APPENDICES A AND B

of the Report to

THE INTERNATIONAL JOINT COMMISSION

on

THE DIVISION OF THE WATERS OF

THE ST. MARY AND MILK RIVERS

1997

by

R.A. Halliday
representing Canada

and

David J. Lystrom
representing the United States

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The data contained in these appendices are the culmination of a concerted effort by personnel of the Alberta and Saskatchewan districts of the Hydrometric Monitoring Division (HMD), Canada and the Montana District of the United States Geological Survey (USGS). In addition to the authors, who had primary responsibility for assuring that the data contained herein are accurate and complete, the following individuals contributed significantly to the collection, compilation, verification, and tabulation of the data:

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APPENDIX A

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TABLE 6

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
MARCH 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	SHARES OF NATURAL FLOW CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	71	0	71	318	389	195	194	124
2	98	0	98	318	416	208	208	110
3	83	0	83	343	426	213	213	130
4	127	0	127	343	470	235	235	108
5	166	0	166	343	509	254	255	88
6	169	0	169	343	512	256	256	87
7	154	0	154	318	472	236	236	82
8	157	0	157	318	475	238	237	81
9	154	0	154	318	472	236	236	82
10	154	0	154	294	448	224	224	70
11	183	0	183	294	477	238	239	55
12	169	0	169	294	463	232	231	63
13	142	0	142	318	460	230	230	88
14	157	0	157	318	475	237	238	80
15	169	0	169	318	487	244	243	75
S.TOTAL	2 153	0	2 153	4 798	6 951	3 476	3 475	1 323
MEAN	144	0.0	144	320	463	232	232	88.2
16	157	0	157	318	475	237	238	80
17	171	0	171	343	514	257	257	86
18	198	0	198	367	565	283	282	85
19	157	0	157	612	769	384	385	227
20	171	0	171	2 447	2 618	1 309	1 309	1 138
21	171	0	171	3 670	3 841	1 921	1 920	1 750
22	171	0	171	2 691	2 862	1 431	1 431	1 260
23	186	0	186	1 957	2 143	1 071	1 072	885
24	15	0	15	1 727	1 742	871	871	856
25	27	0	27	1 050	1 077	539	538	512
26	15	0	15	1 260	1 275	637	638	622
27	29	0	29	1 358	1 387	694	693	665
28	29	0	29	1 377	1 406	703	703	674
29	27	0	27	1 353	1 380	690	690	663
30	29	0	29	1 348	1 377	688	689	659
31	15	0	15	1 331	1 346	673	673	658
S.TOTAL	1 568	0	1 568	23 209	24 777	12 388	12 389	10 820
MEAN	98.0	0.0	98.0	1 451	1 549	774	774	676
TOTAL	3 721	0	3 721	28 007	31 728	15 864	15 864	12 143
MEAN	120	0.0	120	903	1 023	512	512	392

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
APRIL 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	SHARES OF NATURAL FLOW CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	15	0	15	1 304	1 319	330	989	315
2	15	0	15	1 319	1 334	334	1 000	319
3	15	0	15	1 331	1 346	336	1 010	321
4	-73	0	-73	1 265	1 192	298	894	371
5	-100	0	-100	1 270	1 170	292	878	392
6	-56	0	-56	1 277	1 221	305	916	361
7	-100	0	-100	1 218	1 118	280	838	380
8	-100	0	-100	1 214	1 114	278	836	378
9	-272	0	-272	1 206	934	234	700	506
10	-384	0	-384	1 216	832	208	624	592
11	-384	0	-384	1 221	837	209	628	593
12	-396	0	-396	1 179	783	196	587	592
13	-396	0	-396	1 123	727	182	545	578
14	-435	0	-435	1 096	661	165	496	600
15	-394	0	-394	1 108	714	178	536	572
S.TOTAL	-3 045	0	-3 045	18 347	15 302	3 825	11 477	6 870
MEAN	-203	0.0	-203	1 223	1 020	255	765	458
16	-406	0	-406	1 199	793	198	595	604
17	-377	0	-377	1 382	1 005	251	754	628
18	-113	0	-113	1 429	1 316	329	987	442
19	-83	0	-83	1 421	1 338	334	1 004	417
20	29	0	29	1 620	1 649	417	1 232	388
21	276	0	276	1 754	2 030	608	1 422	332
22	252	0	252	1 877	2 129	657	1 472	405
23	127	0	127	2 004	2 131	658	1 473	531
24	42	0	42	2 043	2 085	635	1 450	593
25	-29	0	-29	2 116	2 087	636	1 451	665
26	-42	0	-42	2 248	2 206	696	1 510	738
27	15	0	15	2 544	2 559	872	1 687	857
28	267	0	267	2 765	3 032	1 109	1 923	842
29	394	0	394	2 911	3 305	1 245	2 060	851
30	308	0	308	3 132	3 440	1 313	2 127	1 005
S.TOTAL	660	0	660	30 445	31 105	9 958	21 147	9 298
MEAN	44.0	0.0	44.0	2 030	2 074	664	1 410	620
TOTAL	-2 385	0	-2 385	48 792	46 407	13 783	32 624	16 168
MEAN	-79.5	0.0	-79.5	1 626	1 547	459	1 087	539

