2	6052.1	4414.2	3725.2	4748.1	11014.2	14061.9	14986.5	15702.9	10352.8
39	1994	1994	16119.9	15549.1	13201.5	9868.1	8049.6	5806.9	5172.1	9332.8	12560.6	12710.3	11141.6	10436.9	10829.1
40	1995	1995	9711.8	9354.7	7141.8	3858.5	2308.6	309.8	.9	3554.3	9779.7	12582.0	12821.2	11771.5	6932.9
41	1996	1996	10028.1	10264.8	8840.5	5908.5	3774.9	1788.7	1055.9	2630.0	10454.8	15362.0	17522.7	18276.2	8825.6
AVERAGE			23976.1	23204.4	20842.2	17687.9	15653.1	13457.2	12193.9	14951.8	21789.3	23681.9	23883.9	24175.7	19624.8
MAXIMUM			28941.0	28941.0	27957.0	24843.0	22882.5	20277.0	17839.5	25257.5	28941.0	28941.0	28941.0	28941.0	25542.4
MINIMUM			9711.8	9354.7	7141.8	3858.5	2308.6	309.8	.9	2630.0	9779.7	12451.4	11141.6	10436.9	6932.9

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR ELEVATION (m.): 6 Smallwood Reservoir

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	470.798	470.621	470.030	469.301	468.837	468.329	468.109	467.909	470.212	471.350	471.660	472.032	469.932
2	1957	1957	472.185	472.033	471.672	471.199	470.934	470.686	470.294	471.207	472.600	472.740	472.740	472.740	471.753
3	1958	1958	472.740	472.590	472.149	471.561	471.166	470.750	470.137	470.931	472.582	472.740	472.740	472.671	471.896
4	1959	1959	472.595	472.361	471.865	471.238	470.834	470.403	470.100	470.514	471.748	472.108	472.402	472.740	471.576
5	1960	1960	472.740	472.610	472.165	471.584	471.211	470.750	470.226	470.712	471.440	471.850	471.782	471.660	471.561
6	1961	1961	471.705	471.599	471.141	470.457	469.976	469.471	469.207	468.923	470.583	470.971	471.021	471.183	470.519
7	1962	1962	470.931	470.514	469.852	469.081	468.552	467.999	467.729	467.781	469.455	469.971	470.090	470.114	469.339
8	1963	1963	469.849	469.440	468.799	467.996	467.525	466.769	465.783	467.499	469.184	469.457	469.589	469.868	468.480
9	1964	1964	469.866	469.572	468.967	468.181	467.716	467.264	467.040	467.191	469.339	470.774	471.315	472.031	469.105
10	1965	1965	472.175	471.985	471.537	470.937	470.568	470.157	469.980	470.225	472.268	472.740	472.740	472.740	471.504
11	1966	1966	472.740	472.740	472.307	471.770	471.400	470.800	470.260	470.484	471.489	471.742	471.895	471.761	471.616
12	1967	1967	471.646	471.631	471.131	470.569	470.204	469.839	469.787	470.810	472.140	472.479	472.638	472.740	471.301
13	1968	1968	472.740	472.740	472.430	471.897	471.462	470.869	470.253	470.562	472.408	472.740	472.740	472.740	471.965
14	1969	1969	472.740	472.721	472.417	471.992	471.638	471.125	470.632	470.719	472.600	472.740	472.740	472.740	472.067
15	1970	1970	472.527	472.162	471.598	470.907	470.454	469.935	469.730	470.952	472.304	472.740	472.740	472.740	471.566
16	1971	1971	472.740	472.329	471.684	470.922	470.428	469.965	469.738	469.380	471.416	472.113	471.991	471.981	471.224
17	1972	1972	472.085	471.881	471.314	470.503	470.084	469.768	469.570	470.844	471.772	471.961	471.693	471.488	471.080
18	1973	1973	471.590	471.459	471.164	470.553	470.185	469.733	469.584	469.500	471.318	471.979	471.891	471.771	470.894
19	1974	1974	471.659	471.464	470.989	470.132	469.753	469.217	468.940	469.041	471.293	472.376	472.569	472.740	470.848
20	1975	1975	472.527	472.324	471.905	471.287	470.947	470.584	470.152	471.464	472.609	472.740	472.740	472.740	471.835
21	1976	1976	472.740	472.593	472.203	471.769	471.400	470.750	470.242	470.834	472.600	472.740	472.740	472.740	471.946
22	1977	1977	472.740	472.740	472.467	472.000	471.630	470.963	470.430	471.111	472.600	472.740	472.740	472.740	472.075
23	1978	1978	472.740	472.600	472.125	471.573	471.082	470.628	470.261	472.077	472.740	472.740	472.740	472.740	472.004
24	1979	1979	472.740	472.740	472.392	471.941	471.494	470.949	470.500	471.600	472.740	472.740	472.740	472.740	472.110
25	1980	1980	472.740	472.637	472.275	471.777	471.400	470.787	470.344	471.196	472.740	472.740	472.740	472.740	472.010
26	1981	1981	472.506	472.270	471.829	471.223	470.752	470.227	469.944	470.602	472.386	472.740	472.740	472.740	471.663
27	1982	1982	472.515	472.252	471.813	471.134	470.747	470.439	470.151	471.683	472.600	472.740	472.740	472.740	471.796
28	1983	1983	472.740	472.740	472.570	471.962	471.504	470.899	470.423	471.370	472.584	472.740	472.740	472.740	472.084
29	1984	1984	472.581	472.514	472.056	471.517	471.102	470.669	470.152	470.083	471.426	471.782	471.827	471.795	471.459
30	1985	1985	471.638	471.451	470.993	470.189	469.651	469.085	469.101	470.753	471.537	471.969	471.916	472.033	470.860
31	1986	1986	471.940	471.675	471.067	470.509	470.033	469.625	470.100	471.018	471.281	471.533	471.804	472.012	471.050
32	1987	1987	471.994	471.989	471.541	471.079	470.597	470.250	470.100	471.007	472.032	472.134	472.001	472.107	471.403
33	1988	1988	472.067	471.956	471.368	470.554	470.251	469.942	469.954	470.690	471.564	471.337	471.134	471.087	470.992
34	1989	1989	471.317	471.423	471.078	470.364	469.892	469.481	469.325	469.598	471.005	471.306	471.233	471.325	470.612
35	1990	1990	471.610	471.539	471.155	470.503	469.990	469.483	469.243	469.233	470.338	470.687	470.560	470.522	470.405
36	1991	1991	470.435	470.478	469.917	469.260	468.718	468.281	468.089	468.257	470.399	471.183	471.485	471.847	469.862
37	1992	1992	471.855	471.547	470.962	470.218	469.731	469.138	468.931	469.459	470.206	470.240	470.064	470.112	470.205
38	1993	1993	470.135	469.856	469.263	468.459	467.941	467.540	467.371	467.622	469.141	469.812	470.016	470.174	468.944
39	1994	1994	470.265	470.140	469.623	468.876	468.430	467.881	467.726	468.745	469.481	469.514	469.169	469.014	469.072
40	1995	1995	468.838	468.750	468.208	467.404	466.740	464.411	464.051	467.329	468.854	469.486	469.539	469.308	467.743
41	1996	1996	468.915	468.973	468.624	467.906	467.383	466.134	465.280	467.103	469.018	470.098	470.568	470.720	468.394
AVERAGE			471.796	471.650	471.186	470.544	470.106	469.560	469.243	469.952	471.367	471.739	471.779	471.834	470.896
MAXIMUM			472.740	472.740	472.570	472.000	471.638	471.125	470.632	472.077	472.740	472.740	472.740	472.740	472.110
MINIMUM			468.838	468.750	468.208	467.404	466.740	464.411	464.051	467.103	468.854	469.457	469.169	469.014	467.743

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR VOLUME (mcm): 7 West Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
2	1957	1957	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	308.626	241.096
3	1958	1958	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
4	1959	1959	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
5	1960	1960	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
6	1961	1961	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
7	1962	1962	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
8	1963	1963	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
9	1964	1964	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
10	1965	1965	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	308.626	173.750	254.882
11	1966	1966	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
12	1967	1967	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
13	1968	1968	308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	308.626	308.626	275.248
14	1969	1969	308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	250.645
15	1970	1970	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
16	1971	1971	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
17	1972	1972	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
18	1973	1973	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
19	1974	1974	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
20	1975	1975	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
21	1976	1976	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	176.503	230.086
22	1977	1977	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	308.626	173.750	254.882
23	1978	1978	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	308.626	308.626	308.626	308.626	275.565
24	1979	1979	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	308.626	148.274	173.750	241.519
25	1980	1980	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	308.626	308.626	148.274	173.750	250.962
26	1981	1981	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
27	1982	1982	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
28	1983	1983	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
29	1984	1984	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
30	1985	1985	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
31	1986	1986	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
32	1987	1987	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
33	1988	1988	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
34	1989	1989	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
35	1990	1990	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
36	1991	1991	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
37	1992	1992	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
38	1993	1993	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
39	1994	1994	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
40	1995	1995	199.110	239.186	289.444	289.444	289.444	289.444	148.984	221.934	195.306	168.678	148.274	173.750	221.083
41	1996	1996	199.110	239.186	289.444	289.444	289.444	289.444	254.264	221.934	195.306	168.678	148.274	173.750	229.857
AVERAGE			204.452	239.186	289.444	289.444	289.444	289.444	251.696	221.934	200.834	192.572	163.918	183.686	234.671
MAXIMUM			308.626	239.186	289.444	289.444	289.444	289.444	254.264	221.934	308.626	308.626	308.626	308.626	275.565
MINIMUM			199.110	239.186	289.444	289.444	289.444	289.444	148.984	221.934	195.306	168.678	148.274	173.750	221.083

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR ELEVATION (m.): 7 West Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
2	1957	1957	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	452.929	452.044
3	1958	1958	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
4	1959	1959	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
5	1960	1960	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
6	1961	1961	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
7	1962	1962	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
8	1963	1963	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
9	1964	1964	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
10	1965	1965	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	452.929	451.100	452.245
11	1966	1966	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
12	1967	1967	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
13	1968	1968	452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	452.929	452.929	452.516
14	1969	1969	452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.170
15	1970	1970	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
16	1971	1971	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
17	1972	1972	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
18	1973	1973	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
19	1974	1974	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
20	1975	1975	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
21	1976	1976	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.143	451.895
22	1977	1977	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	452.929	451.100	452.245
23	1978	1978	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	452.929	452.929	452.929	452.929	452.521
24	1979	1979	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	452.929	450.600	451.100	452.051
25	1980	1980	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	452.929	452.929	450.600	451.100	452.175
26	1981	1981	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
27	1982	1982	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
28	1983	1983	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
29	1984	1984	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
30	1985	1985	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
31	1986	1986	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
32	1987	1987	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
33	1988	1988	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
34	1989	1989	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
35	1990	1990	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
36	1991	1991	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
37	1992	1992	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
38	1993	1993	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
39	1994	1994	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
40	1995	1995	451.500	452.100	452.700	452.700	452.700	452.700	450.615	451.860	451.440	451.020	450.600	451.100	451.753
41	1996	1996	451.500	452.100	452.700	452.700	452.700	452.700	452.280	451.860	451.440	451.020	450.600	451.100	451.892
AVERAGE			451.570	452.100	452.700	452.700	452.700	452.700	452.239	451.860	451.513	451.346	450.827	451.235	451.957
MAXIMUM			452.929	452.100	452.700	452.700	452.700	452.700	452.280	451.860	452.929	452.929	452.929	452.929	452.521
MINIMUM			451.500	452.100	452.700	452.700	452.700	452.700	450.615	451.860	451.440	451.020	450.600	451.100	451.753

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0007

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR VOLUME (mcm): 8 East Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
2	1957	1957	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
3	1958	1958	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
4	1959	1959	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
5	1960	1960	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
6	1961	1961	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
7	1962	1962	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
8	1963	1963	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
9	1964	1964	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
10	1965	1965	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
11	1966	1966	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
12	1967	1967	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
13	1968	1968	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
14	1969	1969	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
15	1970	1970	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
16	1971	1971	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
17	1972	1972	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
18	1973	1973	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
19	1974	1974	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
20	1975	1975	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
21	1976	1976	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
22	1977	1977	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
23	1978	1978	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
24	1979	1979	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
25	1980	1980	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
26	1981	1981	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
27	1982	1982	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
28	1983	1983	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
29	1984	1984	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
30	1985	1985	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
31	1986	1986	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
32	1987	1987	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
33	1988	1988	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
34	1989	1989	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
35	1990	1990	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
36	1991	1991	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
37	1992	1992	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
38	1993	1993	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
39	1994	1994	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
40	1995	1995	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
41	1996	1996	555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
AVERAGE			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
MAXIMUM			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409
MINIMUM			555.240	435.552	435.552	435.552	435.552	435.552	435.552	495.396	555.240	555.240	555.240	555.240	490.409

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD-END RESERVOIR ELEVATION (m.): 8 East Forebay

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
2	1957	1957	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
3	1958	1958	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
4	1959	1959	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
5	1960	1960	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
6	1961	1961	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
7	1962	1962	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
8	1963	1963	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
9	1964	1964	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
10	1965	1965	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
11	1966	1966	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
12	1967	1967	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
13	1968	1968	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
14	1969	1969	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
15	1970	1970	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
16	1971	1971	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
17	1972	1972	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
18	1973	1973	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
19	1974	1974	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
20	1975	1975	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
21	1976	1976	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
22	1977	1977	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
23	1978	1978	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
24	1979	1979	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
25	1980	1980	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
26	1981	1981	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
27	1982	1982	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
28	1983	1983	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
29	1984	1984	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
30	1985	1985	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
31	1986	1986	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
32	1987	1987	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
33	1988	1988	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
34	1989	1989	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
35	1990	1990	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
36	1991	1991	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
37	1992	1992	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
38	1993	1993	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
39	1994	1994	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
40	1995	1995	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
41	1996	1996	448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
AVERAGE			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
MAXIMUM			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017
MINIMUM			448.510	447.600	447.600	447.600	447.600	447.600	447.600	448.055	448.510	448.510	448.510	448.510	448.017

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD CAPACITY POTENTIAL (MW): 2 Churchill Falls Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
2	1957	1957	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
3	1958	1958	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
4	1959	1959	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
5	1960	1960	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
6	1961	1961	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
7	1962	1962	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
8	1963	1963	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
9	1964	1964	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
10	1965	1965	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
11	1966	1966	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
12	1967	1967	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
13	1968	1968	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
14	1969	1969	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
15	1970	1970	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
16	1971	1971	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
17	1972	1972	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
18	1973	1973	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
19	1974	1974	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
20	1975	1975	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
21	1976	1976	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
22	1977	1977	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
23	1978	1978	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
24	1979	1979	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
25	1980	1980	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
26	1981	1981	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
27	1982	1982	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
28	1983	1983	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
29	1984	1984	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
30	1985	1985	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
31	1986	1986	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
32	1987	1987	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
33	1988	1988	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
34	1989	1989	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
35	1990	1990	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
36	1991	1991	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
37	1992	1992	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
38	1993	1993	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
39	1994	1994	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
40	1995	1995	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
41	1996	1996	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
AVERAGE			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MAXIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MINIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 2 Churchill Falls Station

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
2	1957	1957	2874.80	3911.73	4541.98	4813.46	4737.16	4186.75	5158.70	2908.16	4406.18	4825.94	4770.57	4825.94	4324.08
3	1958	1958	4270.01	3911.71	4541.98	4813.46	4737.14	4227.77	5158.70	2908.16	2892.90	4825.94	4471.59	2620.71	4115.03
4	1959	1959	2874.79	3911.73	4541.98	4813.46	4737.16	4186.76	3402.92	2908.16	2892.90	3117.18	2991.55	3756.85	3671.29
5	1960	1960	4060.42	3911.71	4541.98	4813.46	4737.15	4581.46	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	3856.44
6	1961	1961	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
7	1962	1962	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
8	1963	1963	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
9	1964	1964	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
10	1965	1965	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	4825.94	4770.56	4825.94	4026.24
11	1966	1966	4907.96	5028.63	4541.98	4813.44	5181.96	5269.44	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	4112.78
12	1967	1967	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	4825.94	3730.02
13	1968	1968	4992.05	4415.35	4541.98	4813.46	5324.82	5269.44	5158.70	2908.16	2892.88	4825.93	4770.57	4825.94	4557.95
14	1969	1969	4992.05	3911.73	4541.98	4813.46	5324.82	5269.44	5158.70	2908.16	3194.46	4825.94	4770.57	3191.47	4407.00
15	1970	1970	2874.78	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	4825.94	4770.57	3186.74	3891.51
16	1971	1971	4083.76	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3651.45
17	1972	1972	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
18	1973	1973	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
19	1974	1974	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.54	2886.61	3570.62
20	1975	1975	2874.78	3911.73	4541.98	4813.46	4737.16	4186.74	5158.70	2908.15	4881.31	4052.47	4063.16	4825.94	4237.35
21	1976	1976	3517.08	3911.71	4541.98	4813.44	5029.44	5236.00	5158.70	2908.16	3295.82	4825.94	4770.57	4825.94	4398.90
22	1977	1977	4589.66	4658.94	4541.95	5080.65	5324.82	5269.44	5158.70	2908.16	4148.97	4825.94	4770.56	4825.94	4669.72
23	1978	1978	3229.76	3911.71	4541.98	4813.46	4737.16	4186.75	5158.70	5047.96	4881.31	4825.93	4770.57	4825.94	4575.01
24	1979	1979	4415.67	4563.79	4541.98	4813.45	5324.82	5269.44	5158.70	2999.12	4881.31	4825.94	4770.57	2909.90	4534.87
25	1980	1980	3525.40	3911.72	4541.98	4813.44	5201.77	5269.44	5158.70	2908.16	4881.30	4825.93	4770.57	3795.00	4461.24
26	1981	1981	2874.77	3911.73	4541.98	4813.46	4737.16	4186.76	3048.32	2908.16	2892.88	4825.94	3961.81	4219.36	3907.69
27	1982	1982	2874.78	3911.73	4541.98	4813.46	4737.16	4186.76	5158.70	5047.96	3784.80	4825.94	4085.36	3769.67	4309.73
28	1983	1983	4188.46	4076.79	4541.98	4813.46	5324.82	5269.44	5158.70	2908.14	2892.90	4825.94	4770.57	3484.96	4351.65
29	1984	1984	2874.79	3911.73	4541.98	4813.46	4737.12	4186.75	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	3722.22
30	1985	1985	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
31	1986	1986	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3108.49	2908.16	2892.90	3117.18	2991.55	2620.71	3553.72
32	1987	1987	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3128.18	2908.16	2892.90	3117.18	2991.55	2620.71	3555.33
33	1988	1988	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
34	1989	1989	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
35	1990	1990	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
36	1991	1991	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
37	1992	1992	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
38	1993	1993	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
39	1994	1994	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
40	1995	1995	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
41	1996	1996	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
AVERAGE			3271.74	3989.41	4541.98	4819.97	4838.13	4407.82	3832.48	3014.76	3193.37	3723.47	3581.43	3236.71	3866.37
MAXIMUM			4992.05	5028.63	4541.98	5080.65	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	4669.72
MINIMUM			2874.77	3911.71	4541.95	4813.44	4737.12	4186.74	3048.32	2908.14	2892.88	3117.18	2991.54	2620.71	3548.77

