

From Dennis Ailceha  
 flood-flows 4.xls

NAPONEE CANAL  
 Monthly Diversions  
 (acre-feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1955	0	0	0	0	202	29	441	728	299	0	0	0	1699
1956	0	0	0	0	75	117	954	722	175	0	0	0	2043
1957	0	0	0	0	0	0	780	1158	0	0	0	0	1938
1958	0	0	0	0	0	0	119	288	0	0	0	0	407
1959	0	0	0	0	0	254	1612	1307	50	0	0	0	3223
1960	0	0	0	0	0	0	1051	1117	125	0	0	0	2293
1961	0	0	0	0	0	26	1432	1466	315	0	0	0	3239
1962	0	0	0	0	268	186	774	916	8	0	0	0	2152
1963	0	0	0	0	102	226	2093	712	26	0	0	0	3159
1964	0	0	0	0	265	34	2352	1061	48	0	0	0	3760
1965	0	0	0	0	172	172	789	1281	0	0	0	0	2414
1966	0	0	0	0	152	98	1601	703	50	0	0	0	2604
1967	0	0	0	0	0	0	1009	1505	92	0	0	0	2606
1968	0	0	0	0	0	0	1962	828	43	0	0	0	2833
1969	0	0	0	0	0	0	621	1601	0	0	0	0	2222
1970	0	0	0	0	0	520	2551	1242	0	0	0	0	4313
1971	0	0	0	0	0	289	1963	1901	0	0	0	0	4153
1972	0	0	0	0	0	0	2127	1227	0	0	0	0	3354
1973	0	0	0	0	0	210	1408	1811	54	0	0	0	3483
1974	0	0	0	0	0	499	2566	755	0	0	0	0	3820
1975	0	0	0	0	0	8	1911	1468	0	0	0	0	3387
1976	0	0	0	0	0	353	2556	1744	8	0	0	0	4661
1977	0	0	0	0	0	641	1856	418	0	0	0	0	2915
1978	0	0	0	0	0	530	1757	620	80	0	0	0	2987
1979	0	0	0	0	0	4	678	1534	0	0	0	0	2216
1980	0	0	0	0	0	349	2406	1232	12	0	0	0	3999
1981	0	0	0	0	0	66	1166	444	0	0	0	0	1676
1982	0	0	0	0	0	0	943	963	350	0	0	0	2256
1983	0	0	0	0	0	7	1583	1563	119	0	0	0	3272
1984	0	0	0	0	0	53	1830	1643	218	0	0	0	3744
1985	0	0	0	0	0	457	1542	1254	217	0	0	0	3470
1986	0	0	0	0	0	714	1935	1144	38	0	0	0	3831
1987	0	0	0	0	0	702	1159	738	0	0	0	0	2599
1988	0	0	0	0	0	1170	1226	926	0	0	0	0	3322
1989	0	0	0	0	0	175	1237	965	188	0	0	0	2565
1990	0	0	0	0	0	228	1800	320	237	0	0	0	2585
1991	0	0	0	0	0	187	1061	846	0	0	0	0	2094
1992	0	0	0	0	0	0	303	779	57	0	0	0	1139
1993	0	0	0	0	0	13	0	548	0	0	0	0	561
1994	0	0	0	0	0	699	704	1400	7	0	0	0	2810
1995	0	0	0	0	0	156	1324	1423	282	0	0	0	3185
1996	0	0	0	0	0	0	811	651	0	0	0	0	1462
1997	0	0	0	0	0	510	1831	809	52	0	0	0	3202
1998	0	0	0	0	0	746	815	758	0	0	0	0	2319
1999	0	0	0	0	0	44	1605	1146	34	0	0	0	2829
2000	0	0	0	0	0	976	1073	1589	0	0	0	0	3638
2001	0	0	0	0	0	448	1158	1285	97	0	0	0	2988
TOTAL	0	0	0	0	1236	11896	64475	50539	3281	0	0	0	131427
AVG.	0	0	0	0	26	253	1372	1075	70	0	0	0	2796