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
MAY 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	42	0	42	3 303	3 345	1 265	2 080	1 223
2	-125	0	-125	3 376	3 251	1 218	2 033	1 343
3	-254	0	-254	3 401	3 147	1 166	1 981	1 420
4	-225	0	-225	3 450	3 225	1 205	2 020	1 430
5	-139	37	-102	3 327	3 225	1 205	2 020	1 307
6	-86	462	376	3 107	3 483	1 334	2 149	958
7	-42	543	501	3 107	3 608	1 397	2 211	896
8	71	795	866	2 936	3 802	1 494	2 308	628
9	-365	944	579	3 034	3 613	1 399	2 214	820
10	-350	944	594	3 303	3 897	1 541	2 356	947
11	-69	1 028	959	3 523	4 482	1 834	2 648	875
12	56	1 201	1 257	3 719	4 976	2 081	2 895	824
13	208	1 275	1 483	4 257	5 740	2 463	3 277	980
14	687	1 292	1 979	4 893	6 872	3 029	3 843	1 050
15	815	1 304	2 119	5 578	7 697	3 441	4 256	1 322
S.TOTAL	224	9 825	10 049	54 314	64 363	26 072	38 291	16 023
MEAN	14.9	655	670	3 621	4 291	1 738	2 553	1 068
16	1 206	1 311	2 517	6 655	9 172	4 179	4 993	1 662
17	1 862	1 336	3 198	8 123	11 321	5 253	6 068	2 055
18	2 173	1 375	3 548	10 055	13 603	6 394	7 209	2 846
19	1 121	1 397	2 518	10 202	12 720	5 953	6 767	3 435
20	103	1 483	1 586	9 028	10 614	4 900	5 714	3 314
21	-369	1 522	1 153	8 000	9 153	4 169	4 984	3 016
22	-648	1 512	864	7 193	8 057	3 621	4 436	2 757
23	-411	1 495	1 084	6 434	7 518	3 352	4 166	2 268
24	-323	1 497	1 174	6 068	7 242	3 214	4 028	2 040
25	-323	1 517	1 194	7 438	8 632	3 909	4 723	2 715
26	88	1 478	1 566	10 618	12 184	5 685	6 499	4 119
27	426	1 473	1 899	8 734	10 633	4 909	5 724	3 010
28	279	1 468	1 747	7 951	9 698	4 442	5 256	2 695
29	250	1 463	1 713	7 658	9 371	4 278	5 093	2 565
30	590	1 470	2 060	8 000	10 060	4 623	5 437	2 563
31	1 218	1 483	2 701	9 444	12 145	5 665	6 480	2 964
S.TOTAL	7 242	23 280	30 522	131 601	162 123	74 546	87 577	44 024
MEAN	453	1 455	1 908	8 225	10 133	4 659	5 474	2 752
TOTAL	7 466	33 105	40 571	185 915	226 486	100 618	125 868	60 047
MEAN	241	1 068	1 309	5 997	7 306	3 246	4 060	1 937