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0011

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD CAPACITY POTENTIAL (MW): 0 TOTAL INTEGRATED POWER SYSTEM

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
2	1957	1957	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
3	1958	1958	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
4	1959	1959	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
5	1960	1960	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
6	1961	1961	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
7	1962	1962	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
8	1963	1963	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
9	1964	1964	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
10	1965	1965	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
11	1966	1966	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
12	1967	1967	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
13	1968	1968	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
14	1969	1969	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
15	1970	1970	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
16	1971	1971	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
17	1972	1972	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
18	1973	1973	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
19	1974	1974	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
20	1975	1975	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
21	1976	1976	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
22	1977	1977	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
23	1978	1978	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
24	1979	1979	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
25	1980	1980	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
26	1981	1981	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
27	1982	1982	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
28	1983	1983	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
29	1984	1984	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
30	1985	1985	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
31	1986	1986	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
32	1987	1987	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
33	1988	1988	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
34	1989	1989	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
35	1990	1990	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
36	1991	1991	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
37	1992	1992	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
38	1993	1993	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
39	1994	1994	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
40	1995	1995	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
41	1996	1996	4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
AVERAGE			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MAXIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68
MINIMUM			4992.05	5214.07	5324.82	5324.82	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	5078.68

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0012

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE ENERGY (MW CONTINUOUS): 0 TOTAL INTEGRATED POWER SYSTEM

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
2	1957	1957	2874.80	3911.73	4541.98	4813.46	4737.16	4186.75	5158.70	2908.16	4406.18	4825.94	4770.57	4825.94	4324.08
3	1958	1958	4270.01	3911.71	4541.98	4813.46	4737.14	4227.77	5158.70	2908.16	2892.90	4825.94	4471.59	2620.71	4115.03
4	1959	1959	2874.79	3911.73	4541.98	4813.46	4737.16	4186.76	3402.92	2908.16	2892.90	3117.18	2991.55	3756.85	3671.29
5	1960	1960	4060.42	3911.71	4541.98	4813.46	4737.15	4581.46	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	3856.44
6	1961	1961	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
7	1962	1962	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
8	1963	1963	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
9	1964	1964	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
10	1965	1965	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	4825.94	4770.56	4825.94	4026.24
11	1966	1966	4907.96	5028.63	4541.98	4813.44	5181.96	5269.44	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	4112.78
12	1967	1967	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	4825.94	3730.02
13	1968	1968	4992.05	4415.35	4541.98	4813.46	5324.82	5269.44	5158.70	2908.16	2892.88	4825.93	4770.57	4825.94	4557.95
14	1969	1969	4992.05	3911.73	4541.98	4813.46	5324.82	5269.44	5158.70	2908.16	3194.46	4825.94	4770.57	3191.47	4407.00
15	1970	1970	2874.78	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	4825.94	4770.57	3186.74	3891.51
16	1971	1971	4083.76	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3651.45
17	1972	1972	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
18	1973	1973	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
19	1974	1974	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.54	2886.61	3570.62
20	1975	1975	2874.78	3911.73	4541.98	4813.46	4737.16	4186.74	5158.70	2908.15	4881.31	4052.47	4063.16	4825.94	4237.35
21	1976	1976	3517.08	3911.71	4541.98	4813.44	5029.44	5236.00	5158.70	2908.16	3295.82	4825.94	4770.57	4825.94	4398.90
22	1977	1977	4589.66	4658.94	4541.95	5080.65	5324.82	5269.44	5158.70	2908.16	4148.97	4825.94	4770.56	4825.94	4669.72
23	1978	1978	3229.76	3911.71	4541.98	4813.46	4737.16	4186.75	5158.70	5047.96	4881.31	4825.93	4770.57	4825.94	4575.01
24	1979	1979	4415.67	4563.79	4541.98	4813.45	5324.82	5269.44	5158.70	2999.12	4881.31	4825.94	4770.57	2909.90	4534.87
25	1980	1980	3525.40	3911.72	4541.98	4813.44	5201.77	5269.44	5158.70	2908.16	4881.30	4825.93	4770.57	3795.00	4461.24
26	1981	1981	2874.77	3911.73	4541.98	4813.46	4737.16	4186.76	3048.32	2908.16	2892.88	4825.94	3961.81	4219.36	3907.69
27	1982	1982	2874.78	3911.73	4541.98	4813.46	4737.16	4186.76	5158.70	5047.96	3784.80	4825.94	4085.36	3769.67	4309.73
28	1983	1983	4188.46	4076.79	4541.98	4813.46	5324.82	5269.44	5158.70	2908.14	2892.90	4825.94	4770.57	3484.96	4351.65
29	1984	1984	2874.79	3911.73	4541.98	4813.46	4737.12	4186.75	5158.70	2908.16	2892.90	3117.18	2991.55	2620.71	3722.22
30	1985	1985	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
31	1986	1986	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3108.49	2908.16	2892.90	3117.18	2991.55	2620.71	3553.72
32	1987	1987	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3128.18	2908.16	2892.90	3117.18	2991.55	2620.71	3555.33
33	1988	1988	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
34	1989	1989	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
35	1990	1990	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
36	1991	1991	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
37	1992	1992	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
38	1993	1993	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
39	1994	1994	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
40	1995	1995	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
41	1996	1996	2874.80	3911.73	4541.98	4813.46	4737.16	4186.76	3048.33	2908.16	2892.90	3117.18	2991.55	2620.71	3548.77
AVERAGE			3271.74	3989.41	4541.98	4819.97	4838.13	4407.82	3832.48	3014.76	3193.37	3723.47	3581.43	3236.71	3866.37
MAXIMUM			4992.05	5028.63	4541.98	5080.65	5324.82	5269.44	5158.70	5047.96	4881.31	4825.94	4770.57	4825.94	4669.72
MINIMUM			2874.77	3911.71	4541.95	4813.44	4737.12	4186.74	3048.32	2908.14	2892.88	3117.18	2991.54	2620.71	3548.77

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 7 Lac Joseph Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	175.896	115.132	69.968	54.714	46.771	42.611	44.534	97.324	618.332	316.809	201.646	208.958	166.154
2	1957	1957	194.334	117.369	102.745	91.935	80.148	78.257	88.437	328.250	548.995	251.915	211.195	236.976	194.562
3	1958	1958	166.347	115.447	83.016	60.103	48.977	44.849	43.903	294.526	547.387	229.980	168.584	104.321	159.377
4	1959	1959	141.228	96.694	71.890	56.289	48.347	41.665	38.167	210.565	418.577	204.199	200.700	250.655	148.491
5	1960	1960	207.382	120.553	81.755	61.710	53.421	49.954	61.395	227.742	287.845	230.925	118.630	92.881	133.417
6	1961	1961	169.845	128.495	87.460	52.161	39.774	33.408	31.485	78.887	488.892	189.890	144.411	156.482	133.458
7	1962	1962	98.585	72.836	58.212	46.771	39.113	34.984	35.614	140.282	462.480	212.488	156.797	126.289	123.845
8	1963	1963	101.453	80.778	66.469	55.974	51.845	44.849	46.771	247.156	458.352	166.977	159.035	176.527	138.147
9	1964	1964	159.350	95.433	69.968	58.842	53.106	52.161	52.161	149.170	563.303	378.204	241.735	285.954	180.232
10	1965	1965	192.443	108.450	83.016	68.077	56.289	50.270	48.662	178.103	639.638	359.420	236.976	180.340	183.853
11	1966	1966	204.829	198.494	82.385	71.575	68.392	48.977	57.266	174.321	350.816	192.443	168.900	90.013	142.627
12	1967	1967	133.601	149.800	78.257	76.649	62.971	60.103	73.151	345.741	440.198	191.812	172.398	276.404	171.959
13	1968	1968	230.295	168.900	110.373	72.521	56.289	50.585	41.035	191.497	597.027	407.452	204.514	200.385	194.742
14	1969	1969	247.156	143.781	111.948	97.009	76.019	64.263	63.286	149.485	628.197	292.951	142.488	126.604	178.764
15	1970	1970	99.562	75.704	56.605	48.032	37.852	30.855	42.958	395.696	440.860	317.754	181.632	134.861	155.960
16	1971	1971	208.327	52.791	38.167	31.801	28.933	41.350	38.797	63.286	600.210	245.549	106.559	119.292	131.312
17	1972	1972	183.208	105.298	59.473	25.119	52.791	69.337	44.534	405.529	312.333	179.395	73.151	73.781	132.625
18	1973	1973	182.578	123.421	123.421	66.469	62.656	43.556	54.083	115.447	545.181	245.549	114.186	93.511	147.583
19	1974	1974	134.231	108.135	85.884	21.936	61.395	27.357	30.225	149.485	650.133	321.568	179.080	175.266	162.021
20	1975	1975	120.017	94.992	92.156	63.790	51.782	42.516	42.737	404.332	470.612	178.292	183.082	258.975	167.340
21	1976	1976	223.613	115.667	94.015	77.469	29.405	45.794	36.717	246.967	571.655	236.062	191.151	198.463	172.783
22	1977	1977	233.572	164.802	116.613	81.598	46.834	33.187	43.651	269.691	620.507	394.026	186.927	161.083	196.703
23	1978	1978	184.595	126.320	75.735	43.903	31.076	28.964	88.279	552.020	480.981	347.475	252.577	202.906	202.378
24	1979	1979	190.142	185.635	105.992	76.334	30.351	36.875	69.274	328.943	548.522	262.789	159.413	141.039	178.518
25	1980	1980	156.892	126.289	98.428	72.363	29.059	45.763	66.375	268.115	700.465	345.426	179.489	109.490	183.707
26	1981	1981	140.818	105.424	86.483	61.521	4.822	14.971	73.435	132.876	556.023	322.513	174.005	182.956	155.066
27	1982	1982	119.418	96.032	79.770	55.186	20.896	29.910	86.735	542.502	474.205	274.292	164.456	174.131	177.397
28	1983	1983	235.180	159.571	109.490	71.512	27.924	32.431	69.999	316.210	488.797	324.405	167.355	149.611	180.206
29	1984	1984	113.713	106.811	86.672	65.965	21.778	21.022	74.979	77.973	428.411	250.403	190.205	115.163	129.740
30	1985	1985	141.039	130.323	78.414	66.217	18.690	13.017	57.014	316.494	321.726	228.435	147.468	150.052	139.782
31	1986	1986	151.943	101.485	73.119	51.877	18.248	20.297	105.487	277.160	256.801	170.034	229.192	159.539	135.322
32	1987	1987	168.553	150.557	122.381	63.759	25.308	38.167	53.516	281.352	379.339	232.028	111.129	128.589	146.869
33	1988	1988	150.525	140.692	90.769	52.129	2.364	15.002	70.850	237.386	329.605	125.721	111.633	133.601	122.155
34	1989	1989	205.176	179.741	110.278	68.234	28.870	9.676	55.911	176.369	393.238	199.314	128.054	139.494	141.562
35	1990	1990	190.772	160.453	97.766	56.699	21.558	22.062	49.482	131.741	310.726	281.447	123.673	99.657	129.430
36	1991	1991	157.680	169.971	89.886	68.928	23.827	27.798	33.187	210.660	422.202	263.860	208.107	201.866	157.037
37	1992	1992	160.453	113.682	66.816	44.534	38.041	1.135	34.007	191.182	315.107	172.430	119.544	112.579	114.425
38	1993	1993	178.607	124.145	85.411	64.610	12.103	23.669	62.088	154.213	405.592	285.670	246.999	214.032	155.422
39	1994	1994	176.936	130.890	88.657	61.868	54.966	9.203	37.789	289.862	323.617	160.390	135.397	65.335	128.383
40	1995	1995	114.092	137.383	95.024	58.716	28.554	29.437	61.616	260.740	384.003	288.853	201.110	96.379	147.036
41	1996	1996	121.593	191.151	139.904	73.151	29.626	30.761	50.774	227.048	489.207	305.526	243.658	154.875	172.056
AVERAGE			167.463	126.574	87.922	61.416	39.541	36.123	55.131	239.910	470.002	258.163	171.640	157.544	156.401
MAXIMUM			247.156	198.494	139.904	97.009	80.148	78.257	105.487	552.020	700.465	407.452	252.577	285.954	202.378
MINIMUM			98.585	52.791	38.167	21.936	2.364	1.135	30.225	63.286	256.801	125.721	73.151	65.335	114.425

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 8 General Flow Lac Joseph to Ossokmanuan

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	175.896	115.132	69.968	54.714	46.771	42.611	44.534	97.324	618.332	316.809	201.646	208.958	166.154
2	1957	1957	194.334	117.369	102.745	91.935	80.148	78.257	88.437	328.250	548.995	251.915	211.195	236.976	194.562
3	1958	1958	166.347	115.447	83.016	60.103	48.977	44.849	43.903	294.526	547.387	229.980	168.584	104.321	159.377
4	1959	1959	141.228	96.694	71.890	56.289	48.347	41.665	38.167	210.565	418.577	204.199	200.700	250.655	148.491
5	1960	1960	207.382	120.553	81.755	61.710	53.421	49.954	61.395	227.742	287.845	230.925	118.630	92.881	133.417
6	1961	1961	169.845	128.495	87.460	52.161	39.774	33.408	31.485	78.887	488.892	189.890	144.411	156.482	133.458
7	1962	1962	98.585	72.836	58.212	46.771	39.113	34.984	35.614	140.282	462.480	212.488	156.797	126.289	123.845
8	1963	1963	101.453	80.778	66.469	55.974	51.845	44.849	46.771	247.156	458.352	166.977	159.035	176.527	138.147
9	1964	1964	159.350	95.433	69.968	58.842	53.106	52.161	52.161	149.170	563.303	378.204	241.735	285.954	180.232
10	1965	1965	192.443	108.450	83.016	68.077	56.289	50.270	48.662	178.103	639.638	359.420	236.976	180.340	183.853
11	1966	1966	204.829	198.494	82.385	71.575	68.392	48.977	57.266	174.321	350.816	192.443	168.900	90.013	142.627
12	1967	1967	133.601	149.800	78.257	76.649	62.971	60.103	73.151	345.741	440.198	191.812	172.398	276.404	171.959
13	1968	1968	230.295	168.900	110.373	72.521	56.289	50.585	41.035	191.497	597.027	407.452	204.514	200.385	194.742
14	1969	1969	247.156	143.781	111.948	97.009	76.019	64.263	63.286	149.485	628.197	292.951	142.488	126.604	178.764
15	1970	1970	99.562	75.704	56.605	48.032	37.852	30.855	42.958	395.696	440.860	317.754	181.632	134.861	155.960
16	1971	1971	208.327	52.791	38.167	31.801	28.933	41.350	38.797	63.286	600.210	245.549	106.559	119.292	131.312
17	1972	1972	183.208	105.298	59.473	25.119	52.791	69.337	44.534	405.529	312.333	179.395	73.151	73.781	132.625
18	1973	1973	182.578	123.421	123.421	66.469	62.656	43.556	54.083	115.447	545.181	245.549	114.186	93.511	147.583
19	1974	1974	134.231	108.135	85.884	21.936	61.395	27.357	30.225	149.485	650.133	321.568	179.080	175.266	162.021
20	1975	1975	120.017	94.992	92.156	63.790	51.782	42.516	42.737	404.332	470.612	178.292	183.082	258.975	167.340
21	1976	1976	223.613	115.667	94.015	77.469	29.405	45.794	36.717	246.967	571.655	236.062	191.151	198.463	172.783
22	1977	1977	233.572	164.802	116.613	81.598	46.834	33.187	43.651	269.691	620.507	394.026	186.927	161.083	196.703
23	1978	1978	184.595	126.320	75.735	43.903	31.076	28.964	88.279	552.020	480.981	347.475	252.577	202.906	202.378
24	1979	1979	190.142	185.635	105.992	76.334	30.351	36.875	69.274	328.943	548.522	262.789	159.413	141.039	178.518
25	1980	1980	156.892	126.289	98.428	72.363	29.059	45.763	66.375	268.115	700.465	345.426	179.489	109.490	183.707
26	1981	1981	140.818	105.424	86.483	61.521	4.822	14.971	73.435	132.876	556.023	322.513	174.005	182.956	155.066
27	1982	1982	119.418	96.032	79.770	55.186	20.896	29.910	86.735	542.502	474.205	274.292	164.456	174.131	177.397
28	1983	1983	235.180	159.571	109.490	71.512	27.924	32.431	69.999	316.210	488.797	324.405	167.355	149.611	180.206
29	1984	1984	113.713	106.811	86.672	65.965	21.778	21.022	74.979	77.973	428.411	250.403	190.205	115.163	129.740
30	1985	1985	141.039	130.323	78.414	66.217	18.690	13.017	57.014	316.494	321.726	228.435	147.468	150.052	139.782
31	1986	1986	151.943	101.485	73.119	51.877	18.248	20.297	105.487	277.160	256.801	170.034	229.192	159.539	135.322
32	1987	1987	168.553	150.557	122.381	63.759	25.308	38.167	53.516	281.352	379.339	232.028	111.129	128.589	146.869
33	1988	1988	150.525	140.692	90.769	52.129	2.364	15.002	70.850	237.386	329.605	125.721	111.633	133.601	122.155
34	1989	1989	205.176	179.741	110.278	68.234	28.870	9.676	55.911	176.369	393.238	199.314	128.054	139.494	141.562
35	1990	1990	190.772	160.453	97.766	56.699	21.558	22.062	49.482	131.741	310.726	281.447	123.673	99.657	129.430
36	1991	1991	157.680	169.971	89.886	68.928	23.827	27.798	33.187	210.660	422.202	263.860	208.107	201.866	157.037
37	1992	1992	160.453	113.682	66.816	44.534	38.041	1.135	34.007	191.182	315.107	172.430	119.544	112.579	114.425
38	1993	1993	178.607	124.145	85.411	64.610	12.103	23.669	62.088	154.213	405.592	285.670	246.999	214.032	155.422
39	1994	1994	176.936	130.890	88.657	61.868	54.966	9.203	37.789	289.862	323.617	160.390	135.397	65.335	128.383
40	1995	1995	114.092	137.383	95.024	58.716	28.554	29.437	61.616	260.740	384.003	288.853	201.110	96.379	147.036
41	1996	1996	121.593	191.151	139.904	73.151	29.626	30.761	50.774	227.048	489.207	305.526	243.658	154.875	172.056
AVERAGE			167.463	126.574	87.922	61.416	39.541	36.123	55.131	239.910	470.002	258.163	171.640	157.544	156.401
MAXIMUM			247.156	198.494	139.904	97.009	80.148	78.257	105.487	552.020	700.465	407.452	252.577	285.954	202.378
MINIMUM			98.585	52.791	38.167	21.936	2.364	1.135	30.225	63.286	256.801	125.721	73.151	65.335	114.425