FRANKLIN PUMP CANAL  
Monthly Diversions  
(acre-feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1953	0	0	0	15	153	114	766	1088	157	0	0	0	2293
1954	0	0	0	9	0	157	1523	752	99	0	0	0	2540
1955	0	0	0	0	470	0	827	1987	542	0	0	0	3826
1956	0	0	0	0	414	377	1329	1226	361	0	0	0	3707
1957	0	0	0	0	0	0	1166	637	0	0	0	0	1803
1958	0	0	0	0	0	0	186	672	0	0	0	0	858
1959	0	0	0	0	0	54	1557	1192	307	0	0	0	3110
1960	0	0	0	0	0	0	698	1545	433	0	0	0	2676
1961	0	0	0	0	0	0	1174	950	198	0	0	0	2322
1962	0	0	0	0	0	0	0	403	0	0	0	0	403
1963	0	0	0	0	0	196	2390	643	0	0	0	0	3229
1964	0	0	0	0	325	181	2129	712	83	0	0	0	3430
1965	0	0	0	0	0	0	640	1113	0	0	0	0	1753
1966	0	0	0	0	0	187	1996	479	55	0	0	0	2717
1967	0	0	0	0	0	0	595	1871	135	0	0	0	2601
1968	0	0	0	0	0	0	1542	608	75	0	0	0	2225
1969	0	0	0	0	0	0	284	1522	0	0	0	0	1806
1970	0	0	0	0	0	364	2714	1173	0	0	0	0	4251
1971	0	0	0	0	0	122	2306	1852	32	0	0	0	4312
1972	0	0	0	0	0	0	1911	914	0	0	0	0	2825
1973	0	0	0	0	0	446	1210	1705	127	0	0	0	3488
1974	0	0	0	0	0	366	2455	1229	0	0	0	0	4050
1975	0	0	0	0	0	0	2043	1406	0	0	0	0	3449
1976	0	0	0	0	0	565	2160	1264	110	0	0	0	4099
1977	0	0	0	0	0	892	1990	210	0	0	0	0	3092
1978	0	0	0	0	0	492	1723	478	16	0	0	0	2709
1979	0	0	0	0	0	0	730	1413	0	0	0	0	2143
1980	0	0	0	0	0	137	2033	1483	14	0	0	0	3667
1981	0	0	0	0	0	33	961	81	0	0	0	0	1075
1982	0	0	0	0	0	0	891	1213	0	0	0	0	2104
1983	0	0	0	0	0	0	1687	1468	207	0	0	0	3362
1984	0	0	0	0	0	49	1726	1916	141	0	0	0	3832
1985	0	0	0	0	0	74	1504	1135	92	0	0	0	2805
1986	0	0	0	0	0	890	2408	1113	0	0	0	0	4411
1987	0	0	0	0	0	702	1512	661	0	0	0	0	2875
1988	0	0	0	0	0	1432	1724	1366	33	0	0	0	4555
1989	0	0	0	0	0	116	1471	1215	0	0	0	0	2802
1990	0	0	0	0	0	0	1871	0	269	0	0	0	2140
1991	0	0	0	0	0	499	1419	866	0	0	0	0	2784
1992	0	0	0	0	0	15	507	1148	117	0	0	0	1787
1993	0	0	0	0	0	0	0	519	0	0	0	0	519
1994	0	0	0	0	0	942	1047	1565	0	0	0	0	3554
1995	0	0	0	0	0	0	1517	1764	682	0	0	0	3963
1996	0	0	0	0	0	0	912	1064	248	0	0	0	2224
1997	0	0	0	0	0	9	2064	934	18	0	0	0	3025
1998	0	0	0	0	0	538	1153	939	0	0	0	0	2630
1999	0	0	0	0	0	1629	1251	82	0	0	0	0	2962
2000	0	0	0	0	0	709	1617	1620	0	0	0	0	3946
2001	0	0	0	0	0	108	1343	1682	276	0	0	0	3409
TOTAL	0	0	0	24	1362	12395	68662	52878	4827	0	0	0	140148
AVG.	0	0	0	0	28	253	1401	1079	99	0	0	0	2860