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
JUNE 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW: UNITED STATES	SHARES OF NATURAL FLOW: CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	2 158	1 463	3 621	12 380	16 001	7 593	8 408	3 972
2	2 772	1 480	4 252	13 603	17 855	8 520	9 335	4 268
3	1 267	1 490	2 757	13 089	15 846	7 516	8 330	4 759
4	230	1 480	1 710	11 792	13 502	6 344	7 158	4 634
5	-32	1 475	1 443	11 034	12 477	5 831	6 646	4 388
6	577	1 465	2 042	10 692	12 734	5 960	6 774	3 918
7	680	1 463	2 143	10 006	12 149	5 667	6 482	3 524
8	267	1 456	1 723	9 297	11 020	5 103	5 917	3 380
9	186	1 448	1 634	8 783	10 417	4 801	5 616	3 167
10	267	1 443	1 710	8 294	10 004	4 595	5 409	2 885
11	355	1 429	1 784	9 224	11 008	5 097	5 911	3 313
12	1 172	1 289	2 461	12 502	14 963	7 074	7 889	4 613
13	2 329	1 277	3 606	12 722	16 328	7 757	8 571	4 151
14	2 447	1 250	3 697	11 303	15 000	7 093	7 907	3 396
15	1 935	1 243	3 178	10 251	13 429	6 307	7 122	3 129
S.TOTAL	16 610	21 151	37 761	164 972	202 733	95 258	107 475	57 497
MEAN	1 107	1 410	2 517	10 998	13 516	6 351	7 165	3 833
16	1 578	1 314	2 892	9 444	12 336	5 761	6 575	2 869
17	1 705	1 468	3 173	8 930	12 103	5 644	6 459	2 471
18	1 703	1 468	3 171	8 710	11 881	5 533	6 348	2 362
19	1 458	1 465	2 923	8 612	11 535	5 360	6 175	2 437
20	602	1 463	2 065	8 392	10 457	4 821	5 636	2 756
21	76	1 451	1 527	7 829	9 356	4 271	5 085	2 744
22	-377	1 439	1 062	7 217	8 279	3 732	4 547	2 670
23	-357	1 429	1 072	6 606	7 678	3 432	4 246	2 360
24	-188	1 456	1 268	5 921	7 189	3 187	4 002	1 919
25	188	1 439	1 627	5 162	6 789	2 987	3 802	1 360
26	526	1 412	1 938	4 379	6 317	2 751	3 566	813
27	832	1 417	2 249	3 768	6 017	2 601	3 416	352
28	795	1 473	2 268	3 401	5 669	2 427	3 242	159
29	935	1 465	2 400	3 572	5 972	2 579	3 393	179
30	1 209	1 407	2 616	3 890	6 506	2 846	3 660	230
S.TOTAL	10 685	21 566	32 251	95 833	128 084	57 932	70 152	25 681
MEAN	712	1 438	2 150	6 389	8 539	3 862	4 677	1 712
TOTAL	27 295	42 717	70 012	260 805	330 817	153 190	177 627	83 178
MEAN	910	1 424	2 334	8 694	11 027	5 106	5 921	2 773