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 9 Ossokmanuan Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	382.20	250.17	152.03	118.89	101.63	92.59	96.77	211.48	1343.57	688.39	438.15	454.04	361.03
2	1957	1957	422.27	255.03	223.25	199.76	174.15	170.04	192.16	713.25	1192.91	547.38	458.90	514.92	422.76
3	1958	1958	361.45	250.85	180.38	130.60	106.42	97.45	95.40	639.97	1189.41	499.72	366.32	226.68	346.31
4	1959	1959	306.87	210.11	156.21	122.31	105.05	90.53	82.93	457.53	909.52	443.70	436.10	544.65	322.65
5	1960	1960	450.62	261.95	177.64	134.09	116.08	108.55	133.40	494.86	625.46	501.77	257.77	201.82	289.90
6	1961	1961	369.05	279.21	190.04	113.34	86.43	72.59	68.41	171.41	1062.31	412.61	313.79	340.02	289.99
7	1962	1962	214.21	158.26	126.49	101.63	84.99	76.02	77.39	304.82	1004.92	461.71	340.70	274.41	269.10
8	1963	1963	220.45	175.52	144.43	121.63	112.65	97.45	101.63	537.04	995.95	362.82	345.57	383.57	300.18
9	1964	1964	346.25	207.37	152.03	127.86	115.39	113.34	113.34	324.13	1224.00	821.80	525.26	621.35	391.63
10	1965	1965	418.16	235.65	180.38	147.92	122.31	109.23	105.74	387.00	1389.86	780.98	514.92	391.86	399.49
11	1966	1966	445.07	431.31	179.01	155.52	148.61	106.42	124.43	378.78	762.28	418.16	367.00	195.59	309.91
12	1967	1967	290.30	325.50	170.04	166.55	136.83	130.60	158.95	751.26	956.50	416.79	374.60	600.60	373.65
13	1968	1968	500.41	367.00	239.83	157.58	122.31	109.92	89.16	416.10	1297.27	885.35	444.39	435.41	423.15
14	1969	1969	537.04	312.42	243.25	210.79	165.18	139.64	137.51	324.81	1365.00	636.55	309.61	275.10	388.43
15	1970	1970	216.34	164.50	123.00	104.37	82.25	67.04	93.34	859.80	957.94	690.45	394.67	293.04	338.89
16	1971	1971	452.67	114.71	82.93	69.10	62.87	89.85	84.30	137.51	1304.19	533.55	231.54	259.21	285.33
17	1972	1972	398.09	228.80	129.23	54.58	114.71	150.66	96.77	881.17	678.67	389.81	158.95	160.32	288.18
18	1973	1973	396.72	268.18	268.18	144.43	136.14	94.64	117.52	250.85	1184.62	533.55	248.11	203.19	320.68
19	1974	1974	291.67	234.97	186.62	47.66	133.40	59.44	65.68	324.81	1412.67	698.73	389.12	380.83	352.05
20	1975	1975	260.78	206.41	200.24	138.61	112.52	92.38	92.86	878.57	1022.59	387.41	397.82	562.72	363.61
21	1976	1976	485.89	251.33	204.28	168.33	63.89	99.51	79.78	536.63	1242.14	512.94	415.35	431.24	375.44
22	1977	1977	507.53	358.10	253.39	177.30	101.77	72.11	94.85	586.01	1348.29	856.17	406.17	350.02	427.41
23	1978	1978	401.10	274.48	164.56	95.40	67.52	62.94	191.82	1199.48	1045.12	755.03	548.82	440.89	439.75
24	1979	1979	413.16	403.36	230.31	165.87	65.95	80.13	150.53	714.76	1191.88	571.01	346.39	306.46	387.90
25	1980	1980	340.91	274.41	213.87	157.24	63.14	99.44	144.23	582.58	1522.03	750.57	390.01	237.91	399.17
26	1981	1981	305.98	229.08	187.92	133.68	10.48	32.53	159.57	288.72	1208.18	700.79	378.09	397.54	336.94
27	1982	1982	259.48	208.67	173.33	119.91	45.40	64.99	188.47	1178.80	1030.40	596.01	357.34	378.37	385.46
28	1983	1983	511.02	346.73	237.91	155.39	60.68	70.47	152.10	687.09	1062.10	704.90	363.64	325.09	391.57
29	1984	1984	247.09	232.09	188.33	143.33	47.32	45.68	162.92	169.43	930.89	544.10	413.29	250.24	281.91
30	1985	1985	306.46	283.18	170.39	143.88	40.61	28.28	123.89	687.71	699.07	496.36	320.43	326.05	303.73
31	1986	1986	330.16	220.52	158.88	112.72	39.65	44.10	229.21	602.24	558.00	369.47	498.01	346.66	294.04
32	1987	1987	366.25	327.14	265.92	138.54	54.99	82.93	116.28	611.35	824.26	504.17	241.47	279.41	319.13
33	1988	1988	327.07	305.71	197.23	113.27	5.14	32.60	153.95	515.81	716.20	273.18	242.57	290.30	265.43
34	1989	1989	445.82	390.56	239.62	148.27	62.73	21.02	121.49	383.23	854.46	433.09	278.25	303.11	307.60
35	1990	1990	414.53	348.65	212.43	123.20	46.84	47.94	107.52	286.26	675.17	611.55	268.73	216.54	281.24
36	1991	1991	342.62	369.33	195.31	149.77	51.77	60.40	72.11	457.74	917.40	573.34	452.19	438.63	341.22
37	1992	1992	348.65	247.02	145.18	96.77	82.66	2.47	73.89	415.42	684.69	374.67	259.76	244.62	248.63
38	1993	1993	388.09	269.75	185.59	140.39	26.30	51.43	134.91	335.09	881.31	620.73	536.70	465.07	337.72
39	1994	1994	384.46	284.41	192.64	134.43	119.43	20.00	82.11	629.84	703.18	348.51	294.20	141.97	278.96
40	1995	1995	247.91	298.52	206.48	127.58	62.05	63.96	133.88	566.56	834.40	627.65	436.99	209.42	319.49
41	1996	1996	264.21	415.35	304.00	158.95	64.37	66.84	110.33	493.35	1062.99	663.87	529.44	336.53	373.86
AVERAGE			363.88	275.03	191.04	133.45	85.92	78.49	119.79	521.30	1021.26	560.96	372.96	342.33	339.84
MAXIMUM			537.04	431.31	304.00	210.79	174.15	170.04	229.21	1199.48	1522.03	885.35	548.82	621.35	439.75
MINIMUM			214.21	114.71	82.93	47.66	5.14	2.47	65.68	137.51	558.00	273.18	158.95	141.97	248.63

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 10 Gabbro Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	167.68	365.30	222.00	173.60	587.01	477.89	471.34	183.89	1339.58	1340.97	501.58	520.17	527.19
2	1957	1957	226.18	372.40	326.00	291.70	692.91	590.99	610.64	820.48	1311.69	571.53	484.38	744.25	584.16
3	1958	1958	527.80	366.30	263.40	190.70	594.01	484.99	469.34	769.19	1265.70	735.28	620.94	188.17	538.85
4	1959	1959	57.68	306.80	228.10	178.60	592.01	474.89	451.14	543.19	1043.48	656.88	498.58	652.47	471.15
5	1960	1960	267.58	382.50	259.40	195.80	608.11	501.19	524.84	597.69	780.78	594.48	238.18	151.87	423.32
6	1961	1961	148.48	407.70	277.50	165.50	564.81	448.69	429.94	125.39	1147.30	726.90	319.98	353.67	423.45
7	1962	1962	.00	150.89	184.70	148.40	562.71	453.69	443.04	320.19	1108.22	755.33	359.28	257.87	392.95
8	1963	1963	.00	185.50	210.90	177.60	603.11	484.99	478.44	659.29	1102.12	604.15	366.38	417.27	438.33
9	1964	1964	115.18	302.80	222.00	186.70	607.11	508.19	495.54	348.39	1257.74	1405.50	669.29	764.47	571.86
10	1965	1965	220.18	344.10	263.40	216.00	617.21	502.19	484.44	440.19	1370.82	844.51	751.90	636.71	555.49
11	1966	1966	587.47	629.80	261.40	227.10	655.61	498.09	511.74	428.19	946.05	505.79	397.68	142.77	480.40
12	1967	1967	33.48	475.30	248.30	243.20	638.41	533.39	562.14	846.57	1172.98	684.15	408.78	376.69	516.23
13	1968	1968	686.23	535.90	350.20	230.10	617.21	503.19	460.24	482.69	1307.91	926.95	648.90	635.80	614.12
14	1969	1969	784.20	456.20	355.20	307.80	679.81	546.59	530.84	349.39	1354.11	614.64	825.83	418.95	600.36
15	1970	1970	.00	163.20	179.60	152.40	558.71	440.59	466.34	919.41	1241.13	807.75	653.88	369.75	494.85
16	1971	1971	270.58	167.50	121.10	100.90	530.41	473.89	453.14	75.89	1312.64	1085.30	199.88	235.67	416.64
17	1972	1972	190.88	334.10	188.70	79.70	606.11	562.69	471.34	933.89	1072.99	451.28	93.88	91.27	420.80
18	1973	1973	188.88	391.60	391.60	210.90	637.41	480.89	501.64	241.39	1230.80	995.54	224.08	153.87	468.26
19	1974	1974	35.48	343.10	272.50	69.60	633.41	429.49	425.94	349.39	1386.03	1408.77	429.98	413.27	514.07
20	1975	1975	.00	291.46	292.40	202.40	602.91	477.59	465.64	932.12	1296.90	715.07	442.68	524.37	518.25
21	1976	1976	468.59	367.00	298.30	245.80	531.91	487.99	446.54	658.69	1270.16	729.63	585.38	250.74	527.76
22	1977	1977	741.10	522.90	370.00	258.90	587.21	447.99	468.54	730.79	1342.80	922.68	593.10	762.31	644.77
23	1978	1978	342.59	400.80	240.30	139.30	537.21	434.59	610.14	1154.15	1049.84	1102.50	801.40	643.80	621.48
24	1979	1979	603.30	589.00	336.30	242.20	534.91	459.69	549.84	821.53	1141.20	577.60	784.83	562.60	599.58
25	1980	1980	107.38	400.70	312.30	229.60	530.81	487.89	540.64	725.79	1258.06	1096.00	792.33	520.58	582.88
26	1981	1981	56.38	334.50	274.40	195.20	453.91	390.19	563.04	296.69	1246.92	1124.40	546.91	437.67	492.01
27	1982	1982	.00	292.80	253.10	175.10	504.91	437.59	605.24	1139.74	1483.99	835.93	628.07	409.67	562.86
28	1983	1983	355.78	506.30	347.40	226.90	527.21	445.59	552.14	802.17	1206.65	622.12	739.28	542.23	571.77
29	1984	1984	.00	308.29	275.00	209.30	507.71	409.39	567.94	122.49	1057.94	819.68	465.28	222.57	411.65
30	1985	1985	57.08	413.50	248.80	210.10	497.91	383.99	510.94	802.60	963.81	590.17	329.68	333.27	443.51
31	1986	1986	91.68	322.00	232.00	164.60	496.51	407.09	664.74	742.77	694.39	401.28	588.98	363.37	429.36
32	1987	1987	144.38	477.70	388.30	202.30	518.91	463.79	499.84	749.15	1000.64	684.78	214.38	265.17	466.00
33	1988	1988	87.18	446.40	288.00	165.40	446.11	390.29	554.84	628.29	913.28	260.68	215.98	281.07	387.59
34	1989	1989	260.58	570.30	349.90	216.50	530.21	373.39	507.44	434.69	1006.41	599.45	268.08	299.77	449.16
35	1990	1990	214.88	509.10	310.20	179.90	507.01	412.69	487.04	293.09	853.38	754.78	254.18	173.37	410.67
36	1991	1991	109.88	539.30	285.20	218.70	514.21	430.89	435.34	543.49	1048.80	852.15	522.08	497.67	498.26
37	1992	1992	118.68	360.70	212.00	141.30	559.31	346.29	437.94	481.69	867.28	408.88	241.08	214.37	363.06
38	1993	1993	176.28	393.90	271.00	205.00	477.01	417.79	527.04	364.39	1024.43	893.94	645.48	536.27	493.14
39	1994	1994	170.98	415.30	281.30	196.30	613.01	371.89	449.94	762.09	928.07	370.68	291.38	64.47	407.34
40	1995	1995	.00	406.53	301.50	186.30	529.21	436.09	525.54	702.39	993.03	868.14	499.88	162.97	466.53
41	1996	1996	.00	601.73	443.90	232.10	532.61	440.29	491.14	595.49	1147.77	1094.32	634.88	348.57	545.92
AVERAGE			210.11	393.93	278.97	194.87	564.06	457.30	504.97	583.39	1135.31	781.48	482.41	388.83	496.24
MAXIMUM			784.20	629.80	443.90	307.80	692.91	590.99	664.74	1154.15	1483.99	1408.77	825.83	764.47	644.77
MINIMUM			.00	150.89	121.10	69.60	446.11	346.29	425.94	75.89	694.39	260.68	93.88	64.47	363.06

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0017

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 11 Flow Over Gabbro Control Structure