SUPERIOR CANAL  
Monthly Diversions  
(acre-feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952	0	0	0	0	563	1402	1865	2283	851	0	0	0	6964
1953	0	0	0	184	1718	1275	3291	2818	853	30	0	0	10169
1954	0	0	0	141	1133	274	4504	1972	1390	198	0	0	9612
1955	0	0	0	135	2485	619	3816	6339	1656	50	0	0	15100
1956	0	0	0	230	1242	930	3616	5619	1291	264	0	0	13192
1957	0	0	0	0	0	200	5040	4578	510	165	0	0	10493
1958	0	0	0	0	234	2065	1539	4308	270	0	0	0	8416
1959	0	0	0	212	1496	1636	5911	6907	1287	0	0	0	17449
1960	0	0	0	0	932	603	4780	5647	1162	0	0	0	13124
1961	0	0	0	0	974	403	6184	4681	1194	0	0	0	13436
1962	0	0	0	0	1353	617	2406	6353	393	0	0	0	11122
1963	0	0	0	210	2176	1874	6678	4185	38	0	0	0	15161
1964	0	0	0	169	1936	1363	7398	3642	198	0	0	0	14706
1965	0	0	0	101	663	1390	4784	5599	0	0	0	0	12537
1966	0	0	0	0	2091	1269	7390	2646	998	0	0	0	14394
1967	0	0	0	439	793	480	4311	5924	861	0	0	0	12808
1968	0	0	0	0	793	1719	7624	3839	22	0	0	0	13997
1969	0	0	0	0	905	274	3932	5074	77	0	0	0	10262
1970	0	0	0	0	1072	1722	8804	5004	0	0	0	0	16602
1971	0	0	0	0	1159	846	7859	6356	278	0	0	0	16498
1972	0	0	0	0	1482	455	7207	3630	0	0	0	0	12774
1973	0	0	0	0	1319	2018	5090	5057	231	0	0	0	13715
1974	0	0	0	0	1293	2540	8752	2309	0	0	0	0	14894
1975	0	0	0	0	1334	57	7811	4983	392	0	0	0	14577
1976	0	0	0	0	141	3722	8597	7091	648	0	0	0	20199
1977	0	0	0	0	143	516	8324	2210	0	0	0	0	11193
1978	0	0	0	0	0	2318	6649	5343	868	0	0	0	15178
1979	0	0	0	0	0	0	4338	6181	15	0	0	0	10534
1980	0	0	0	0	0	1831	8717	4892	0	0	0	0	15440
1981	0	0	0	0	0	1465	5421	1694	0	0	0	0	8580
1982	0	0	0	0	0	0	4768	6244	742	0	0	0	11754
1983	0	0	0	0	0	439	8122	6448	569	0	0	0	15578
1984	0	0	0	0	0	112	8160	7389	892	0	0	0	16553
1985	0	0	0	0	0	1190	7376	4711	564	0	0	0	13841
1986	0	0	0	0	0	2907	8262	4097	0	0	0	0	15266
1987	0	0	0	0	0	2977	7008	4005	0	0	0	0	13990
1988	0	0	0	0	0	5225	7290	6072	226	0	0	0	18813
1989	0	0	0	0	0	2191	7438	5430	0	0	0	0	15059
1990	0	0	0	0	0	577	7694	4029	1328	0	0	0	13628
1991	0	0	0	0	0	2365	6554	3316	0	0	0	0	12235
1992	0	0	0	0	0	626	2871	3313	300	0	0	0	7110
1993	0	0	0	41	2516	2417	1539	2661	0	0	0	0	9174
1994	0	0	0	0	0	3119	5343	5301	19	0	0	0	13782
1995	0	0	0	0	0	1001	8083	6337	1851	0	0	0	17272
1996	0	0	0	0	0	2973	6207	4761	293	0	0	0	14234
1997	0	0	0	0	0	1443	6681	3973	210	0	0	0	12307
1998	0	0	0	0	0	3791	6268	4118	23	0	0	0	14200
1999	0	0	0	0	0	2724	7550	4545	464	0	0	0	15283
2000	0	0	0	0	135	5835	6602	5864	30	0	0	0	18466
2001	0	0	0	0	0	1263	3613	6288	139	0	0	0	11303
TOTAL	0	0	0	1862	32081	79058	300067	236066	23133	707	0	0	672974
AVG.	0	0	0	37	642	1581	6001	4721	463	14	0	0	13459