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
JULY 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	SHARES OF NATURAL FLOW CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	1 140	1 412	2 552	3 939	6 491	2 838	3 653	286
2	1 094	1 399	2 493	3 768	6 261	2 723	3 538	230
3	969	1 392	2 361	3 596	5 957	2 571	3 386	210
4	942	1 385	2 327	3 450	5 777	2 481	3 296	154
5	954	1 382	2 336	3 401	5 737	2 461	3 276	125
6	861	1 387	2 248	3 401	5 649	2 417	3 232	169
7	1 035	1 424	2 459	3 474	5 933	2 559	3 374	100
8	900	1 497	2 397	3 499	5 896	2 541	3 355	144
9	399	1 510	1 909	4 037	5 946	2 566	3 380	657
10	230	1 522	1 752	4 600	6 352	2 769	3 583	1 017
11	-166	1 536	1 370	5 015	6 385	2 785	3 600	1 415
12	-357	1 534	1 177	4 967	6 144	2 665	3 479	1 488
13	-462	1 527	1 065	4 600	5 665	2 425	3 240	1 360
14	-418	1 517	1 099	4 012	5 111	2 148	2 963	1 049
15	-186	1 502	1 316	3 572	4 888	2 037	2 851	721
S.TOTAL	6 935	21 926	28 861	59 331	88 192	37 986	50 206	9 125
MEAN	462	1 462	1 924	3 955	5 879	2 532	3 347	608
16	-105	1 497	1 392	3 327	4 719	1 952	2 767	560
17	355	1 490	1 845	2 936	4 781	1 983	2 798	138
18	690	1 475	2 165	2 618	4 783	1 984	2 799	-181
19	546	1 468	2 014	2 398	4 412	1 799	2 613	-215
20	254	1 463	1 717	2 439	4 156	1 671	2 485	-46
21	-86	1 475	1 389	2 642	4 031	1 608	2 423	219
22	-252	1 478	1 226	2 765	3 991	1 588	2 403	362
23	-526	1 478	952	2 814	3 766	1 476	2 290	524
24	-20	1 478	1 458	2 789	4 247	1 716	2 531	258
25	-418	1 475	1 057	2 618	3 675	1 430	2 245	373
26	-210	1 473	1 263	2 442	3 705	1 445	2 260	182
27	-208	1 463	1 255	2 124	3 379	1 282	2 097	27
28	64	1 463	1 527	1 808	3 335	1 260	2 075	-267
29	-42	1 480	1 438	1 600	3 038	1 112	1 926	-326
30	-166	1 483	1 317	1 639	2 956	1 071	1 885	-246
31	-291	1 485	1 194	1 681	2 875	1 030	1 845	-164
S.TOTAL	-415	23 624	23 209	38 640	61 849	24 407	37 442	1 198
MEAN	-25.9	1 477	1 451	2 415	3 866	1 525	2 340	74.9
TOTAL	6 520	45 550	52 070	97 971	150 041	62 393	87 648	10 323
MEAN	210	1 469	1 680	3 160	4 840	2 013	2 827	333

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
AUGUST 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	SHARES OF NATURAL FLOW CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	-311	1 485	1 174	1 722	2 896	1 041	1 855	-133
2	-103	1 483	1 380	1 669	3 049	1 117	1 932	-263
3	-83	1 478	1 395	1 593	2 988	1 087	1 901	-308
4	-103	1 475	1 372	1 519	2 891	1 038	1 853	-334
5	-103	1 456	1 353	1 336	2 689	937	1 752	-416
6	267	1 453	1 720	1 194	2 914	1 050	1 864	-670
7	250	1 468	1 718	1 106	2 824	1 005	1 819	-713
8	330	1 453	1 783	1 130	2 913	1 049	1 864	-734
9	166	1 409	1 575	1 194	2 769	977	1 792	-598
10	460	1 429	1 889	1 133	3 022	1 104	1 918	-785
11	103	1 463	1 566	1 079	2 645	915	1 730	-651
12	-125	1 468	1 343	1 086	2 429	807	1 622	-536
13	-396	1 470	1 074	1 067	2 141	663	1 478	-411
14	-477	1 465	988	1 165	2 153	669	1 484	-319
15	-927	1 434	507	1 380	1 887	536	1 351	29
S.TOTAL	-1 052	21 889	20 837	19 373	40 210	13 995	26 215	-6 842
MEAN	-70.1	1 459	1 389	1 292	2 681	933	1 748	-456
16	-1 280	1 448	168	1 945	2 113	649	1 464	481
17	-922	1 451	529	2 209	2 738	962	1 776	433
18	-1 010	1 456	446	2 121	2 567	876	1 691	430
19	-959	1 453	494	1 896	2 390	788	1 602	294
20	-734	1 431	697	1 669	2 366	776	1 590	79
21	-580	1 441	861	1 659	2 520	853	1 667	-8
22	-1 074	1 448	374	1 776	2 150	668	1 482	294
23	-1 297	1 456	159	1 855	2 014	600	1 414	441
24	-1 284	1 465	181	1 945	2 126	656	1 470	475
25	-1 277	1 458	181	1 999	2 180	683	1 497	502
26	-1 248	1 451	203	1 957	2 160	673	1 487	470
27	-1 258	1 419	161	1 974	2 135	660	1 475	499
28	-1 228	1 304	76	2 065	2 141	663	1 478	587
29	-1 402	1 206	-196	2 114	1 918	552	1 366	748
30	-1 478	1 199	-279	2 043	1 764	475	1 289	754
31	-1 426	1 196	-230	1 960	1 730	458	1 272	688
S.TOTAL	-18 457	22 282	3 825	31 187	35 012	10 992	24 020	7 167
MEAN	-1 154	1 393	239	1 949	2 188	687	1 501	448
TOTAL	-19 509	44 171	24 662	50 560	75 222	24 987	50 235	325
MEAN	-629	1 425	796	1 631	2 427	806	1 620	10.5