SIM	HYD YEAR OF	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	1957	1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	1958	1958	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	1959	1959	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	1960	1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	1961	1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	1962	1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	1963	1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1964	1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	1965	1965	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
11	1966	1966	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
12	1967	1967	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
13	1968	1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14	1969	1969	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
15	1970	1970	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16	1971	1971	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
17	1972	1972	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
18	1973	1973	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
19	1974	1974	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
20	1975	1975	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
21	1976	1976	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
22	1977	1977	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
23	1978	1978	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
24	1979	1979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
25	1980	1980	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
26	1981	1981	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
27	1982	1982	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
28	1983	1983	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
29	1984	1984	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
30	1985	1985	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
31	1986	1986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
32	1987	1987	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
33	1988	1988	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
34	1989	1989	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
35	1990	1990	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
36	1991	1991	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
37	1992	1992	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
38	1993	1993	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
39	1994	1994	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
40	1995	1995	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
41	1996	1996	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
AVERAGE			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAXIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MINIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 13 Smallwood Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	979.50	641.20	389.70	304.60	260.40	237.30	247.90	542.00	3443.30	1764.20	1123.00	1163.70	925.27
2	1957	1957	1082.20	653.60	572.10	511.90	446.40	435.70	492.40	1827.90	3057.10	1402.80	1176.10	1319.60	1083.42
3	1958	1958	926.40	643.00	462.30	334.80	272.80	249.80	244.40	1640.10	3048.20	1280.60	938.80	581.00	887.54
4	1959	1959	786.40	538.40	400.30	313.50	269.20	232.00	212.50	1172.60	2330.90	1137.10	1117.60	1395.70	826.87
5	1960	1960	1154.90	671.30	455.20	343.60	297.60	278.10	341.80	1268.20	1603.00	1285.90	660.70	517.20	742.95
6	1961	1961	945.80	715.60	487.10	290.50	221.40	186.00	175.30	439.30	2722.40	1057.40	804.10	871.40	743.17
7	1962	1962	549.10	405.60	324.10	260.40	217.90	194.80	198.30	781.10	2575.40	1183.20	873.20	703.20	689.64
8	1963	1963	565.00	449.90	370.20	311.70	288.70	249.80	260.40	1376.20	2552.40	929.90	885.60	983.00	769.30
9	1964	1964	887.40	531.40	389.70	327.70	295.80	290.50	290.50	830.70	3136.80	2106.00	1346.10	1592.30	1003.65
10	1965	1965	1071.60	604.00	462.30	379.10	313.50	279.80	271.00	991.90	3561.90	2001.50	1319.60	1004.30	1023.82
11	1966	1966	1140.70	1105.30	458.70	398.50	380.80	272.80	318.80	970.70	1953.60	1071.60	940.50	501.30	794.22
12	1967	1967	743.90	834.20	435.70	426.80	350.70	334.80	407.40	1925.30	2451.30	1068.00	960.00	1539.20	957.57
13	1968	1968	1282.30	940.50	614.60	403.80	313.50	281.60	228.50	1066.30	3324.60	2268.90	1138.90	1115.90	1084.41
14	1969	1969	1376.20	800.60	623.40	540.20	423.30	357.80	352.50	832.50	3498.20	1631.30	793.50	704.90	995.45
15	1970	1970	554.40	421.50	315.30	267.50	210.80	171.80	239.10	2203.40	2454.90	1769.40	1011.40	751.00	868.46
16	1971	1971	1160.10	294.00	212.50	177.10	161.20	230.20	216.10	352.50	3342.30	1367.40	593.30	664.20	731.23
17	1972	1972	1020.20	586.30	331.20	139.90	294.00	386.10	247.90	2258.30	1739.30	999.00	407.40	410.90	738.55
18	1973	1973	1016.70	687.20	687.20	370.20	348.90	242.60	301.10	643.00	3035.90	1367.40	635.90	520.70	821.83
19	1974	1974	747.50	602.20	478.20	122.20	341.80	152.30	168.30	832.50	3620.30	1790.70	997.20	976.00	902.23
20	1975	1975	551.00	629.00	492.00	297.30	386.90	340.00	585.40	2415.00	2781.50	973.10	968.30	1167.90	966.81
21	1976	1976	764.30	651.10	528.30	583.80	452.90	180.00	445.70	1400.70	3401.10	1248.60	1077.60	1442.90	1014.21
22	1977	1977	873.90	1081.60	669.90	600.90	480.60	178.40	350.10	1516.10	3111.30	1435.30	1334.70	881.40	1044.04
23	1978	1978	789.60	632.60	415.90	455.60	136.70	215.90	545.40	3973.40	2384.90	1818.10	894.10	1088.60	1120.04
24	1979	1979	901.90	980.70	554.00	554.10	364.70	410.10	414.50	2244.50	2944.60	1404.90	832.50	463.80	1008.99
25	1980	1980	1125.90	711.90	564.80	473.80	496.50	258.80	460.00	1819.80	3736.40	1493.60	824.20	818.60	1066.02
26	1981	1981	450.40	519.40	464.50	340.80	274.20	172.90	10.40	1836.70	3266.90	1293.30	830.40	1045.00	876.68
27	1982	1982	527.70	504.60	489.50	230.80	389.90	487.80	705.10	3390.20	1747.00	1141.70	794.70	914.60	947.92
28	1983	1983	1111.20	891.70	906.50	247.10	348.70	313.70	375.00	1925.20	2288.40	1383.50	929.00	685.60	954.21
29	1984	1984	667.10	884.10	428.60	414.50	328.00	280.70	324.20	786.40	2410.20	954.80	657.80	632.60	730.42
30	1985	1985	635.50	551.40	533.70	70.10	184.20	150.00	576.80	3006.50	1534.70	1343.80	598.40	827.30	839.29
31	1986	1986	729.70	474.90	248.30	516.00	298.10	393.90	1232.90	1887.70	817.10	1137.70	982.40	982.30	811.86
32	1987	1987	824.50	852.60	337.30	644.40	188.20	421.30	331.30	1859.50	2033.70	594.20	554.70	873.70	795.40
33	1988	1988	838.00	665.00	182.70	51.50	661.00	574.50	526.80	1646.80	1758.40	391.10	448.60	551.10	689.52
34	1989	1989	1162.20	967.60	638.90	201.40	274.90	420.90	286.90	1042.80	2508.30	1023.90	632.70	792.80	830.61
35	1990	1990	1323.90	684.50	600.30	330.10	219.90	220.10	160.00	715.50	2066.00	930.30	548.10	675.50	708.09
36	1991	1991	745.50	875.60	396.00	380.00	212.10	392.50	328.10	730.90	3521.10	1633.10	1058.40	1161.30	953.29
37	1992	1992	902.70	346.20	332.90	242.50	215.90	141.90	277.00	1409.30	1436.70	721.40	500.10	787.90	611.65
38	1993	1993	867.20	466.40	354.50	238.50	341.90	459.90	273.20	1034.40	2366.00	1300.90	726.50	655.30	758.46
39	1994	1994	985.80	708.20	472.30	273.70	323.20	283.20	370.10	1785.50	1315.30	759.00	167.00	587.80	671.27
40	1995	1995	738.60	797.00	501.40	303.00	516.50	307.50	377.10	1662.50	2382.80	1235.10	621.20	359.20	817.52
41	1996	1996	365.10	827.00	647.80	385.30	275.80	308.70	292.20	1004.80	2829.70	1783.70	1189.90	856.60	898.99
AVERAGE			874.93	678.75	469.02	342.91	319.01	292.11	352.74	1488.99	2587.66	1304.47	851.08	867.50	870.85
MAXIMUM			1376.20	1105.30	906.50	644.40	661.00	574.50	1232.90	3973.40	3736.40	2268.90	1346.10	1592.30	1120.04
MINIMUM			365.10	294.00	182.70	51.50	136.70	141.90	10.40	352.50	817.10	391.10	167.00	359.20	611.65

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0019

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 14 Lobstick Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1002.30	1345.72	1632.18	1713.75	1687.59	1489.34	1065.55	1029.87	941.55	1046.88	1022.76	906.57	1238.59
2	1957	1957	999.30	1345.22	1626.88	1707.85	1682.19	1483.64	1819.62	992.67	1496.52	1671.60	1660.48	2063.85	1543.21
3	1958	1958	1454.20	1345.52	1629.98	1712.95	1687.18	1503.86	1826.92	998.07	952.95	1675.20	1559.74	923.37	1439.06
4	1959	1959	1007.89	1348.62	1631.88	1713.65	1687.29	1489.54	1193.90	1011.67	973.75	1064.98	1022.86	1306.66	1285.34
5	1960	1960	1422.48	1344.82	1630.18	1712.65	1686.49	1630.76	1824.02	1008.87	994.75	1060.68	1036.16	925.27	1354.64
6	1961	1961	1003.20	1343.52	1629.28	1714.25	1688.69	1490.84	1067.65	1032.87	962.35	1067.28	1031.96	914.97	1243.83
7	1962	1962	1014.70	1352.52	1633.98	1715.15	1688.69	1490.64	1066.95	1022.97	966.65	1063.68	1030.06	919.77	1245.39
8	1963	1963	1014.30	1351.12	1632.68	1713.65	1686.69	1489.04	1065.25	1005.77	967.25	1070.98	1029.56	911.67	1243.07
9	1964	1964	1004.90	1348.82	1632.18	1713.15	1686.49	1487.84	1064.35	1021.57	950.45	1036.88	1016.36	894.07	1236.31
10	1965	1965	999.60	1346.82	1629.98	1711.75	1686.09	1488.14	1064.95	1016.87	938.15	1856.98	2071.50	1641.01	1454.68
11	1966	1966	1728.17	1735.10	1630.18	1711.15	1844.91	1879.67	1824.72	1017.57	984.65	1066.88	1028.06	925.67	1445.68
12	1967	1967	1009.10	1340.12	1630.78	1710.35	1684.99	1486.54	1060.95	989.87	970.15	1066.98	1027.56	1687.47	1302.73
13	1968	1968	1968.53	1476.40	1625.58	1710.95	1898.62	1879.47	1827.32	1014.77	944.95	2490.07	1787.80	1751.70	1698.53
14	1969	1969	2160.40	1298.77	1625.38	1707.05	1895.32	1877.17	1823.72	1021.47	1047.92	1943.21	1619.33	1123.85	1595.81
15	1970	1970	1014.59	1352.02	1634.18	1714.85	1688.99	1491.24	1065.85	981.77	970.15	1661.00	1665.28	1120.75	1363.30
16	1971	1971	1430.68	1355.72	1637.18	1717.55	1690.39	1489.54	1066.55	1035.37	944.45	1058.38	1038.16	920.97	1281.03
17	1972	1972	1001.00	1347.22	1633.78	1718.65	1686.59	1485.04	1065.55	980.17	990.85	1068.98	1043.46	928.27	1243.96
18	1973	1973	1001.20	1344.32	1623.48	1711.95	1684.99	1489.24	1064.05	1026.87	953.35	1058.38	1036.86	925.07	1241.56
19	1974	1974	1009.00	1346.82	1629.58	1719.05	1685.19	1491.84	1067.95	1021.47	936.45	1046.08	1026.45	1006.98	1247.07
20	1975	1975	1012.49	1348.02	1630.48	1713.25	1686.09	1488.13	1820.42	975.06	1677.58	1404.71	1410.98	1692.27	1485.06
21	1976	1976	1232.89	1345.82	1629.18	1707.65	1790.93	1869.26	1821.62	1003.97	1087.24	1675.50	1662.98	1693.64	1541.97
22	1977	1977	1615.00	1604.50	1625.06	1804.65	1896.12	1882.57	1824.22	999.67	1397.98	2055.25	1927.80	1643.71	1688.80
23	1978	1978	1132.19	1345.52	1631.08	1711.65	1691.79	1490.14	1817.72	1709.28	2013.65	2920.60	1695.50	1732.40	1741.51
24	1979	1979	1505.20	1569.70	1627.48	1708.35	1899.12	1877.77	1821.62	1015.27	1668.98	1982.50	1617.33	1026.40	1608.57
25	1980	1980	1233.28	1343.82	1627.38	1709.75	1852.68	1879.47	1822.22	994.97	1787.91	2589.60	1616.53	1339.18	1648.90
26	1981	1981	1013.29	1348.22	1629.68	1713.65	1690.59	1492.94	1068.55	1002.27	947.35	1668.60	1377.31	1482.67	1368.68
27	1982	1982	1013.59	1349.62	1629.98	1715.05	1686.69	1485.64	1814.62	1720.18	1300.87	1674.90	1422.77	1324.27	1510.78
28	1983	1983	1466.98	1398.00	1621.28	1714.35	1899.22	1879.47	1822.72	989.56	970.15	1668.00	1668.28	1227.83	1525.99
29	1984	1984	1011.19	1342.32	1631.58	1712.55	1688.87	1491.24	1823.92	1025.67	970.05	1065.78	1032.56	921.67	1307.16
30	1985	1985	1009.90	1347.42	1629.38	1718.25	1691.39	1494.24	1059.65	970.57	993.95	1059.88	1036.26	916.17	1242.05
31	1986	1986	1008.20	1350.22	1634.98	1711.75	1690.59	1491.14	1066.54	994.67	1010.65	1066.28	1023.16	912.27	1244.83
32	1987	1987	1004.90	1340.22	1631.08	1708.75	1692.59	1488.64	1093.61	992.97	981.25	1072.48	1038.76	916.67	1244.96
33	1988	1988	1006.00	1344.82	1635.88	1721.25	1685.89	1487.84	1060.65	999.37	989.55	1083.28	1040.46	921.37	1246.28
34	1989	1989	996.50	1336.72	1625.68	1716.55	1691.39	1491.14	1066.55	1014.77	971.15	1066.88	1035.96	916.37	1242.34
35	1990	1990	994.00	1341.82	1627.38	1713.45	1691.69	1491.84	1067.75	1024.57	984.05	1064.08	1037.86	921.67	1244.86
36	1991	1991	1006.80	1338.22	1631.98	1712.25	1691.19	1488.74	1066.05	1018.77	949.05	1051.98	1022.16	906.27	1238.50
37	1992	1992	1004.00	1351.12	1633.28	1716.15	1689.29	1493.94	1064.95	1006.97	995.55	1073.78	1038.46	918.97	1247.07
38	1993	1993	1003.50	1348.92	1631.88	1713.15	1693.19	1489.24	1066.05	1016.87	972.95	1056.98	1026.76	915.17	1242.72
39	1994	1994	1001.10	1343.72	1630.08	1714.55	1687.89	1492.44	1064.95	994.17	998.05	1073.78	1044.06	924.17	1245.60
40	1995	1995	1009.30	1341.32	1629.08	1715.15	1686.39	1489.84	1021.83	1038.17	974.05	1056.98	1031.76	927.17	1241.72
41	1996	1996	1016.00	1337.42	1623.48	1712.05	1690.39	1490.54	1066.05	1012.57	958.65	1045.88	1018.06	914.47	1238.64
AVERAGE			1159.56	1370.41	1629.92	1715.48	1724.18	1569.26	1345.07	1042.70	1085.07	1379.34	1258.05	1143.73	1367.09
MAXIMUM			2160.40	1735.10	1637.18	1804.65	1899.22	1882.57	1827.32	1720.18	2013.65	2920.60	2071.50	2063.85	1741.51
MINIMUM			994.00	1298.77	1621.28	1707.05	1682.19	1483.64	1021.83	970.57	936.45	1036.88	1016.36	894.07	1236.31

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0020

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 16 West Forebay Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	18.200	11.900	7.200	5.700	4.800	4.400	4.600	10.100	64.000	32.800	20.900	21.600	17.194
2	1957	1957	20.100	12.200	10.600	9.500	8.300	8.100	9.200	34.000	56.800	26.100	21.900	24.500	20.144
3	1958	1958	17.200	12.000	8.600	6.200	5.100	4.600	4.500	30.500	56.700	23.800	17.500	10.800	16.502
4	1959	1959	14.600	10.000	7.400	5.800	5.000	4.300	4.000	21.800	43.300	21.100	20.800	26.000	15.367
5	1960	1960	21.500	12.500	8.500	6.400	5.500	5.200	6.400	23.600	29.800	23.900	12.300	9.600	13.826
6	1961	1961	17.600	13.300	9.100	5.400	4.100	3.500	3.300	8.200	50.600	19.700	15.000	16.200	13.836
7	1962	1962	10.200	7.500	6.000	4.800	4.100	3.600	3.700	14.500	47.900	22.000	16.200	13.100	12.814
8	1963	1963	10.500	8.400	6.900	5.800	5.400	4.600	4.800	25.600	47.500	17.300	16.500	18.300	14.313
9	1964	1964	16.500	9.900	7.200	6.100	5.500	5.400	5.400	15.400	58.300	39.200	25.000	29.600	18.654
10	1965	1965	19.900	11.200	8.600	7.000	5.800	5.200	5.000	18.400	66.200	37.200	24.500	18.700	19.014
11	1966	1966	21.200	20.600	8.500	7.400	7.100	5.100	5.900	18.000	36.300	19.900	17.500	9.300	14.760
12	1967	1967	13.800	15.500	8.100	7.900	6.500	6.200	7.600	35.800	45.600	19.900	17.800	28.600	17.796
13	1968	1968	23.800	17.500	11.400	7.500	5.800	5.200	4.200	19.800	61.800	42.200	21.200	20.700	20.144
14	1969	1969	25.600	14.900	11.600	10.000	7.900	6.700	6.600	15.500	65.000	30.300	14.800	13.100	18.517
15	1970	1970	10.300	7.800	5.900	5.000	3.900	3.200	4.400	41.000	45.600	32.900	18.800	14.000	16.146
16	1971	1971	21.600	5.500	4.000	3.300	3.000	4.300	4.000	6.600	62.100	25.400	11.000	12.300	13.598
17	1972	1972	19.000	10.900	6.200	2.600	5.500	7.200	4.600	42.000	32.300	18.600	7.600	7.600	13.740
18	1973	1973	18.900	12.800	12.800	6.900	6.500	4.500	5.600	12.000	56.400	25.400	11.800	9.700	15.283
19	1974	1974	13.900	11.200	8.900	2.300	6.400	2.800	3.100	15.500	67.300	33.300	18.500	18.100	16.771
20	1975	1975	11.600	10.400	8.300	6.000	5.800	5.200	8.700	45.300	50.500	18.600	18.500	25.500	17.901
21	1976	1976	17.800	11.800	9.100	9.600	6.300	4.000	7.900	26.700	63.100	23.600	20.300	25.300	18.804
22	1977	1977	19.600	18.800	11.800	9.400	7.400	3.200	6.200	29.500	60.500	32.400	24.800	17.000	20.093
23	1978	1978	16.300	12.000	7.900	7.100	2.100	3.900	10.400	68.800	46.100	36.600	21.100	20.200	21.185
24	1979	1979	18.200	19.100	10.200	9.200	5.500	6.300	7.900	40.400	56.000	26.600	16.100	11.000	18.934
25	1980	1980	19.500	13.100	10.300	8.300	6.700	5.200	7.500	32.500	72.000	32.100	16.600	13.900	19.841
26	1981	1981	11.100	10.300	8.800	5.800	2.900	2.100	2.700	27.800	60.300	28.000	16.700	19.800	16.393
27	1982	1982	10.900	9.400	8.600	4.900	5.400	6.800	12.400	61.800	38.700	24.000	16.100	17.600	18.138
28	1983	1983	22.500	16.500	14.200	5.300	5.400	5.200	7.200	36.000	45.600	28.400	16.900	13.900	18.166
29	1984	1984	12.500	14.100	7.600	6.500	4.000	3.200	6.400	12.800	45.700	20.600	14.600	11.900	13.334
30	1985	1985	13.300	10.800	9.000	2.800	2.400	1.300	8.400	48.200	30.300	24.400	12.200	15.400	14.963
31	1986	1986	14.400	9.000	5.400	7.000	2.900	3.300	17.900	32.700	19.600	20.300	20.600	17.900	14.323
32	1987	1987	16.500	15.400	7.900	8.900	1.600	4.900	5.000	33.800	38.500	16.300	10.600	15.100	14.605
33	1988	1988	15.800	12.500	4.800	.900	5.900	5.400	7.800	29.700	33.200	9.400	9.500	12.100	12.257
34	1989	1989	21.900	17.700	11.400	3.900	2.400	3.300	4.000	19.800	45.000	19.900	12.400	15.300	14.788
35	1990	1990	23.500	14.400	10.300	5.900	2.200	2.800	3.200	13.500	36.700	21.700	11.200	11.900	13.160
36	1991	1991	15.300	16.700	7.300	6.700	2.500	4.800	4.300	17.200	59.200	29.500	21.300	21.800	17.247
37	1992	1992	17.100	8.400	6.500	4.200	3.700	1.500	5.000	24.800	29.300	15.500	10.800	13.600	11.740
38	1993	1993	17.400	9.800	7.400	6.100	1.200	4.500	4.300	18.400	43.800	26.300	18.300	16.100	14.532
39	1994	1994	19.000	13.200	8.500	5.200	4.600	2.400	5.000	33.000	27.700	15.500	7.200	10.300	12.684
40	1995	1995	13.700	14.700	9.200	4.800	5.600	4.100	6.600	30.000	43.100	26.300	15.100	8.400	15.178
41	1996	1996	9.400	17.200	12.800	6.800	3.000	3.700	4.300	21.200	53.000	33.400	23.900	16.500	17.154
AVERAGE			16.871	12.705	8.654	6.120	4.773	4.420	6.098	27.127	48.571	25.376	16.693	16.398	16.191
MAXIMUM			25.600	20.600	14.200	10.000	8.300	8.100	17.900	68.800	72.000	42.200	25.000	29.600	21.185
MINIMUM			9.400	5.500	4.000	.900	1.200	1.300	2.700	6.600	19.600	9.400	7.200	7.600	11.740