COURTLAND CANAL, MILE 0.7 (Guide Rock)  
 Monthly Diversions  
 (acre-feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952	0	0	0	0	184	2162	1519	2832	649	0	0	0	7346
1953	0	0	0	0	0	0	799	668	0	0	0	0	1467
1954	0	0	0	0	1073	2319	4082	3775	2253	99	0	0	13601
1955	0	0	0	0	2729	2376	4423	8357	3094	0	0	0	20979
1956	0	0	0	181	3662	4130	6003	8862	3235	928	0	0	27001
1957	0	0	0	0	0	1099	10364	9265	1243	27322	0	0	49293
1958	0	0	0	837	14420	4491	3183	8092	1946	0	0	0	32969
1959	0	0	0	0	1692	3017	12662	14378	4431	0	0	0	36180
1960	0	0	0	0	0	2507	13912	16338	3763	0	0	0	36520
1961	0	0	0	668	8313	1736	23030	17589	3669	0	0	0	55005
1962	0	0	0	0	2787	2382	9084	12813	996	0	0	0	28062
1963	0	0	0	260	7938	10722	34054	25682	1474	0	0	0	80130
1964	0	0	0	0	3031	5583	38281	34499	7464	0	0	0	88858
1965	0	0	0	0	0	7303	23024	30288	896	0	0	0	61511
1966	0	0	0	0	12047	13944	34132	9140	2927	6040	12734	0	90964
1967	0	0	0	0	795	5914	23176	33686	8736	9349	0	0	81656
1968	0	0	0	0	3548	7455	42693	18998	455	0	0	0	73149
1969	0	0	0	0	1377	8605	20388	21961	1331	0	0	0	53662
1970	0	0	0	0	16415	7881	42303	38733	7528	0	0	0	112860
1971	0	0	0	0	920	6832	32010	28824	8360	3861	0	0	78807
1972	0	0	0	0	6151	7732	29393	11989	626	0	0	0	55891
1973	0	0	0	0	3721	7035	21968	16368	950	0	0	0	50042
1974	0	0	0	0	3578	9512	42106	20535	4014	0	0	0	79745
1975	0	0	0	900	4905	3542	36293	28017	7442	0	0	0	81099
1976	0	0	0	933	3045	15692	42086	38939	11460	6320	6227	289	124991
1977	0	0	2302	6992	4087	7731	34870	17541	0	0	0	0	73523
1978	0	0	0	0	2694	9522	30346	17359	3587	0	0	0	63508
1979	0	0	0	0	5010	6363	9903	17486	6572	3646	0	0	48980
1980	0	0	0	0	3756	8023	33696	33039	4219	0	0	0	82733
1981	0	0	1450	5489	6168	11118	22230	9997	983	0	0	0	57435
1982	0	0	0	0	0	4600	18152	16887	3413	0	0	0	43052
1983	0	0	0	4999	14171	8220	31021	29456	8316	307	0	0	96490
1984	0	0	0	0	0	6351	28706	30880	8424	6545	166	0	81072
1985	0	0	0	0	2787	9869	25409	10195	2482	0	0	0	50742
1986	0	0	0	0	0	14607	28024	18512	292	0	0	0	61435
1987	0	0	0	0	0	2610	12419	20501	15029	1449	0	0	52008
1988	0	0	0	0	3140	25496	35325	20302	7289	3015	0	0	94567
1989	0	0	0	1545	3784	12255	21773	21115	6843	296	0	0	67611
1990	0	1835	4961	66	6295	6753	26881	19818	11056	6062	6026	3338	93091
1991	0	0	5229	6467	7557	7529	15027	12288	2922	3396	4826	5849	71090
1992	5677	5401	5533	5832	4077	6273	7837	6148	463	0	0	0	47241
1993	0	0	0	1629	3433	5324	6374	8152	263	0	0	0	25175
1994	0	0	0	0	2176	15984	19339	20677	262	0	0	0	58438
1995	4420	2630	0	0	0	3629	25096	24418	13800	2700	0	0	76693
1996	0	0	0	1248	6901	11540	26531	22966	3763	0	0	0	72949
1997	0	0	0	0	3893	9677	25592	18653	4818	0	0	0	62633
1998	0	0	0	0	658	14729	26952	18492	4954	0	0	0	65785
1999	0	0	0	0	643	11507	25992	16549	8243	210	0	0	63144
2000	0	1652	12964	6024	6371	20571	32164	27573	4568	4481	5244	5227	126839
2001	5238	722	0	0	0	7544	19525	18462	9726	6000	0	0	67217
TOTAL	15335	12240	32439	44070	189932	391796	1140152	936094	221229	92026	35223	14703	3125239
AVG.	307	245	649	881	3799	7836	22803	18722	4425	1841	704	294	62505