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
SEPTEMBER 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	-1 395	1 265	-130	1 774	1 644	415	1 229	545
2	-1 272	1 370	98	1 399	1 497	374	1 123	276
3	-761	1 358	597	1 201	1 798	492	1 306	-105
4	-807	1 353	546	1 094	1 640	413	1 227	-133
5	-663	1 346	683	1 025	1 708	447	1 261	-236
6	-812	1 346	534	988	1 522	380	1 142	-154
7	-687	1 333	646	959	1 605	401	1 204	-245
8	-834	1 360	526	949	1 475	369	1 106	-157
9	-1 101	1 419	318	1 020	1 338	334	1 004	16
10	-1 360	1 429	69	1 091	1 160	290	870	221
11	-1 373	1 429	56	1 103	1 159	290	869	234
12	-1 353	1 426	73	1 079	1 152	288	864	215
13	-1 436	1 417	-19	988	969	242	727	261
14	-969	1 404	435	864	1 299	325	974	-110
15	-847	1 424	577	805	1 382	346	1 036	-231
S.TOTAL	-15 670	20 679	5 009	16 339	21 348	5 406	15 942	397
MEAN	-1 045	1 379	334	1 089	1 423	360	1 063	26.5
16	-734	1 448	714	744	1 458	364	1 094	-350
17	-790	1 456	666	741	1 407	352	1 055	-314
18	-815	1 456	641	832	1 473	368	1 105	-273
19	-724	1 470	746	922	1 668	427	1 241	-319
20	-661	1 473	812	1 030	1 842	514	1 328	-298
21	-842	1 480	638	1 116	1 754	470	1 284	-168
22	-966	1 478	512	1 150	1 662	424	1 238	-88
23	-986	1 492	506	1 147	1 653	419	1 234	-87
24	-1 370	1 483	113	1 108	1 221	305	916	192
25	-1 162	1 485	323	1 059	1 382	346	1 036	23
26	-1 067	1 485	418	1 050	1 468	367	1 101	-51
27	-949	1 443	494	1 030	1 524	381	1 143	-113
28	-1 020	1 451	431	1 025	1 456	364	1 092	-67
29	-930	1 443	513	979	1 492	373	1 119	-140
30	-1 054	1 453	399	947	1 346	336	1 010	-63
S.TOTAL	-14 070	21 996	7 926	14 880	22 806	5 810	16 996	-2 116
MEAN	-938	1 466	528	992	1 520	387	1 133	-141
TOTAL	-29 740	42 675	12 935	31 219	44 154	11 216	32 938	-1 719
MEAN	-991	1 423	431	1 041	1 472	374	1 098	-57.3

APPROVED BY FIELD REPRESENTATIVES FOR THE UNITED STATES AND CANADA

TABLE 6 (continued)