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0021

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 17 Whitefish Falls Control Structure

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1011.03	1342.16	1620.61	1719.45	1692.39	1493.74	1083.72	1052.04	1015.83	1089.62	1051.28	918.34	1255.78
2	1957	1957	1009.93	1341.96	1618.71	1717.35	1690.49	1491.74	1842.39	1038.74	1563.60	1707.65	1690.00	1711.58	1533.20
3	1958	1958	1512.29	1342.05	1619.81	1719.15	1692.28	1508.46	1844.99	1040.64	1019.93	1708.95	1584.86	924.34	1459.84
4	1959	1959	1013.02	1343.16	1620.51	1719.45	1692.29	1493.84	1211.48	1045.54	1027.33	1096.02	1051.28	1322.83	1300.71
5	1960	1960	1434.51	1341.86	1619.91	1719.05	1691.99	1635.96	1843.99	1044.54	1034.83	1094.52	1056.08	925.04	1368.46
6	1961	1961	1011.33	1341.36	1619.61	1719.65	1692.79	1494.34	1084.52	1053.14	1023.23	1096.92	1054.58	921.34	1257.67
7	1962	1962	1015.43	1344.56	1621.21	1719.95	1692.79	1494.24	1084.22	1049.54	1024.83	1095.62	1053.88	923.04	1258.20
8	1963	1963	1015.33	1344.06	1620.81	1719.45	1692.09	1493.64	1083.62	1043.44	1025.03	1098.22	1053.68	920.14	1257.39
9	1964	1964	1011.93	1343.26	1620.61	1719.25	1691.99	1493.24	1083.32	1049.04	1019.03	1086.02	1048.98	913.84	1254.96
10	1965	1965	1010.03	1342.56	1619.81	1718.75	1691.89	1493.34	1083.52	1047.34	1014.63	1702.89	1692.44	1711.74	1426.77
11	1966	1966	1739.90	1740.24	1619.91	1718.55	1852.01	1884.77	1844.19	1047.64	1031.23	1096.72	1053.18	925.14	1460.44
12	1967	1967	1013.43	1340.16	1620.11	1718.25	1691.49	1492.74	1082.12	1037.74	1026.03	1096.82	1052.98	1706.24	1320.53
13	1968	1968	1770.44	1520.69	1618.21	1718.45	1904.42	1884.67	1845.09	1046.64	1017.02	1706.22	1691.53	1711.24	1618.26
14	1969	1969	1771.95	1340.46	1618.21	1717.05	1903.22	1883.87	1843.89	1049.04	1123.20	1707.40	1694.00	1127.12	1564.43
15	1970	1970	1015.42	1344.36	1621.31	1719.85	1692.89	1494.44	1083.82	1034.84	1026.03	1703.85	1691.70	1124.92	1379.45
16	1971	1971	1442.81	1345.76	1622.41	1720.85	1693.39	1493.84	1084.12	1054.04	1016.83	1093.72	1056.78	923.44	1294.62
17	1972	1972	1010.53	1342.66	1621.21	1721.25	1692.09	1492.24	1083.72	1034.24	1033.43	1097.52	1058.68	926.04	1257.70
18	1973	1973	1010.63	1341.66	1617.51	1718.85	1691.49	1493.74	1083.22	1050.94	1020.03	1093.72	1056.28	924.94	1256.85
19	1974	1974	1013.43	1342.56	1619.71	1721.35	1691.59	1494.64	1084.62	1049.04	1014.03	1089.32	1052.57	1015.25	1263.84
20	1975	1975	1014.62	1342.96	1620.01	1719.25	1691.89	1493.33	1842.69	1032.43	1738.35	1433.25	1437.10	1707.95	1502.96
21	1976	1976	1241.22	1342.15	1619.51	1717.25	1797.23	1873.26	1843.09	1042.74	1160.62	1709.05	1690.90	1708.05	1560.69
22	1977	1977	1626.16	1607.84	1618.10	1814.05	1903.52	1885.77	1843.99	1041.24	1468.75	1707.40	1690.89	1712.74	1658.06
23	1978	1978	1139.03	1342.06	1620.21	1718.75	1693.89	1494.04	1841.69	1790.16	1743.63	1713.89	1690.75	1711.35	1624.00
24	1979	1979	1564.29	1573.34	1618.91	1717.55	1904.62	1884.07	1843.09	1067.74	1735.25	1709.82	1693.30	1027.57	1609.95
25	1980	1980	1243.31	1341.46	1618.91	1718.05	1859.38	1884.67	1843.29	1039.54	1727.31	1713.03	1693.00	1343.25	1583.42
26	1981	1981	1014.92	1343.06	1619.71	1719.45	1693.49	1495.04	1084.82	1042.14	1017.92	1706.55	1401.63	1492.64	1385.08
27	1982	1982	1015.02	1343.56	1619.81	1719.95	1692.09	1492.44	1840.59	1794.06	1349.84	1708.85	1446.49	1332.04	1528.92
28	1983	1983	1480.01	1399.04	1616.71	1719.65	1904.62	1884.67	1843.49	1037.63	1026.03	1706.35	1692.80	1231.90	1544.15
29	1984	1984	1014.22	1340.96	1620.41	1719.05	1692.87	1494.44	1843.89	1050.54	1026.03	1096.32	1054.78	923.74	1320.50
30	1985	1985	1013.73	1342.76	1619.61	1721.05	1693.79	1495.54	1081.62	1030.84	1034.53	1094.22	1056.08	921.74	1257.01
31	1986	1986	1013.13	1343.76	1621.61	1718.75	1693.49	1494.44	1098.01	1039.44	1040.53	1096.52	1051.38	920.34	1259.15
32	1987	1987	1011.93	1340.16	1620.21	1717.65	1694.19	1493.54	1112.18	1038.84	1030.03	1098.72	1056.98	921.94	1259.56
33	1988	1988	1012.33	1341.86	1621.91	1722.15	1691.79	1493.24	1082.02	1041.14	1033.03	1102.62	1057.58	923.64	1258.54
34	1989	1989	1008.93	1338.96	1618.31	1720.45	1693.79	1494.44	1084.12	1046.64	1026.43	1096.72	1055.98	921.84	1257.13
35	1990	1990	1008.03	1340.76	1618.91	1719.35	1693.89	1494.64	1084.52	1050.14	1031.03	1095.72	1056.68	923.74	1258.02
36	1991	1991	1012.63	1339.46	1620.51	1718.95	1693.69	1493.54	1083.92	1048.04	1018.53	1091.42	1051.08	918.24	1255.75
37	1992	1992	1011.63	1344.06	1621.01	1720.35	1692.99	1495.44	1083.52	1043.84	1035.13	1099.22	1056.88	922.74	1258.81
38	1993	1993	1011.43	1343.26	1620.51	1719.25	1694.39	1493.74	1083.92	1047.34	1027.03	1093.22	1052.68	921.44	1257.25
39	1994	1994	1010.63	1341.46	1619.81	1719.75	1692.49	1494.84	1083.52	1039.24	1036.03	1099.22	1058.88	924.64	1258.28
40	1995	1995	1013.53	1340.56	1619.51	1719.95	1691.99	1493.94	1082.62	1040.94	1027.43	1093.22	1054.48	925.74	1256.90
41	1996	1996	1015.93	1339.16	1617.51	1718.85	1693.39	1494.24	1083.92	1045.84	1021.93	1089.22	1049.58	921.14	1255.80
AVERAGE			1154.39	1369.71	1619.81	1721.60	1728.95	1573.68	1365.74	1080.94	1132.47	1312.59	1265.72	1142.32	1370.71
MAXIMUM			1771.95	1740.24	1622.41	1814.05	1904.62	1885.77	1845.09	1794.06	1743.63	1713.89	1694.00	1712.74	1658.06
MINIMUM			1008.03	1338.96	1616.71	1717.05	1690.49	1491.74	1081.62	1030.84	1014.03	1086.02	1048.98	913.84	1254.96

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0022

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 18 Jacopie Spillway

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	1957	1957	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	314.91	25.88
3	1958	1958	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	1959	1959	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	1960	1960	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	1961	1961	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	1962	1962	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	1963	1963	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	1964	1964	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	1965	1965	.00	.00	.00	.00	.00	.00	.00	.00	.00	148.98	403.56	.00	46.93
11	1966	1966	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	1967	1967	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	1968	1968	171.54	.00	.00	.00	.00	.00	.00	.00	.00	783.75	117.47	61.16	96.14
14	1969	1969	414.05	.00	.00	.00	.00	.00	.00	.00	.00	223.80	.00	.00	54.17
15	1970	1970	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	1971	1971	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	1972	1972	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	1973	1973	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	1974	1974	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	1975	1975	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	1976	1976	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	1977	1977	.00	.00	.00	.00	.00	.00	.00	.00	.00	337.93	261.71	.00	50.93
23	1978	1978	.00	.00	.00	.00	.00	.00	.00	.00	282.67	1243.31	25.85	41.25	134.42
24	1979	1979	.00	.00	.00	.00	.00	.00	.00	.00	.00	256.97	.00	.00	21.83
25	1980	1980	.00	.00	.00	.00	.00	.00	.00	.00	99.14	908.67	.00	.00	85.32
26	1981	1981	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	1982	1982	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	1983	1983	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	1984	1984	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	1985	1985	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	1986	1986	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32	1987	1987	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
33	1988	1988	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34	1989	1989	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35	1990	1990	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36	1991	1991	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
37	1992	1992	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
38	1993	1993	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
39	1994	1994	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
40	1995	1995	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
41	1996	1996	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AVERAGE			14.28	.00	.00	.00	.00	.00	.00	.00	9.31	95.21	19.72	10.18	12.58
MAXIMUM			414.05	.00	.00	.00	.00	.00	.00	.00	282.67	1243.31	403.56	314.91	134.42
MINIMUM			.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0023

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 19 East Forebay Local Inflow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	10.100	6.600	4.000	3.200	2.700	2.500	2.600	5.600	35.600	18.200	11.600	12.000	9.564
2	1957	1957	11.200	6.800	5.900	5.300	4.600	4.500	5.100	18.900	31.600	14.500	12.200	13.600	11.204
3	1958	1958	9.600	6.700	4.800	3.500	2.800	2.600	2.500	17.000	31.500	13.200	9.700	6.000	9.183
4	1959	1959	8.100	5.600	4.100	3.200	2.800	2.400	2.200	12.100	24.100	11.800	11.600	14.400	8.547
5	1960	1960	11.900	6.900	4.700	3.600	3.100	2.900	3.500	13.100	16.600	13.300	6.800	5.300	7.674
6	1961	1961	9.800	7.400	5.000	3.000	2.300	1.900	1.800	4.500	28.200	10.900	8.300	9.000	7.676
7	1962	1962	5.700	4.200	3.400	2.700	2.300	2.000	2.100	8.100	26.600	12.200	9.000	7.300	7.141
8	1963	1963	5.800	4.700	3.800	3.200	3.000	2.600	2.700	14.200	26.400	9.600	9.200	10.200	7.957
9	1964	1964	9.200	5.500	4.000	3.400	3.100	3.000	3.000	8.600	32.400	21.800	13.900	16.500	10.383
10	1965	1965	11.100	6.200	4.800	3.900	3.200	2.900	2.800	10.300	36.800	20.700	13.600	10.400	10.581
11	1966	1966	11.800	11.400	4.700	4.100	3.900	2.800	3.300	10.000	20.200	11.100	9.700	5.200	8.198
12	1967	1967	7.700	8.600	4.500	4.400	3.600	3.500	4.200	19.900	25.400	11.000	9.900	15.900	9.895
13	1968	1968	13.300	9.700	6.400	4.200	3.200	2.900	2.400	11.000	34.400	23.500	11.800	11.500	11.221
14	1969	1969	14.200	8.300	6.400	5.600	4.400	3.700	3.600	8.600	36.200	16.900	8.200	7.300	10.293
15	1970	1970	5.700	4.400	3.300	2.800	2.200	1.800	2.500	22.800	25.400	18.300	10.500	7.800	9.002
16	1971	1971	12.000	3.000	2.200	1.800	1.700	2.400	2.200	3.600	34.600	14.100	6.100	6.900	7.553
17	1972	1972	10.600	6.100	3.400	1.400	3.000	4.000	2.600	23.400	18.000	10.300	4.200	4.300	7.645
18	1973	1973	10.500	7.100	7.100	3.800	3.600	2.500	3.100	6.700	31.400	14.100	6.600	5.400	8.496
19	1974	1974	7.700	6.200	4.900	1.300	3.500	1.600	1.700	8.600	37.400	18.500	10.300	10.100	9.315
20	1975	1975	6.500	5.800	4.600	3.400	3.200	2.900	4.800	25.200	28.100	10.300	10.300	14.200	9.961
21	1976	1976	9.900	6.600	5.100	5.400	3.500	2.200	4.400	14.900	35.100	13.100	11.300	14.100	10.474
22	1977	1977	10.900	10.400	6.500	5.200	4.100	1.800	3.500	16.400	33.700	18.000	13.800	9.400	11.165
23	1978	1978	9.100	6.700	4.400	3.900	1.200	2.200	5.800	38.300	25.600	20.300	11.700	11.200	11.779
24	1979	1979	10.100	10.600	5.700	5.100	3.000	3.500	4.400	22.500	31.200	14.800	8.900	6.100	10.525
25	1980	1980	10.800	7.300	5.700	4.600	3.700	2.900	4.200	18.100	40.100	17.900	9.200	7.700	11.035
26	1981	1981	6.200	5.700	4.900	3.200	1.600	1.200	1.500	15.500	33.500	15.600	9.300	11.000	9.120
27	1982	1982	6.100	5.200	4.800	2.700	3.000	3.800	6.900	34.400	21.500	13.300	8.900	9.800	10.082
28	1983	1983	12.500	9.200	7.900	3.000	3.000	2.900	4.000	20.000	25.400	15.800	9.400	7.700	10.108
29	1984	1984	6.900	7.800	4.200	3.600	2.200	1.800	3.600	7.100	25.400	11.500	8.100	6.600	7.405
30	1985	1985	7.400	6.000	5.000	1.600	1.300	.700	4.700	26.800	16.900	13.600	6.800	8.600	8.332
31	1986	1986	8.000	5.000	3.000	3.900	1.600	1.800	9.900	18.200	10.900	11.300	11.500	10.000	7.966
32	1987	1987	9.200	8.600	4.400	5.000	.900	2.700	2.800	18.800	21.400	9.100	5.900	8.400	8.135
33	1988	1988	8.800	6.900	2.700	.500	3.300	3.000	4.300	16.500	18.400	5.200	5.300	6.700	6.804
34	1989	1989	12.200	9.800	6.300	2.200	1.300	1.800	2.200	11.000	25.000	11.100	6.900	8.500	8.213
35	1990	1990	13.100	8.000	5.700	3.300	1.200	1.600	1.800	7.500	20.400	12.100	6.200	6.600	7.321
36	1991	1991	8.500	9.300	4.100	3.700	1.400	2.700	2.400	9.600	32.900	16.400	11.800	12.100	9.592
37	1992	1992	9.500	4.700	3.600	2.300	2.100	.800	2.800	13.800	16.300	8.600	6.000	7.600	6.530
38	1993	1993	9.700	5.500	4.100	3.400	.700	2.500	2.400	10.300	24.400	14.600	10.200	8.900	8.094
39	1994	1994	10.500	7.300	4.800	2.900	2.600	1.400	2.800	18.400	15.400	8.600	4.000	5.700	7.061
40	1995	1995	7.600	8.200	5.100	2.700	3.100	2.300	3.700	16.700	24.000	14.600	8.400	4.600	8.442
41	1996	1996	5.200	9.600	7.100	3.800	1.700	2.000	2.400	11.800	29.500	18.600	13.300	9.200	9.546
AVERAGE			9.383	7.063	4.807	3.410	2.651	2.463	3.395	15.093	27.022	14.107	9.278	9.117	9.005
MAXIMUM			14.200	11.400	7.900	5.600	4.600	4.500	9.900	38.300	40.100	23.500	13.900	16.500	11.779
MINIMUM			5.200	3.000	2.200	.500	.700	.700	1.500	3.600	10.900	5.200	4.000	4.300	6.530