Days Courtland Canal in Operation

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952	0	0	0	0	6	30	31	31	12	0	0	0	110
1953	0	0	0	0	0	0	17	21	0	0	0	0	38
1954	0	0	0	0	22	30	31	31	30	4	0	0	148
1955	0	0	0	0	26	28	31	31	26	0	0	0	142
1956	0	0	0	4	31	30	31	31	30	15	0	0	168
1957	0	0	0	0	0	11	28	31	24	30	0	0	124
1958	0	0	0	13	23	30	31	31	29	0	0	0	157
1959	0	0	0	0	15	26	31	31	29	0	0	0	132
1960	0	0	0	0	0	25	31	31	26	0	0	0	113
1961	0	0	0	6	31	30	31	31	25	0	0	0	154
1962	0	0	0	0	18	30	31	31	17	0	0	0	127
1963	0	0	0	2	31	30	31	31	16	0	0	0	141
1964	0	0	0	0	14	30	31	31	14	0	0	0	120
1965	0	0	0	0	0	27	31	31	7	0	0	0	96
1966	0	0	0	0	29	30	31	30	9	14	0	0	143
1967	0	0	0	0	7	30	31	31	30	18	0	0	147
1968	0	0	0	0	17	30	31	31	7	0	0	0	116
1969	0	0	0	0	12	30	31	31	9	0	0	0	113
1970	0	0	0	0	24	30	31	31	28	0	0	0	144
1971	0	0	0	0	7	30	31	31	30	25	0	0	154
1972	0	0	0	0	30	30	31	31	6	0	0	0	128
1973	0	0	0	0	29	30	31	31	4	0	0	0	125
1974	0	0	0	0	31	29	31	31	23	0	0	0	145
1975	0	0	0	6	31	30	31	31	22	0	0	0	151
1976	0	0	0	5	31	30	31	31	30	31	30	2	221
1977	0	0	14	30	31	30	31	24	0	0	0	0	160
1978	0	0	0	0	24	30	31	31	14	0	0	0	130
1979	0	0	0	0	31	30	31	31	30	22	0	0	175
1980	0	0	0	0	20	30	31	31	16	0	0	0	128
1981	0	0	9	30	31	30	31	31	9	0	0	0	171
1982	0	0	0	0	0	16	31	31	15	0	0	0	93
1983	0	0	0	12	31	30	31	31	30	4	0	0	169
1984	0	0	0	0	0	26	31	31	30	31	2	0	151
1985	0	0	0	0	12	30	31	31	12	0	0	0	116
1986	0	0	0	0	0	29	31	31	2	0	0	0	93
1987	0	0	0	0	21	30	31	31	10	0	0	0	123
1988	0	0	0	0	21	30	31	31	30	17	0	0	160
1989	0	0	0	12	30	30	31	31	30	3	0	0	167
1990	0	15	10	1	31	30	31	31	30	31	30	19	259
1991	0	0	27	30	31	30	31	31	30	31	30	31	302
1992	31	28	31	30	30	30	31	31	4	0	0	0	246
1993	0	0	0	16	31	30	31	31	3	0	0	0	142
1994	0	0	0	0	22	30	31	31	1	0	0	0	115
1995	15	20	0	0	0	10	31	31	30	11	0	0	148
1996	0	0	0	6	31	30	31	31	15	0	0	0	144
1997	0	0	0	0	10	30	31	31	15	22	0	0	139
1998	0	0	0	0	6	30	31	31	23	0	0	0	121
1999	0	0	0	0	7	30	31	31	30	5	0	0	134
2000	0	7	31	12	28	30	31	31	30	31	30	31	292
2001	31	7	0	0	0	18	31	31	30	26	0	0	174