NATURAL FLOW AND WATER DIVISION OF ST. MARY RIVER AT INTERNATIONAL BOUNDARY
OCTOBER 1997
QUANTITIES IN CUBIC DECAMETRES

DAY	CHANGE IN CONTENTS OF LAKE SHERBURNE (WITH 1 DAY LAG)	DIVERTED BY ST. MARY CANAL	TOTAL USED BY UNITED STATES	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	ST.MARY RIVER NATURAL FLOW AT INTERNATIONAL BOUNDARY	SHARES OF NATURAL FLOW UNITED STATES	SHARES OF NATURAL FLOW CANADA	FLOW IN EXCESS OR DEFICIT (-) OF CANADIAN SHARE
1	-807	1 399	592	1 010	1 602	400	1 202	-192
2	-903	1 302	399	1 035	1 434	358	1 076	-41
3	-678	974	296	1 321	1 617	404	1 213	108
4	-254	462	208	1 649	1 857	521	1 336	313
5	524	242	766	1 549	2 315	750	1 565	-16
6	281	181	462	1 534	1 996	591	1 405	129
7	746	5	751	1 541	2 292	739	1 553	-12
8	766	0	766	1 492	2 258	722	1 536	-44
9	626	0	626	1 431	2 057	621	1 436	-5
10	541	0	541	1 412	1 953	569	1 384	28
11	372	0	372	1 343	1 715	450	1 265	78
12	237	0	237	1 333	1 570	392	1 178	155
13	254	0	254	1 358	1 612	403	1 209	149
14	240	0	240	1 373	1 613	403	1 210	163
15	-387	0	-387	1 429	1 042	260	782	647
S.TOTAL	1 558	4 565	6 123	20 810	26 933	7 583	19 350	1 460
MEAN	104	304	408	1 387	1 796	506	1 290	97.3
16	-453	0	-453	1 456	1 003	251	752	704
17	-198	0	-198	1 319	1 121	280	841	478
18	27	0	27	1 221	1 248	312	936	285
19	171	0	171	1 145	1 316	329	987	158
20	108	0	108	1 101	1 209	302	907	194
21	93	0	93	1 062	1 155	289	866	196
22	39	0	39	1 035	1 074	268	806	229
23	120	0	120	1 010	1 130	282	848	162
24	0	0	0	981	981	245	736	245
25	39	0	39	971	1 010	252	758	213
26	120	0	120	964	1 084	271	813	151
27	105	0	105	974	1 079	270	809	165
28	-225	0	-225	893	668	167	501	392
29	54	0	54	817	871	218	653	164
30	372	0	372	795	1 167	292	875	-80
31	215	0	215	768	983	246	737	31
S.TOTAL	587	0	587	16 512	17 099	4 274	12 825	3 687
MEAN	36.7	0.0	36.7	1 032	1 069	267	802	230
TOTAL	2 145	4 565	6 710	37 322	44 032	11 857	32 175	5 147
MEAN	69.2	147	216	1 204	1 420	382	1 038	166

NATURAL FLOW OF ST. MARY RIVER

APPROVED BY:

FOR CANADA

FOR THE UNITED STATES

TABLE 7
HISTORICAL SUMMARY OF COMPUTED NATURAL FLOW
ST. MARY RIVER AT INTERNATIONAL BOUNDARY
(cubic decametres)

Period	Computed Natural Flow		Share April through October	
	Non-Irrigation Season (Nov. through Mar.)	Irrigation Season (Apr. through Oct.)	United States	Canada
1902 -1903	71 500	1 030 000	434 000	599 000
1903 -1904	119 000	685 000	270 000	415 000
1904 -1905	48 300	570 000	212 000	357 000
1905 -1906	63 600	631 000	236 000	395 000
1906 -1907	153 000	970 000	403 000	567 000
1907 -1908	77 000	1 120 000	485 000	638 000
1908 -1909	80 500	969 000	409 000	560 000
1909 -1910	108 000	680 000	258 000	422 000
1910 -1911	120 000	803 000	319 000	484 000
1911 -1912	72 900	624 000	235 000	389 000
1912 -1913	85 900	850 000	346 000	503 000
1913 -1914	72 200	654 000	245 000	409 000
1914 -1915	104 000	654 000	243 000	411 000
1915 -1916	135 000	973 000	406 000	568 000
1916 -1917	72 600	807 000	330 000	477 000
1917 -1918	113 000	631 000	240 000	391 000
1918 -1919	61 300	477 000	176 000	301 000
1919 -1920	75 300	715 000	281 000	435 000
1920 -1921	89 000	785 000	315 000	469 000
1921 -1922	79 800	698 000	282 000	416 000
1922 -1923	58 200	719 000	283 000	436 000
1923 -1924	63 400	642 000	251 000	391 000
1924 -1925	97 000	889 000	365 000	524 000
1925 -1926	60 700	459 000	153 000	306 000
1926 -1927	92 300	1 150 000	495 000	659 000
1927 -1928	138 000	906 000	373 000	532 000
1928 -1929	81 500	527 000	200 000	327 000
1929 -1930	64 600	661 000	258 000	402 000
1930 -1931	47 900	461 000	166 000	296 000
1931 -1932	103 000	636 000	250 000	387 000
1932 -1933	83 200	793 000	322 000	471 000
1933 -1934	208 000	776 000	318 000	458 000
1934 -1935	168 000	577 000	221 000	355 000
1935 -1936	37 000	512 000	194 000	317 000
1936 -1937	42 000	618 000	247 000	371 000
1937 -1938	80 500	706 000	284 000	422 000
1938 -1939	73 200	497 000	185 000	312 000