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0024

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 20 Churchill Falls Power Flow

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
2	1957	1957	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1035.29	1572.11	1722.15	1702.20	1725.18	1544.40
3	1958	1958	1521.89	1394.93	1624.61	1722.65	1695.08	1511.06	1847.49	1035.29	1028.34	1722.15	1594.56	930.34	1469.02
4	1959	1959	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1213.68	1035.29	1028.34	1107.82	1062.88	1337.23	1309.25
5	1960	1960	1446.41	1394.93	1624.61	1722.65	1695.09	1638.86	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1376.14
6	1961	1961	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
7	1962	1962	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
8	1963	1963	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
9	1964	1964	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
10	1965	1965	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1723.59	1706.04	1722.15	1437.35
11	1966	1966	1751.70	1797.81	1624.61	1722.65	1855.91	1887.57	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1468.64
12	1967	1967	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	1722.15	1330.42
13	1968	1968	1783.74	1576.57	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.33	1729.72	1703.33	1722.74	1629.48
14	1969	1969	1786.15	1394.94	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1136.31	1724.30	1702.20	1134.42	1574.72
15	1970	1970	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1722.15	1702.20	1132.72	1388.45
16	1971	1971	1454.81	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1302.18
17	1972	1972	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
18	1973	1973	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
19	1974	1974	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.87	1025.35	1273.15
20	1975	1975	1021.12	1394.94	1624.61	1722.65	1695.09	1496.23	1847.49	1035.29	1743.36	1443.55	1447.40	1722.15	1512.92
21	1976	1976	1251.12	1394.93	1624.61	1722.65	1800.73	1875.46	1847.49	1035.29	1172.63	1722.15	1702.20	1722.15	1571.16
22	1977	1977	1637.06	1664.41	1624.60	1819.25	1907.62	1887.57	1847.49	1035.29	1479.36	1725.40	1704.69	1722.15	1669.22
23	1978	1978	1148.13	1394.93	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	1746.14	1734.19	1702.45	1722.55	1635.78
24	1979	1979	1574.39	1630.11	1624.61	1722.65	1907.62	1887.57	1847.49	1067.89	1743.36	1724.62	1702.20	1033.67	1620.48
25	1980	1980	1254.11	1394.93	1624.61	1722.65	1863.08	1887.57	1847.49	1035.29	1744.33	1730.93	1702.20	1350.95	1594.45
26	1981	1981	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.33	1722.15	1410.93	1503.64	1394.20
27	1982	1982	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	1348.26	1722.15	1455.39	1341.84	1539.00
28	1983	1983	1492.51	1454.41	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.34	1722.15	1702.20	1239.60	1554.26
29	1984	1984	1021.12	1394.94	1624.61	1722.65	1695.07	1496.24	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1327.90
30	1985	1985	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
31	1986	1986	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1107.91	1035.29	1028.34	1107.82	1062.88	930.34	1267.12
32	1987	1987	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1114.98	1035.29	1028.34	1107.82	1062.88	930.34	1267.70
33	1988	1988	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
34	1989	1989	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
35	1990	1990	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
36	1991	1991	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
37	1992	1992	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
38	1993	1993	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
39	1994	1994	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
40	1995	1995	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
41	1996	1996	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
AVERAGE			1163.77	1422.95	1624.61	1725.01	1731.60	1576.14	1369.13	1073.69	1136.41	1326.70	1275.00	1151.44	1379.71
MAXIMUM			1786.15	1797.81	1624.61	1819.25	1907.62	1887.57	1847.49	1806.11	1746.14	1734.19	1706.04	1725.18	1669.22
MINIMUM			1021.12	1394.93	1624.60	1722.65	1695.07	1496.23	1086.32	1035.29	1028.33	1107.82	1062.87	930.34	1265.34

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 23 East Forebay Spill

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	1957	1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	1958	1958	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	1959	1959	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	1960	1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	1961	1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	1962	1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	1963	1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1964	1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	1965	1965	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
11	1966	1966	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
12	1967	1967	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
13	1968	1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14	1969	1969	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
15	1970	1970	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16	1971	1971	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
17	1972	1972	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
18	1973	1973	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
19	1974	1974	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
20	1975	1975	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
21	1976	1976	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
22	1977	1977	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
23	1978	1978	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
24	1979	1979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
25	1980	1980	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
26	1981	1981	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
27	1982	1982	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
28	1983	1983	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
29	1984	1984	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
30	1985	1985	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
31	1986	1986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
32	1987	1987	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
33	1988	1988	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
34	1989	1989	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
35	1990	1990	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
36	1991	1991	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
37	1992	1992	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
38	1993	1993	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
39	1994	1994	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
40	1995	1995	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
41	1996	1996	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
AVERAGE			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAXIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MINIMUM			.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 24 General Flow CF Station to Gull Island

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
2	1957	1957	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1035.29	1572.11	1722.15	1702.20	2040.09	1570.28
3	1958	1958	1521.89	1394.93	1624.61	1722.65	1695.08	1511.06	1847.49	1035.29	1028.34	1722.15	1594.56	930.34	1469.02
4	1959	1959	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1213.68	1035.29	1028.34	1107.82	1062.88	1337.23	1309.25
5	1960	1960	1446.41	1394.93	1624.61	1722.65	1695.09	1638.86	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1376.14
6	1961	1961	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
7	1962	1962	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
8	1963	1963	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
9	1964	1964	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
10	1965	1965	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1872.57	2109.60	1722.15	1484.27
11	1966	1966	1751.70	1797.81	1624.61	1722.65	1855.91	1887.57	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1468.64
12	1967	1967	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	1722.15	1330.42
13	1968	1968	1955.28	1576.57	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.33	2513.46	1820.80	1783.90	1725.62
14	1969	1969	2200.20	1394.94	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1136.31	1948.10	1702.20	1134.42	1628.90
15	1970	1970	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1722.15	1702.20	1132.72	1388.45
16	1971	1971	1454.81	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1302.18
17	1972	1972	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
18	1973	1973	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
19	1974	1974	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.87	1025.35	1273.15
20	1975	1975	1021.12	1394.94	1624.61	1722.65	1695.09	1496.23	1847.49	1035.29	1743.36	1443.55	1447.40	1722.15	1512.92
21	1976	1976	1251.12	1394.93	1624.61	1722.65	1800.73	1875.46	1847.49	1035.29	1172.63	1722.15	1702.20	1722.15	1571.16
22	1977	1977	1637.06	1664.41	1624.60	1819.25	1907.62	1887.57	1847.49	1035.29	1479.36	2063.34	1966.40	1722.15	1720.15
23	1978	1978	1148.13	1394.93	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	2028.81	2977.50	1728.30	1763.80	1770.20
24	1979	1979	1574.39	1630.11	1624.61	1722.65	1907.62	1887.57	1847.49	1067.89	1743.36	1981.59	1702.20	1033.67	1642.30
25	1980	1980	1254.11	1394.93	1624.61	1722.65	1863.08	1887.57	1847.49	1035.29	1843.47	2639.60	1702.20	1350.95	1679.78
26	1981	1981	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.33	1722.15	1410.93	1503.64	1394.20
27	1982	1982	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	1348.26	1722.15	1455.39	1341.84	1539.00
28	1983	1983	1492.51	1454.41	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.34	1722.15	1702.20	1239.60	1554.26
29	1984	1984	1021.12	1394.94	1624.61	1722.65	1695.07	1496.24	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1327.90
30	1985	1985	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
31	1986	1986	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1107.91	1035.29	1028.34	1107.82	1062.88	930.34	1267.12
32	1987	1987	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1114.98	1035.29	1028.34	1107.82	1062.88	930.34	1267.70
33	1988	1988	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
34	1989	1989	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
35	1990	1990	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
36	1991	1991	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
37	1992	1992	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
38	1993	1993	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
39	1994	1994	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
40	1995	1995	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
41	1996	1996	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
AVERAGE			1178.06	1422.95	1624.61	1725.01	1731.60	1576.14	1369.13	1073.69	1145.72	1421.91	1294.72	1161.61	1392.29
MAXIMUM			2200.20	1797.81	1624.61	1819.25	1907.62	1887.57	1847.49	1806.11	2028.81	2977.50	2109.60	2040.09	1770.20
MINIMUM			1021.12	1394.93	1624.60	1722.65	1695.07	1496.23	1086.32	1035.29	1028.33	1107.82	1062.87	930.34	1265.34

ACRES INTERTEL LIMITED ACRES WATER RESOURCES SIMULATION PROGRAM (# A01000_3.10) 1999.01.20 16:32:36 PAGE 0027

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

PERIOD AVERAGE CHANNEL FLOW (cms): 31 Power Control Channel

SIM	YEAR OF HYD	OTH	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVE
1	1956	1956	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
2	1957	1957	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1035.29	1572.11	1722.15	1702.20	2040.09	1570.28
3	1958	1958	1521.89	1394.93	1624.61	1722.65	1695.08	1511.06	1847.49	1035.29	1028.34	1722.15	1594.56	930.34	1469.02
4	1959	1959	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1213.68	1035.29	1028.34	1107.82	1062.88	1337.23	1309.25
5	1960	1960	1446.41	1394.93	1624.61	1722.65	1695.09	1638.86	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1376.14
6	1961	1961	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
7	1962	1962	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
8	1963	1963	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
9	1964	1964	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
10	1965	1965	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1872.57	2109.60	1722.15	1484.27
11	1966	1966	1751.70	1797.81	1624.61	1722.65	1855.91	1887.57	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1468.64
12	1967	1967	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	1722.15	1330.42
13	1968	1968	1955.28	1576.57	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.33	2513.46	1820.80	1783.90	1725.62
14	1969	1969	2200.20	1394.94	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1136.31	1948.10	1702.20	1134.42	1628.90
15	1970	1970	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1722.15	1702.20	1132.72	1388.45
16	1971	1971	1454.81	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1302.18
17	1972	1972	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
18	1973	1973	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
19	1974	1974	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.87	1025.35	1273.15
20	1975	1975	1021.12	1394.94	1624.61	1722.65	1695.09	1496.23	1847.49	1035.29	1743.36	1443.55	1447.40	1722.15	1512.92
21	1976	1976	1251.12	1394.93	1624.61	1722.65	1800.73	1875.46	1847.49	1035.29	1172.63	1722.15	1702.20	1722.15	1571.16
22	1977	1977	1637.06	1664.41	1624.60	1819.25	1907.62	1887.57	1847.49	1035.29	1479.36	2063.34	1966.40	1722.15	1720.15
23	1978	1978	1148.13	1394.93	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	2028.81	2977.50	1728.30	1763.80	1770.20
24	1979	1979	1574.39	1630.11	1624.61	1722.65	1907.62	1887.57	1847.49	1067.89	1743.36	1981.59	1702.20	1033.67	1642.30
25	1980	1980	1254.11	1394.93	1624.61	1722.65	1863.08	1887.57	1847.49	1035.29	1843.47	2639.60	1702.20	1350.95	1679.78
26	1981	1981	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.33	1722.15	1410.93	1503.64	1394.20
27	1982	1982	1021.12	1394.94	1624.61	1722.65	1695.09	1496.24	1847.49	1806.11	1348.26	1722.15	1455.39	1341.84	1539.00
28	1983	1983	1492.51	1454.41	1624.61	1722.65	1907.62	1887.57	1847.49	1035.29	1028.34	1722.15	1702.20	1239.60	1554.26
29	1984	1984	1021.12	1394.94	1624.61	1722.65	1695.07	1496.24	1847.49	1035.29	1028.34	1107.82	1062.88	930.34	1327.90
30	1985	1985	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
31	1986	1986	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1107.91	1035.29	1028.34	1107.82	1062.88	930.34	1267.12
32	1987	1987	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1114.98	1035.29	1028.34	1107.82	1062.88	930.34	1267.70
33	1988	1988	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
34	1989	1989	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
35	1990	1990	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
36	1991	1991	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
37	1992	1992	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
38	1993	1993	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
39	1994	1994	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
40	1995	1995	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
41	1996	1996	1021.13	1394.94	1624.61	1722.65	1695.09	1496.24	1086.32	1035.29	1028.34	1107.82	1062.88	930.34	1265.34
AVERAGE			1178.06	1422.95	1624.61	1725.01	1731.60	1576.14	1369.13	1073.69	1145.72	1421.91	1294.72	1161.61	1392.29
MAXIMUM			2200.20	1797.81	1624.61	1819.25	1907.62	1887.57	1847.49	1806.11	2028.81	2977.50	2109.60	2040.09	1770.20
MINIMUM			1021.12	1394.93	1624.60	1722.65	1695.07	1496.23	1086.32	1035.29	1028.33	1107.82	1062.87	930.34	1265.34

Jan 20/99 : Churchill River Optimization Study : P12859.00
Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
Use HQ Inflows : CF1(5428.5)

Hydrologic Sequence = 000; Draft Rate = 3548.7 MWc; Start Condition = 63.0% Full

RESERVOIR WATER BALANCE

NAME	NET EVAP (EVAP-PREC) (cms)	LOCAL INFLOW (cms)	REGULATED INFLOW (cms)	TOTAL INFLOW (cms)	POWER OUTFLOW (cms)	SPILL OUTFLOW (cms)	OTHER OUTFLOW (cms)	TOTAL OUTFLOW (cms)	STORAGE ADJUSTMENT (cms)	CHANNEL STORAGE (cms)	WATER BALANCE (cms)
Romaine Diversion	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Ossokmanuan Reser	.00	339.84	156.40	496.24	.00	.00	496.24	496.24	.00	.00	.00
Smallwood Reservo	.00	870.85	496.24	1367.09	.00	.00	1367.09	1367.09	.00	.00	.00
West Forebay	.00	16.19	1367.09	1383.28	.00	.00	1383.28	1383.28	.00	.00	.00
East Forebay	.00	9.01	1370.71	1379.71	1379.71	.00	.00	1379.71	.00	.00	.00
Gull Island Reser	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Muskrat Falls Res	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Extern Node 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Extern Node 3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Extern Node 4	.00	156.40	.00	156.40	.00	.00	156.40	156.40	.00	.00	.00
Extern Node 9	.00	.00	1392.29	1392.29	.00	.00	1392.29	1392.29	.00	.00	.00
Extern Node 12	.00	.00	1392.29	1392.29	.00	.00	1392.29	1392.29	.00	.00	.00
Sink Node	.00	.00	1392.29	1392.29	.00	.00	.00	.00	.00	.00	1392.29
Source Node	.00	.00	.00	.00	.00	.00	1392.29	1392.29	.00	.00	-1392.29

POWER STATION ENERGY ADJUSTMENT

NAME	INSTALLED CAPACITY (MW)	AVERAGE ANNUAL ENERGY (GWH)	ENERGY COEFFICIENT (GWH/(cms))	ENERGY ADJUSTMENT (GWH)	ADJUSTED ENERGY (GWH)
Churchill Falls	5324.8	33869.4	24.548	.043	33869.4
TOTAL SYSTEM	5324.8	33869.4		.0	33869.4

CF1 - 5428.5 MW

(Existing Case)