HCL River Outflow

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952													80191
1953	15491	26678	2144	752	1864	2876	11851	10741	5590	1365	417	422	43022
1954	369	430	492	1010	1329	4211	16906	9949	6065	1059	595	607	62092
1955	583	555	795	716	7609	1308	15332	24673	8900	649	468	504	65249
1956	512	496	562	258	5612	8656	16930	19668	8798	2706	547	504	347546
1957	593	696	482	79356	1430	22588	170802	23690	7489	27480	2280	10660	315242
1958	10374	14016	42710	36044	40819	40013	24984	49442	12714	17262	8264	18600	244323
1959	22590	28000	21860	140562	31488	28441	23133	24387	6061	660	790	1098	309836
1960	743	774	620	600	132722	86347	62048	20722	3528	620	492	620	237676
1961	620	560	620	29112	39250	94187	46843	19528	5116	620	600	620	498805
1962	620	546	620	24732	16851	102506	170959	116251	48020	11600	3000	3100	287568
1963	3220	26446	50710	484	11808	9585	44113	44765	16860	14066	12000	10266	153425
1964	6200	11732	620	364	3803	5555	55930	37125	29648	620	600	1228	393991
1965	3620	560	620	32635	583	30354	84438	26869	9886	118466	56660	29300	287568
1966	31000	34960	48040	13248	17171	17602	67822	11490	13487	11148	13892	7708	355832
1967	7750	25836	24876	25435	6196	73714	136244	40185	8108	6268	600	620	152783
1968	620	15760	17750	13464	12899	15200	54311	19289	1650	620	600	620	210376
1969	5890	14890	620	25460	40021	34609	23838	29412	1256	620	13420	20340	222979
1970	13900	23320	31070	25765	22429	7794	54327	41154	1380	620	600	620	83272
1971	620	560	620	600	553	5135	40893	30096	2355	620	600	620	59164
1972	740	580	620	600	593	1832	35267	16400	692	620	600	620	100638
1973	710	560	620	600	27817	19533	22859	22967	3132	620	600	620	194428
1974	3250	27750	31000	22630	17447	10933	54589	23911	1078	620	600	620	104380
1975	620	560	620	600	1990	7812	54468	30697	5173	620	600	620	79463
1976	770	580	620	300	620	21483	57114	47135	6268	492	300	310	75252
1977	310	280	310	600	310	8188	53334	13691	600	620	600	620	39714
1978	620	560	620	460	620	11780	36154	18871	3727	620	600	620	98551
1979	615	756	615	590	307	294	10766	23284	662	615	595	615	44648
1980	615	575	615	590	615	6544	48875	36935	1362	615	595	615	47544
1981	615	509	307	298	528	10595	24207	5169	595	615	595	615	244200
1982	615	555	615	595	615	595	19572	22021	2096	255	10	0	146930
1983	408	8022	30953	31376	31593	60049	42627	34649	3930	0	0	593	58007
1984	615	575	22	5347	43818	17896	36043	37668	4337	0	0	609	88244
1985	1151	802	20	0	0	7156	32472	13155	2357	8	0	886	52614
1986	852	684	119	0	0	20615	42206	21922	1020	0	0	826	109520
1987	615	555	42	78	0	12888	25050	12693	98	0	0	595	64563
1988	1090	575	21	0	615	37674	43047	24401	1586	0	0	511	56055
1989	595	555	21	0	0	14088	28584	20683	37	0	0	0	47237
1990	0	0	0	0	0	2353	34006	14314	5382	0	0	0	22641
1991	0	0	0	0	0	8297	25159	13781	0	0	0	0	196933
1992	0	0	0	0	0	2067	10114	9164	1296	0	0	0	142131
1993	0	0	0	0	0	-2	615	9538	32378	59566	59504	35334	144285
1994	14021	19705	36188	1888	9003	15996	22101	22802	427	0	0	0	250861
1995	435	555	179	0	13479	49971	38844	31156	9664	2	0	0	133106
1996	0	0	0	0	0	12076	29464	59072	68510	51585	16568	13586	95631
1997	686	555	615	45918	13970	12607	35623	21033	1509	0	0	590	95631
1998	615	555	615	14389	11727	15688	32748	18741	-1	0	0	554	64107
1999	615	555	101	0	0	8711	32694	18585	2493	0	0	353	124367
2000	615	575	7968	9944	3104	27391	39027	35212	275	0	0	256	55814
2001	307	278	54	0	10	6693	21227	23929	2905	0	0	411	