(b) Input File

```
********** RUN CONTROL DATA ********


          Jan 20/99 : Churchill River Optimization Study : P12859.00
             Existing Case : Oct 56 - Sep 97 : TW crv @ CF1 adj.
                        Use HQ Inflows : CF1(5428.5)
Units of analysis is METRIC
MONTHLY


Number of simulation cycles (e.g., years):      41
Number of time periods per simulation cycle:    12
Number of first time period to simulate:         1
Number of periods per cycle to simulate:        12
ID of first cycle (e.g., Gregorian year):     1956
Alias of first cycle (e.g., hydrologic year): 1956

Level of debug output:              0
First time step of debug output:   16
Last  time step of debug output:   17

Max. number of physical flow constraint iterations:    4

Nominal efficiency parameters used to calculate power in simulation time steps.
Nominal efficiency parameters used to calculate power in decision time steps.

Output table flags (1 = print, 0 = do not print):

Flag for reservoir losses table:             0
Flag for reservoir volumes table:            1
Flag for reservoir elevations table:         1
Flag for hydro plant power/energy tables:    1
Flag for power system summary tables:        1
Flag for irrigation deficit tables:          0
Flag for selected channel flow tables:       1
Flag for energy and water balance tables:    1
Flag for ASCII routing/power detail file:    0
Flag for binary power detail file:           0

Global flag for fixing water level and flow bounds:    0
(1 = enable, 0 = disable --> see manual for more info)

    Time unit is     86400. seconds
    Routing option is NO
    Decision   time step is     0 time units
    Hydrologic time step is     0 time units



    Output flow units are cms
    Generation  units are MWC

    Use evaporation coefficient factors?    0 ( 0 = No, 1 = Yes )


Type of ARSP analysis:        0 --> Standard Analysis

Minimum draft rate:       5935.90 MWc
Maximum draft rate:       5937.00 MWc
Draft rate increment:         .10 MWc

Number of starting conditions:  1

Percentiles for statistical analysis:


STUDY TIME HORIZON
Period       Days Rout Period       Days Rout Period       Days Rout

Oct          31.0   0  Nov          30.0   0  Dec          31.0   0
Jan          31.0   0  Feb          28.0   0  Mar          31.0   0
Apr          30.0   0  May          31.0   0  Jun          30.0   0
Jul          31.0   0  Aug          31.0   0  Sep          30.0   0

Using Historical Time Series Data

The following   1 hydrologic sequence(s) will be simulated:

 000
```

```
********** GENERAL RESERVOIR DATA ********
  DrawDown Strategy  =     3
    where
        1 - Equal
        2 - Equal %
        3 - Priority
  DrawDown Parameter =     0
    where
        1 - Elevation
        2 - Volume
  Reference Position =     0
    where
        1 - Zone Limit
        2 - Rule Curve
        3 - FSL


  Reservoir Zones:
  ---------------
   1  Spill Zone
   2  Target Zone
   3  Target Zone
   4  Dead Storage

  Rule Curve is at bottom of zone  2.
```

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Romaine Diversion Headpond
RESERVOIR NUMBER : 2
RESERVOIR STATUS : Off
STARTING WATER LEVEL : 496.688 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 500.000
FULL SUPPLY LEVEL (m.) : 499.990
DEAD STORAGE LEVEL (m.) : 495.300
RESERVOIR BOTTOM (m.) : 430.000
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	430.00	447.00	467.00	472.00	487.00
INPUT VOLUME (mcm)	-	273.00	1217.00	3819.00	4926.00	13224.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	55.53	130.10	221.40	553.20	858.71

ELEVATION (m.)	-	494.00	497.00	504.00
INPUT VOLUME (mcm)	-	19235.00	22335.00	30870.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	1033.33	1219.29	1219.29

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	5000.0
Target Zone	5000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition
2	1 499.99 12 499.99

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Ossokmanuan Reservoir
RESERVOIR NUMBER : 5
RESERVOIR STATUS : On
STARTING WATER LEVEL : 477.800 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 480.400
FULL SUPPLY LEVEL (m.) : 479.150
DEAD STORAGE LEVEL (m.) : 475.031
RESERVOIR BOTTOM (m.) : 475.030
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	475.03	476.00	478.00	478.75	479.00
INPUT VOLUME (mcm)	-	.00	586.00	1923.00	2490.00	2701.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	604.12	668.50	756.00	844.00	893.33

ELEVATION (m.)	-	479.15	479.50	479.99
INPUT VOLUME (mcm)	-	2835.00	3176.00	3734.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	974.29	1138.78	1138.78

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	40000.0
Target Zone	40000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition
2	1 479.15 4 479.15 7 475.03 12 477.80

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Smallwood Reservoir
RESERVOIR NUMBER : 6
RESERVOIR STATUS : On
STARTING WATER LEVEL : 470.720 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 473.230
FULL SUPPLY LEVEL (m.) : 472.740
DEAD STORAGE LEVEL (m.) : 464.051
RESERVOIR BOTTOM (m.) : 464.050
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	464.05	467.10	469.00	470.50	471.50
INPUT VOLUME (mcm)	-	.00	2618.00	10375.00	17185.00	22135.00
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	858.36	4082.63	4540.00	4950.00	5416.00

ELEVATION (m.)	-	472.50	472.74	473.04
INPUT VOLUME (mcm)	-	27551.00	28941.00	30756.00
INPUT AREA (sq.km.)	-	.00	.00	.00
BALANCE AREA (sq.km.)	-	5791.67	6050.00	6050.00

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	10000.0
Target Zone	10000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition									
2	1	472.74	2	472.74	3	472.74	4	472.00	5	471.40
	6	470.75	7	470.10	8	471.60	9	472.60	10	472.74
	11	472.74	12	472.74						

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : West Forebay
RESERVOIR NUMBER : 7
RESERVOIR STATUS : On
STARTING WATER LEVEL : 451.100 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 452.930
FULL SUPPLY LEVEL (m.) : 452.929
DEAD STORAGE LEVEL (m.) : 450.500
RESERVOIR BOTTOM (m.) : 445.000
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	445.00	445.50	446.00	447.00	448.00
INPUT VOLUME (mcm)	-	.00	6.52	13.36	31.11	54.02
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	13.04	13.68	17.75	22.91	28.83

ELEVATION (m.)	-	449.00	450.00	451.00	452.00	452.93
INPUT VOLUME (mcm)	-	82.85	119.57	167.41	230.81	308.71
INPUT AREA (sq.km.)	-	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.)	-	36.72	47.84	63.40	83.76	96.50

ELEVATION (m.)	-	452.99	
INPUT VOLUME (mcm)	-	314.50	
INPUT AREA (sq.km.)	-	.00	
BALANCE AREA (sq.km.)	-	96.50	

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	80000.0
Target Zone	80000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition									
2	1	451.50	3	452.70	6	452.70	11	450.60	12	451.10

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : East Forebay
RESERVOIR NUMBER : 8
RESERVOIR STATUS : On
STARTING WATER LEVEL : 448.510 m.
Routing technique: 0

SURCHARGE LEVEL (m.) : 448.670
FULL SUPPLY LEVEL (m.) : 448.510
DEAD STORAGE LEVEL (m.) : 447.600
RESERVOIR BOTTOM (m.) : 443.800
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.) -	443.80	445.00	447.10	448.70	448.99
INPUT VOLUME (mcm) -	.00	124.48	369.79	580.23	620.55
INPUT AREA (sq.km.) -	.00	.00	.00	.00	.00
BALANCE AREA (sq.km.) -	103.73	116.81	131.53	139.03	139.03

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	30000.0
Target Zone	30000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition											
2	1	448.51	2	447.60	7	447.60	9	448.51	12	448.51		

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Gull Island Reservoir
RESERVOIR NUMBER : 10
RESERVOIR STATUS : Off
STARTING WATER LEVEL : 125.000 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 131.000
FULL SUPPLY LEVEL (m.) : 130.000
DEAD STORAGE LEVEL (m.) : 120.000
RESERVOIR BOTTOM (m.) : 119.000
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	119.00	131.00
INPUT VOLUME (mcm)	.00	.01
INPUT AREA (sq.km.)	.00	.00
BALANCE AREA (sq.km.)	.00	.00

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	700000.0
Target Zone	700000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition			
2	1	125.00	12	125.00

********** GENERAL RESERVOIR DATA ********

RESERVOIR NAME : Muskrat Falls Reservoir
RESERVOIR NUMBER : 11
RESERVOIR STATUS : Off
STARTING WATER LEVEL : 39.000 m.
Routing technique: 1

SURCHARGE LEVEL (m.) : 39.500
FULL SUPPLY LEVEL (m.) : 39.200
DEAD STORAGE LEVEL (m.) : 39.000
RESERVOIR BOTTOM (m.) : 38.999
RAINFALL GAUGE REFERENCE filename :
FULL RESERVOIR SURFACE AREA (sq.km.) : .00
RAINFALL / RUNOFF COEFFICIENT : .00

ELEVATION (m.)	-	39.00	39.50
INPUT VOLUME (mcm)	-	.00	.01
INPUT AREA (sq.km.)	-	.00	.00
BALANCE AREA (sq.km.)	-	.02	.02

EVAPORATION COEFF. - (mm./period)

1	.00	2	.00	3	.00	4	.00	5	.00	6	.00
7	.00	8	.00	9	.00	10	.00	11	.00	12	.00

Evaporation coefficients will NOT be scaled by a 'relative heat gain factor.'

Spill Zone	700000.0
Target Zone	700000.0
Target Zone	700000.0
Dead Storage	700000.0

Reservoir Priority: .00

Lower Boundary of Zone	Zonal Boundary Definition			
2	1	39.00	12	39.00

******** GENERAL CHANNEL DATA ********

CHANNEL/NODE EXTERNAL/INTERNAL NUMBERING SYSTEM

Chan.No. Ext	Int	U/S Node Ext	Int	D/S Node Ext	Int	Channel Type	
1	1	14	14	1	8	INFLOW	St. Jean Local Inflow
2	2	1	8	2	1	GENERAL	Diversion Channel St. Jean to Romaine
3	3	14	14	2	1	INFLOW	Romaine Local Inflow
4	4	14	14	3	9	INFLOW	Julian Local Inflow
5	5	2	1	5	2	SPILL	Natural Flow Romaine to Ossokmanuan
6	6	3	9	5	2	GENERAL	General Flow Julian to Ossokmanuan
7	7	14	14	4	10	INFLOW	Lac Joseph Local Inflow
8	8	4	10	5	2	GENERAL	General Flow Lac Joseph to Ossokmanuan
9	9	14	14	5	2	INFLOW	Ossokmanuan Local Inflow
10	10	5	2	6	3	SPILL	Gabbro Control Structure
11	11	5	2	6	3	SPILL	Flow Over Gabbro Control Structure
12	12	5	2	9	11	SPILL	Ossokmanuan Control Structure
13	13	14	14	6	3	INFLOW	Smallwood Local Inflow
14	14	6	3	7	4	SPILL	Lobstick Control Structure
15	15	6	3	7	4	POWER	Lobstick Power Flow
16	16	14	14	7	4	INFLOW	West Forebay Local Inflow
17	17	7	4	8	5	SPILL	Whitefish Falls Control Structure
18	18	7	4	9	11	SPILL	Jacopie Spillway
19	19	14	14	8	5	INFLOW	East Forebay Local Inflow
20	20	8	5	9	11	POWER	Churchill Falls Power Flow
21	21	8	5	9	11	POWER	CF2 Station Power Flow
22	22	8	5	9	11	POWER	Power Flow 500 MW Unit2 CF Station
23	23	8	5	9	11	SPILL	East Forebay Spill
24	24	9	11	12	12	GENERAL	General Flow CF Station to Gull Island
25	25	14	14	10	6	INFLOW	Gull Island Local Inflow
26	26	10	6	11	7	POWER	Gull Island Power Flow
27	27	10	6	11	7	SPILL	Gull Island Spill
28	28	14	14	11	7	INFLOW	Muskrat Falls Local Inflow
29	29	11	7	12	12	POWER	Muskrat Falls Power Flow
30	30	11	7	12	12	SPILL	Muskrat Falls Spill
31	31	12	12	13	13	P.C.C.	Power Control Channel
32	32	1	8	13	13	DEMAND	St. Jean Environmental Releases
33	33	2	1	13	13	SPILL	Spill to Lower Romaine
34	34	1	8	13	13	SPILL	Spill to Lower St. Jean
35	35	2	1	13	13	DEMAND	Romaine Environmental Releases

******** CHANNEL CONSTRAINT DATA ********

2 Name : Diversion Channel St. Jean to Romaine
Type : GENERAL

Penalty = .000 Concern is Normal Flow Range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

5 Name : Natural Flow Romaine to Ossokmanuan
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

6 Name : General Flow Julian to Ossokmanuan
Type : GENERAL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

8 Name : General Flow Lac Joseph to Ossokmanuan
Type : GENERAL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

10 Name : Gabbro Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

11 Name : Flow Over Gabbro Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

12 Name : Ossokmanuan Control Structure
Type : SPILL

Penalty = 220000.000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

14 Name : Lobstick Control Structure
Type : SPILL

Penalty = .000 Concern is Normal flow range

1 999999.000 2 999999.000 3 999999.000 4 999999.000 5 999999.000
6 999999.000 7 999999.000 8 999999.000 9 999999.000 10 999999.000
11 999999.000 12 999999.000

15 Name : Lobstick Power Flow

```
        Type : POWER

        Penalty =       .000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =       .000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   17   Name : Whitefish Falls Control Structure
        Type : SPILL

        Penalty =       .000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


   18   Name : Jacopie Spillway
        Type : SPILL

        Penalty = 200000.000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


   20   Name : Churchill Falls Power Flow
        Type : POWER

        Penalty =    100.000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  50000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   21   Name : CF2 Station Power Flow
        Type : POWER

        Penalty =     10.000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  75000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   22   Name : Power Flow 500 MW Unit2 CF Station
        Type : POWER

        Penalty =       .000     Concern is Min Power

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000

        Penalty =  75000.000     Concern is Min Flow

        1       .000  2       .000  3       .000  4       .000  5       .000
        6       .000  7       .000  8       .000  9       .000 10       .000
       11       .000 12       .000


   23   Name : East Forebay Spill
        Type : SPILL
```

```
        Penalty = 210000.000      Concern is Normal flow range

         1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
         6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
        11 999999.000 12 999999.000

 24     Name : General Flow CF Station to Gull Island
        Type : GENERAL

        Penalty =         .000      Concern is Normal Flow Range

         1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
         6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
        11 999999.000 12 999999.000

 26     Name : Gull Island Power Flow
        Type : POWER

        Penalty =     10.000      Concern is Min Power

         1        .000  2        .000  3        .000  4        .000  5        .000
         6        .000  7        .000  8        .000  9        .000 10        .000
        11        .000 12        .000

        Penalty =  75000.000      Concern is Min Flow

         1        .000  2        .000  3        .000  4        .000  5        .000
         6        .000  7        .000  8        .000  9        .000 10        .000
        11        .000 12        .000

 27     Name : Gull Island Spill
        Type : SPILL

        Penalty =   1000.000      Concern is Normal flow range

         1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
         6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
        11 999999.000 12 999999.000

 29     Name : Muskrat Falls Power FLow
        Type : POWER

        Penalty =     10.000      Concern is Min Power

         1        .000  2        .000  3        .000  4        .000  5        .000
         6        .000  7        .000  8        .000  9        .000 10        .000
        11        .000 12        .000

        Penalty =  75000.000      Concern is Min Flow

         1        .000  2        .000  3        .000  4        .000  5        .000
         6        .000  7        .000  8        .000  9        .000 10        .000
        11        .000 12        .000

 30     Name : Muskrat Falls Spill
        Type : SPILL

        Penalty =   1000.000      Concern is Normal flow range

         1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
         6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
        11 999999.000 12 999999.000

 32     Name : St. Jean Environmental Releases
        Type : DEMAND

        Penalty = 650000.000      Concern is Demand

         1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
         6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
        11 999999.000 12 999999.000

        Penalty = 950000.000      Concern is Demand

         1       3.100  2       2.400  3       1.500  4        .900  5        .800
         6        .700  7       1.100  8       6.900  9       7.900 10       3.500
        11       2.700 12       2.500

 33     Name : Spill to Lower Romaine
```

```
        Type : SPILL

        Penalty = 230000.000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


  34    Name : Spill to Lower St. Jean
        Type : SPILL

        Penalty = 650000.000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000


  35    Name : Romaine Environmental Releases
        Type : DEMAND

        Penalty = 650000.000     Concern is Normal flow range

        1 999999.000  2 999999.000  3 999999.000  4 999999.000  5 999999.000
        6 999999.000  7 999999.000  8 999999.000  9 999999.000 10 999999.000
       11 999999.000 12 999999.000

        Penalty = 900000.000     Concern is Fishery Flow

        1     19.400  2     14.900  3      9.200  4      5.600  5      4.600
        6      4.300  7      7.100  8     42.500  9     48.800 10     21.700
       11     16.700 12     15.700


Inflow Channel Descriptions
---------------------------

Channel  Proration  Inflow  Inflow
Number     Factor    Units  Series  File Name

    1       .0963     FLW       1   Qroma.HST
    3       .5948     FLW       2   Qroma.HST
    4      1.0000     FLW       3   Qjuli.HST
    7       .3152     FLW       4   Qoinf.HST
    9       .6848     FLW       5   Qoinf.HST
   13      1.0000     FLW       6   Qsinf.HST
   16      1.0000     FLW       7   Qwinf.HST
   19      1.0000     FLW       8   Qeinf.HST
   25      1.0000     FLW       9   Qgull.HST
   28      1.0000     FLW      10   Qmusk.HST

Power Control Channel Descriptions
----------------------------------

  31    Name : Power Control Channel
        Type : P.C.C.
```

Channel Geometry Descriptions

Ext Chn Num	Int Chn Num	Frst Arc Num	No. of Arcs	Zero Cost Arc	Arc Costs and Directions
1	1	1	1	1	.0
					1
2	2	2	1	1	.0
					1
3	3	3	1	1	.0
					1
4	4	4	1	1	.0
					1
5	5	5	1	1	.0
					1
6	6	6	1	1	.0
					1
7	7	7	1	1	.0
					1
8	8	8	1	1	.0
					1
9	9	9	1	1	.0
					1
10	10	10	1	1	.0
					1
11	11	11	1	1	.0
					1
12	12	12	1	1	220000.0
					1
13	13	13	1	1	.0
					1
14	14	14	1	1	.0
					1
15	15	15	2	1	.0 .0
					1 -1
16	16	17	1	1	.0
					1
17	17	18	1	1	.0
					1
18	18	19	1	1	200000.0
					1
19	19	20	1	1	.0
					1
20	20	21	2	1	100.0 50000.0
					1 -1
21	21	23	2	1	10.0 75000.0
					1 -1
22	22	25	2	1	.0 75000.0
					1 -1
23	23	27	1	1	210000.0
					1
24	24	28	1	1	.0
					1
25	25	29	1	1	.0
					1
26	26	30	2	1	10.0 75000.0
					1 -1
27	27	32	1	1	1000.0
					1
28	28	33	1	1	.0
					1
29	29	34	2	1	10.0 75000.0
					1 -1
30	30	36	1	1	1000.0
					1
31	31	37	3	2	500000.0 .0500000.0
					1 1 -1
32	32	40	2	1	650000.0950000.0
					1 -1
33	33	42	1	1	230000.0
					1
34	34	43	1	1	650000.0
					1
35	35	44	2	1	650000.0900000.0
					1 -1

NOTE: Largest internal node is the source,
second largest internal node is the sink.

Reservoir Geometry Descriptions

	Res Num	Channel Numbers Upstream of Reservoir	Channel Numbers Downstream of Reservoir
Int:	1	2 3	5 33 35
Ext:	2	2 3	5 33 35
Int:	2	5 6 8 9	10 11 12
Ext:	5	5 6 8 9	10 11 12
Int:	3	10 11 13	14 15
Ext:	6	10 11 13	14 15
Int:	4	14 15 16	17 18
Ext:	7	14 15 16	17 18
Int:	5	17 19	20 21 22 23
Ext:	8	17 19	20 21 22 23
Int:	6	25	26 27
Ext:	10	25	26 27
Int:	7	26 27 28	29 30
Ext:	11	26 27 28	29 30
Int:	8	1	2 32 34
Ext:	1	1	2 32 34
Int:	9	4	6
Ext:	3	4	6
Int:	10	7	8
Ext:	4	7	8
Int:	11	12 18 20 21 22 23	24
Ext:	9	12 18 20 21 22 23	24
Int:	12	24 29 30	31
Ext:	12	24 29 30	31
Int:	13	31 32 33 34 35	
Ext:	0	31 32 33 34 35	
Int:	14		1 3 4 7 9 13 16 19 25 28
Ext:	0		1 3 4 7 9 13 16 19 25 28

********** GENERAL HYDROELECTRIC DATA ********

Power Channel No. 2: Churchill Falls Station
****

Installed Capacity (MW):	5428.500
Nominal headpond level:	448.510
Design Head (m.):	311.800
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	5.120
Maximum Flow @ Design Head:	2008.000
Best Eff Flow @ Design Head:	2008.000
Eff @ Max Q and Design Head:	.9030
Eff @ Best Q and Design Head:	.9030

Plant Availability (fraction):

Oct	.91960
Nov	.96050
Dec	.98090
Jan	.98090
Feb	.98090
Mar	.97070
Apr	.95030
May	.92990
Jun	.89920
Jul	.88900
Aug	.87880
Sep	.88900

Power Channel Number: 20
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	600.0	800.0	1000.0	1200.0	1600.0
Tailwater (m.):	122.20	124.30	124.70	125.20	125.60	126.00	126.90

Discharge (cms):	2000.0	2800.0
Tailwater (m.):	127.60	129.00

Channels contributing to tailwater level:

12 Ossokmanuan Control Structure
18 Jacopie Spillway
20 Churchill Falls Power Flow
21 CF2 Station Power Flow
22 Power Flow 500 MW Unit2 CF Station
23 East Forebay Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	2008.0	2008.0
Efficiency:	.9030	.9030	.9030

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

Power Channel No. 3: CF2 Station
****

Installed Capacity (MW):	1100.000
Nominal headpond level:	448.510
Design Head (m.):	315.000
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	3.830
Maximum Flow @ Design Head:	415.000
Best Eff Flow @ Design Head:	415.000
Eff @ Max Q and Design Head:	.9200
Eff @ Best Q and Design Head:	.9200

Plant Availability (fraction):

Oct	.99210
Nov	1.03620
Dec	1.05820
Jan	1.05820
Feb	1.05820
Mar	1.04720
Apr	.50000
May	1.00310
Jun	.97000
Jul	.95900
Aug	.94800
Sep	.95900

Power Channel Number: 21
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	1000.0	1600.0	2800.0
Tailwater (m.):	126.85	126.90	127.16	127.90	129.41

Channels contributing to tailwater level:

12 Ossokmanuan Control Structure
18 Jacopie Spillway
20 Churchill Falls Power Flow
21 CF2 Station Power Flow
22 Power Flow 500 MW Unit2 CF Station
23 East Forebay Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	415.0	415.0
Efficiency:	.9200	.9200	.9200

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

Power Channel No. 4: New Unit#2 at Churchill Falls
****

Installed Capacity (MW):	500.000
Nominal headpond level:	448.510
Design Head (m.):	312.400
Maximum Net Head (m.):	320.000
Minimum Net Head (m.):	305.000
Head Loss (m.):	.000
Maximum Flow @ Design Head:	195.000
Best Eff Flow @ Design Head:	177.000
Eff @ Max Q and Design Head:	.9220
Eff @ Best Q and Design Head:	.9220

Plant Availability (fraction):

Oct	1.00000
Nov	1.00000
Dec	1.00000
Jan	1.00000
Feb	1.00000
Mar	1.00000
Apr	1.00000
May	1.00000
Jun	1.00000
Jul	1.00000
Aug	1.00000
Sep	.50000

Power Channel Number: 22
Spill Channel Number: 23

TAILWATER CURVE (TYPE 1)

Discharge (cms):	.0	400.0	600.0	800.0	1000.0	1200.0	1600.0
Tailwater (m.):	125.00	125.30	125.50	125.80	126.10	126.40	127.10

```
Discharge (cms):   2000.0   2800.0
Tailwater ( m.):   127.80   129.10

Channels contributing to tailwater level:

  12  Ossokmanuan Control Structure
  18  Jacopie Spillway
  20  Churchill Falls Power Flow
  21  CF2 Station Power Flow
  22  Power Flow 500 MW Unit2 CF Station
  23  East Forebay Spill


EFFICIENCY vs. DISCHARGE CURVE
------------------------------
Discharge:              .0    177.0    195.0
Efficiency:          .9220    .9220    .9220


EFFICIENCY DERATING CURVE
-------------------------
Efficiency fact:   1.0000   1.0000
Net Head factor:    .5000   1.5000


Power Channel No.  5:   Gull Island Station
**********************

Installed Capacity (MW):         2264.000
Nominal headpond level:           125.000
Design Head ( m.):                 84.000
Maximum Net Head ( m.):          1000.000
Minimum Net Head ( m.):             1.000
Head Loss ( m.):                    2.000

Maximum Flow @ Design Head:      3030.000
Best Eff Flow @ Design Head:     2670.000
Eff @ Max Q and Design Head:        .9108
Eff @ Best Q and Design Head:       .9360


Plant Availability (fraction):

Oct             .99210
Nov            1.03620
Dec            1.05820
Jan            1.05820
Feb            1.05820
Mar            1.04720
Apr            1.02510
May            1.00310
Jun             .97000
Jul             .95900
Aug             .94800
Sep             .95900

Power    Channel Number:   26
Spill    Channel Number:   27


TAILWATER CURVE (TYPE 1)
------------------------
Discharge (cms):       .0    283.0    566.0    850.0   1133.0   1699.0   2265.0
Tailwater ( m.):     38.98    39.00    39.03    39.06    39.09    39.18    39.29

Discharge (cms):   2832.0   5663.0
Tailwater ( m.):    39.41    40.33

Channels contributing to tailwater level:

  26  Gull Island Power Flow
  27  Gull Island Spill
  28  Muskrat Falls Local Inflow


EFFICIENCY vs. DISCHARGE CURVE
------------------------------
Discharge:              .0   2670.0   3030.0
Efficiency:          .9360    .9360    .9108


EFFICIENCY DERATING CURVE
-------------------------
Efficiency fact:   1.0000   1.0000
Net Head factor:   1.0000   1.0000
```

Power Channel No. 6: Muskrat Falls Station
****

Installed Capacity (MW):	824.000
Nominal headpond level:	39.000
Design Head (m.):	35.000
Maximum Net Head (m.):	1000.000
Minimum Net Head (m.):	1.000
Head Loss (m.):	.500
Maximum Flow @ Design Head:	2667.000
Best Eff Flow @ Design Head:	2437.000
Eff @ Max Q and Design Head:	.9000
Eff @ Best Q and Design Head:	.9176

Plant Availability (fraction):

Oct	.99210
Nov	1.03620
Dec	1.05820
Jan	1.05820
Feb	1.05820
Mar	1.04720
Apr	1.02510
May	1.00310
Jun	.97000
Jul	.95900
Aug	.94800
Sep	.95900

Power Channel Number: 29
Spill Channel Number: 30

TAILWATER CURVE (TYPE 1)

Discharge (cms):	1000.0	1500.0	2000.0	2500.0	3000.0	4000.0
Tailwater (m.):	2.00	2.60	2.90	3.40	3.80	4.60

Channels contributing to tailwater level:

24 General Flow CF Station to Gull Island
29 Muskrat Falls Power FLow
30 Muskrat Falls Spill

EFFICIENCY vs. DISCHARGE CURVE

Discharge:	.0	2437.0	2667.0
Efficiency:	.9176	.9176	.9000

EFFICIENCY DERATING CURVE

Efficiency fact:	1.0000	1.0000
Net Head factor:	1.0000	1.0000

POWER DEMANDS -- Minimum generation (MW)

Period	Power Plant Number(s) 2	3	4	5	6
Oct	.00	.00	.00	.00	.00
Nov	.00	.00	.00	.00	.00
Dec	.00	.00	.00	.00	.00
Jan	.00	.00	.00	.00	.00
Feb	.00	.00	.00	.00	.00
Mar	.00	.00	.00	.00	.00
Apr	.00	.00	.00	.00	.00
May	.00	.00	.00	.00	.00
Jun	.00	.00	.00	.00	.00
Jul	.00	.00	.00	.00	.00
Aug	.00	.00	.00	.00	.00
Sep	.00	.00	.00	.00	.00

POWER DEMANDS -- Minimum power flow (cms)

Period	Power Plant Number(s) 2	3	4	5	6
Oct	.00	.00	.00	.00	.00
Nov	.00	.00	.00	.00	.00
Dec	.00	.00	.00	.00	.00
Jan	.00	.00	.00	.00	.00
Feb	.00	.00	.00	.00	.00
Mar	.00	.00	.00	.00	.00
Apr	.00	.00	.00	.00	.00
May	.00	.00	.00	.00	.00
Jun	.00	.00	.00	.00	.00
Jul	.00	.00	.00	.00	.00
Aug	.00	.00	.00	.00	.00
Sep	.00	.00	.00	.00	.00

Power channels downstream of reservoir Romaine Diversion Headpond
There are 3 downstream power channels: 20 21 22

Power channels downstream of reservoir Ossokmanuan Reservoir
There are 3 downstream power channels: 20 21 22

Power channels downstream of reservoir Smallwood Reservoir
There are 3 downstream power channels: 20 21 22

Power channels downstream of reservoir West Forebay
There are 3 downstream power channels: 20 21 22

Power channels downstream of reservoir East Forebay
There are 3 downstream power channels: 20 21 22

Power channels downstream of reservoir Gull Island Reservoir
There are 2 downstream power channels: 26 29

Power channels downstream of reservoir Muskrat Falls Reservoir
There is one downstream power channel, number 29.

For inflow channel 1 the next storage reservoir downstream is number 2
There are no intermediate power plants.

For inflow channel 3 the next storage reservoir downstream is number 2
There are no intermediate power plants.

For inflow channel 4 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 7 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 9 the next storage reservoir downstream is number 5
There are no intermediate power plants.

For inflow channel 13 the next storage reservoir downstream is number 6
There are no intermediate power plants.

For inflow channel 16 the next storage reservoir downstream is number 7
There are no intermediate power plants.

For inflow channel 19 the next storage reservoir downstream is number 8
There are no intermediate power plants.

For inflow channel 25 the next storage reservoir downstream is number 10
There are no intermediate power plants.

For inflow channel 28 the next storage reservoir downstream is number 11
There are no intermediate power plants.

********** GENERAL STRUCTURE DATA ********

Gabbro Control Structure

Structure number : 1
Channel number : 10
Reservoir number : 5
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	472.90	473.35	473.96	474.88	476.40	477.32	478.54
Discharges (cms) :	.0	169.9	339.8	566.3	1076.0	1415.8	1868.9

Elevations (m.) :	479.76
Discharges (cms) :	2491.9

Flow Over Gabbro Control Structure

Structure number : 2
Channel number : 11
Reservoir number : 5
Structure type : 5

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	472.90	479.76	479.91	480.06	480.36	480.67	480.97
Discharges (cms) :	.0	.0	5.9	16.8	47.5	87.3	134.5

Elevations (m.) :	481.28
Discharges (cms) :	160.5

Ossokmanuan Control Structure

Structure number : 3
Channel number : 12
Reservoir number : 5
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	474.20	475.50	476.30	477.00	477.80	478.50	479.15
Discharges (cms) :	.0	311.0	623.0	962.0	1472.0	2066.0	2348.0

Elevations (m.) :	480.50
Discharges (cms) :	3679.0

Lobstick Control Structure

Structure number : 4
Channel number : 14
Reservoir number : 6
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	457.20	463.30	466.34	469.39	470.92	472.44	472.74
Discharges (cms) :	.0	2124.0	3330.0	4604.0	5326.0	6133.0	6329.0

Elevations (m.) :	473.96
Discharges (cms) :	7127.0

Whitefish Control Structure

Structure number : 5
Channel number : 17
Reservoir number : 7
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	448.00	448.50	449.00	449.60	451.10	451.40	451.70
Discharges (cms) :	.0	1077.0	1518.0	1905.0	2601.0	2718.0	2826.0

Elevations (m.) :	452.00	452.30	452.60	452.90	453.50
Discharges (cms) :	2937.0	3045.0	3153.0	3258.0	3459.0

Jacopie Spillway

Structure number : 6
Channel number : 18
Reservoir number : 7
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	440.90	445.00	446.50	448.10	449.60	451.10	452.63
Discharges (cms) :	.0	1764.0	2307.0	2904.0	3557.0	4269.0	5045.0

Elevations (m.) :	454.15	455.00
Discharges (cms) :	5888.0	6359.4

East Forebay Spillway

Structure number : 7
Channel number : 23
Reservoir number : 8
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	436.47	438.90	440.40	441.96	443.50	445.00	446.50
Discharges (cms) :	.0	169.9	396.4	736.2	1189.3	1699.0	2265.4

Elevations (m.) :	448.06	448.67	449.28
Discharges (cms) :	2718.4	2973.3	3199.8

Natural Control from Romaine Diversion

Structure number : 8
Channel number : 5
Reservoir number : 2
Structure type : 7

OPERATIONAL GATE CHANGES	=	3	8
LONG-TERM GATE CHANGES	=	0	0
LEVEL GATE CHANGES	=	.000	.000
PRIMARY CONTROL OPTION	=	1	
SECONDARY CONTROL OPTION	=	1	
GATE CONTROL OPTION	=	1	

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	495.00	495.60	495.85	496.15	496.40	496.65	496.85
Discharges (cms) :	.0	25.0	50.0	100.0	150.0	200.0	250.0
Discharges (cms) :	.0	.0	12.0	37.0	75.0	140.0	210.0

Elevations (m.) :	497.05	497.60	498.25	498.60
Discharges (cms) :	300.0	500.0	800.0	1000.0
Discharges (cms) :	300.0	500.0	800.0	1000.0

Gull Island Spill

Structure number : 9
Channel number : 27
Reservoir number : 10
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	115.00 130.00
Discharges (cms) :	999999.0999999.0

Muskrat Falls Spill

Structure number : 10
Channel number : 30
Reservoir number : 11
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) :	35.00 45.00
Discharges (cms) :	999999.0999999.0

Romaine Spill

Structure number : 11

Channel number : 33
Reservoir number : 2
Structure type : 4

POINTS DESCRIBING DISCHARGE RELATIONSHIP

Elevations (m.) : 480.00 520.00
Discharges (cms) : 999999.0999999.0

********** IRRIGATION AREA DATA ********

No irrigation areas.

********** HEDGING RULE DATA ********

********** HYDROLOGY DATA **********

Checking inflow files...

Qroma.HST
...contains 41 years of data, between 1956 and 1996
Qjuli.HST
...contains 41 years of data, between 1956 and 1996
Qoinf.HST
...contains 41 years of data, between 1956 and 1996
Qsinf.HST
...contains 41 years of data, between 1956 and 1996
Qwinf.HST
...contains 41 years of data, between 1956 and 1996
Qeinf.HST
...contains 41 years of data, between 1956 and 1996
Qgull.HST
...contains 41 years of data, between 1956 and 1996
Qmusk.HST
...contains 41 years of data, between 1956 and 1996

Checking rainfall files...

Checking demand files...

The overlapping period in the hydrology files is from 1956 to 1996.

```
Start date is   Oct       1956 (1956)

Number of simulation years:        41
Number of time steps/year:         12

Total number of nodes in system:   14
Number of reservoirs:               7

Number of storage zones:            4
Rule curve is at bottom of zone:    2

Number of control structures:      11

Total number of channels:          35

Number of power channels:           5
Number of loss channels:            0
Number of inflow channels:         10
Number of inflow series:            8

Number of irrigation areas:         0

Restart option is:                OFF


Starting Condition:     63.04 percent full
Initial energy in storage:    15708.07

Energy Draft Rate:    3548.70 MWc
```

Annual draft rate(s):

Nominal:	3548.70
Oct	2874.80
Nov	3911.73
Dec	4541.98
Jan	4813.46
Feb	4737.16
Mar	4186.76
Apr	3048.33
May	2908.16
Jun	2892.90
Jul	3117.18
Aug	2991.55
Sep	2620.71