Harlan County Releases  
Unused for Irrigation

Pickup Year	80 cfs							Franklin Pump	0.95	Aug	Sep	Oct	Nov	Dec	Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Superior	0.9						
1953	15491	26678	2144	532	0	1339	9198	9055	4477	1332	417	422	71084		
1954	369	430	492	844	2369	5925	10682	7691	6673	1364	595	607	38041		
1955	583	555	795	566	5447	2423	10226	11172	7177	593	468	504	40509		
1956	512	496	562	436	4646	7397	9762	7207	8150	3762	547	504	43981		
1957	593	696	482	79356	1430	<b>22890</b>	<b>156902</b>	12557	9350	1699	2280	10660	298896		
1958	10374	14016	<b>42710</b>	<b>37177</b>	28186	37489	24461	39876	14853	17262	8264	18600	293268		
1959	22590	28000	21860	<b>140326</b>	<b>30326</b>	27340	5776	4401	3986	660	790	1098	287154		
1960	743	774	620	600	<b>131686</b>	<b>86858</b>	45463	0	1726	620	492	620	270203		
1961	620	560	620	29322	<b>33850</b>	<b>96571</b>	18066	0	3471	620	600	620	184920		
1962	620	546	620	24732	15107	<b>103934</b>	<b>163111</b>	99450	49174	11600	3000	3100	474995		
1963	3220	<b>26446</b>	<b>50710</b>	279	5489	144	1259	15822	17719	14066	12000	10266	157419		
1964	6200	11732	620	176	164	2407	7854	0	23269	620	600	1228	54869		
1965	3620	560	620	32523	0	<b>24979</b>	<b>57786</b>	0	10001	<b>118466</b>	<b>56660</b>	29300	334515		
1966	31000	<b>34960</b>	<b>48040</b>	13248	6064	5262	24504	2651	10496	6658	0	7708	490592		
1967	7750	25836	24876	24947	5542	<b>71370</b>	<b>109996</b>	0	2063	0	600	620	273600		
1968	620	15760	17750	13464	10773	9767	1699	0	2152	620	600	620	73825		
1969	5890	14890	620	25460	39390	29504	1436	2690	1120	620	13420	20340	155379		
1970	13900	23320	31070	25765	6807	1501	0	0	0	620	600	620	104204		
1971	620	560	620	600	0	1236	0	0	0	297	600	620	5153		
1972	740	580	620	600	0	0	0	3003	949	620	600	620	8331		
1973	710	560	620	600	26819	13765	0	2286	2321	620	600	620	49520		
1974	3250	27750	31000	22630	16954	1758	415	2154	268	620	600	620	108019		
1975	620	560	620	552	0	8574	8232	0	0	620	600	620	20998		
1976	770	580	620	57	1999	4078	3445	0	0	0	0	306	11855		
1977	310	280	0	0	529	2846	8165	0	600	620	600	620	14570		
1978	620	560	620	460	1435	2867	0	0	982	620	600	620	9384		
1979	615	756	615	590	0	0	0	419	0	55	595	615	4260		
1980	615	575	615	590	0	211	4529	0	0	615	595	615	8960		
1981	615	509	124	0	0	1340	0	0	931	615	595	615	5343		
1982	615	555	615	595	615	0	0	0	0	255	10	0	3260		
1983	408	8022	30953	27726	<b>20767</b>	<b>55188</b>	2278	0	0	294	0	593	146228		
1984	615	575	22	5347	43818	14789	0	0	0	0	133	609	65908		
1985	1151	802	20	0	0	0	0	317	780	8	0	886	3964		
1986	852	684	119	0	0	4820	4273	548	1013	0	0	826	13135		
1987	615	555	42	78	3332	10702	6792	0	0	0	0	595	22711		
1988	1090	575	21	0	458	6793	0	0	0	0	0	511	9448		
1989	595	555	21	187	556	2675	0	0	0	147	0	0	4737		
1990	0	341	0	85	0	0	0	0	0	0	0	0	427		
1991	0	0	0	0	0	1539	4606	451	1514	1146	0	0	9255		
1992	0	0	0	0	230	0	2602	2362	960	0	0	0	6154		
1993	0	0	0	683	0	0	0	1896	<b>32562</b>	<b>59566</b>	<b>59504</b>	<b>35334</b>	189545		
1994	14021	19705	36188	1888	10076	0	0	0	273	0	0	0	82152		
1995	0	806	179	0	13479	46413	5301	46	0	0	0	0	66224		
1996	0	0	0	0	0	711	0	32063	<b>66122</b>	<b>51585</b>	16568	13586	180636		
1997	686	555	615	45918	11231	5002	2511	0	0	3491	0	590	70599		
1998	615	555	615	14389	11948	0	0	0	0	0	0	554	28676		
1999	615	555	101	0	396	0	0	0	0	560	0	353	2580		
2000	615	0	0	5155	318	2065	0	1274	0	0	0	0	9427		
2001	0	587	54	0	10	0	0	0	0	0	0	411	1062		

Note: Red Willow was completed in 1962, Norton in 1964.

=IF(outflow!B59-frank!B59-naponee!B59-fpump!B59/\$H\$3-superior!B59/\$H\$4-courtland!B59/\$H\$5+Days!B59\*\$B\$5\*1.9835>0, outflow!B59-frank!B59-naponee!B59-fpump!B59/\$H\$3-superior!B59/\$H\$4-courtland!B59/\$H\$5+Days!B59\*\$B\$5\*1.9835,0)

Box 2 mo > 76,000

HCL River Outflow

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1952													
1953	15491	26678	2144	752	1864	2876	11851	10741	5590	1365	417	422	80191
1954	369	430	492	1010	1329	4211	16906	9949	6065	1059	595	607	43022
1955	583	555	795	716	7609	1308	15332	24673	8900	649	468	504	62092
1956	512	496	562	258	5612	8656	16930	19668	8798	2706	547	504	65249
1957	593	696	482	79356	1430	22588	170802	23690	7489	27480	2280	10660	347546
1958	10374	14016	42710	36044	40819	40013	24984	49442	12714	17262	8264	18600	315242
1959	22590	28000	21860	140562	31488	28441	23133	24387	6061	660	790	1098	329070
1960	743	774	620	600	132722	86347	62048	20722	3528	620	492	620	309836
1961	620	560	620	29112	39250	94187	46843	19528	5116	620	600	620	237676
1962	620	546	620	24732	16851	102506	170959	116251	48020	11600	3000	3100	498805
1963	3220	26446	50710	484	11808	9585	44113	44765	16860	14066	12000	10266	244323
1964	6200	11732	620	364	3803	5555	55930	37125	29648	620	600	1228	153425
1965	3620	560	620	32635	583	30354	84438	26869	9886	118466	56660	29300	393991
1966	31000	34960	48040	13248	17171	17602	67822	11490	13487	11148	13892	7708	287568
1967	7750	25836	24876	25435	6196	73714	136244	40185	8108	6268	600	620	355832
1968	620	15760	17750	13464	12899	15200	54311	19289	1650	620	600	620	152783
1969	5890	14890	620	25460	40021	34609	23838	29412	1256	620	13420	20340	210376
1970	13900	23320	31070	25765	22429	7794	54327	41154	1380	620	600	620	222979
1971	620	560	620	600	553	5135	40893	30096	2355	620	600	620	83272
1972	740	580	620	600	593	1832	35267	16400	692	620	600	620	59164
1973	710	560	620	600	27817	19533	22859	22967	3132	620	600	620	100638
1974	3250	27750	31000	22630	17447	10933	54589	23911	1078	620	600	620	194428
1975	620	560	620	600	1990	7812	54468	30697	5173	620	600	620	104380
1976	770	580	620	300	620	21483	57114	47135	6268	492	300	310	135992
1977	310	280	310	600	310	8188	53334	13691	600	620	600	620	79463
1978	620	560	620	460	620	11780	36154	18871	3727	620	600	620	75252
1979	615	756	615	590	307	294	10766	23284	662	615	595	615	39714
1980	615	575	615	590	615	6544	48875	36935	1362	615	595	615	98551
1981	615	509	307	298	528	10595	24207	5169	595	615	595	615	44648
1982	615	555	615	595	615	595	19572	22021	2096	255	10	0	47544
1983	408	8022	30953	31376	31593	60049	42627	34649	3930	0	0	593	244200
1984	615	575	22	5347	43818	17896	36043	37668	4337	0	0	609	146930
1985	1151	802	20	0	0	7156	32472	13155	2357	8	0	886	58007
1986	852	684	119	0	0	20615	42206	21922	1020	0	0	826	88244
1987	615	555	42	78	0	12888	25050	12693	98	0	0	595	52614
1988	1090	575	21	0	615	37674	43047	24401	1586	0	0	511	109520
1989	595	555	21	0	0	14088	28584	20683	37	0	0	0	64563
1990	0	0	0	0	0	2353	34006	14314	5382	0	0	0	56055
1991	0	0	0	0	0	8297	25159	13781	0	0	0	0	47237
1992	0	0	0	0	0	2067	10114	9164	1296	0	0	0	22641
1993	0	0	0	0	0	-2	615	9538	32378	59566	59504	35334	196933
1994	14021	19705	36188	1888	9003	15996	22101	22802	427	0	0	0	142131
1995	435	555	179	0	13479	49971	38844	31156	9664	2	0	0	144285
1996	0	0	0	0	0	12076	29464	59072	68510	51585	16568	13586	250861
1997	686	555	615	45918	13970	12607	35623	21033	1509	0	0	590	133106
1998	615	555	615	14389	11727	15688	32748	18741	-1	0	0	554	95631
1999	615	555	101	0	0	8711	32694	18585	2493	0	0	353	64107
2000	615	575	7968	9944	3104	27391	39027	35212	275	0	0	256	124367
2001	307	278	54	0	10	6693	21227	23929	2905	0	0	411	55814

=outflow|B57-frank|B57-naponee|B57'