TABLE 7 (continued)

HISTORICAL SUMMARY OF COMPUTED NATURAL FLOW
ST. MARY RIVER AT INTERNATIONAL BOUNDARY
(cubic decametres)

Period	Computed Natural Flow		Share April through October	
	Non-Irrigation Season (Nov. through Mar.)	Irrigation Season (Apr. through Oct.)	United States	Canada
1939 -1940	46 600	449 000	158 000	291 000
1940 -1941	40 500	413 000	136 000	277 000
1941 -1942	116 000	661 000	255 000	406 000
1942 -1943	78 200	834 000	343 000	490 000
1943 -1944	44 800	392 000	132 000	261 000
1944 -1945	57 300	624 000	247 000	377 000
1945 -1946	94 800	661 000	255 000	405 000
1946 -1947	107 000	771 000	303 000	468 000
1947 -1948	88 000	894 000	379 000	516 000
1948 -1949	43 700	563 000	210 000	353 000
1949 -1950	119 000	946 000	396 000	550 000
1950 -1951	174 000	1 090 000	459 000	633 000
1951 -1952	102 000	638 000	247 000	391 000
1952 -1953	77 100	971 000	415 000	556 000
1953 -1954	77 200	982 000	410 000	571 000
1954 -1955	97 800	727 000	293 000	434 000
1955 -1956	110 000	805 000	327 000	478 000
1956 -1957	73 200	673 000	273 000	400 000
1957 -1958	72 200	655 000	254 000	400 000
1958 -1959	115 000	882 000	355 000	526 000
1959 -1960	118 000	596 000	227 000	368 000
1960 -1961	72 200	699 000	276 000	423 000
1961 -1962	74 900	611 000	230 000	381 000
1962 -1963	123 000	630 000	248 000	382 000
1963 -1964	54 700	942 000	396 000	546 000
1964 -1965	83 900	828 000	334 000	494 000
1965 -1966	87 700	712 000	280 000	432 000
1966 -1967	81 500	840 000	354 000	487 000
1967 -1968	117 000	721 000	281 000	440 000
1968 -1969	97 400	670 000	262 000	408 000
1969 -1970	66 400	739 000	306 000	433 000
1970 -1971	83 100	851 000	351 000	500 000
1971 -1972	107 000	929 000	383 000	546 000
1972 -1973	67 400	502 000	189 000	313 000
1973 -1974	131 000	850 000	354 000	496 000
1974 -1975	50 000	1 020 000	437 000	587 000
1975 -1976	149 000	717 000	283 000	434 000
1976 -1977	46 900	406 000	131 000	275 000
1977 -1978	72 800	767 000	303 000	463 000
1978 -1979	75 200	612 000	240 000	371 000

TABLE 7 (continued)

HISTORICAL SUMMARY OF COMPUTED NATURAL FLOW
ST. MARY RIVER AT INTERNATIONAL BOUNDARY
(cubic decametres)

Period	Computed Natural Flow		Share April through October	
	Non-Irrigation Season (Nov. through Mar.)	Irrigation Season (Apr. through Oct.)	United States	Canada
1979 -1980	45 100	680 000	265 000	415 000
1980 -1981	134 000	675 000	271 000	404 000
1981 -1982	57 200	686 000	274 000	412 000
1982 -1983	60 000	518 000	194 000	324 000
1983 -1984	83 100	534 000	196 000	338 000
1984 -1985	50 500	671 000	255 000	416 000
1985 -1986	165 000	589 000	216 000	374 000
1986 -1987	86 600	601 000	228 000	373 000
1987 -1988	39 400	496 000	182 000	314 000
1988 -1989	80 700	775 000	308 000	467 000
1989 -1990	197 000	738 000	290 000	448 000
1990 -1991	138 000	905 000	381 000	524 000
1991 -1992	59 200	478 000	164 000	314 000
1992 -1993	75 100	630 000	235 000	395 000
1993 -1994	79 800	534 000	202 000	332 000
1994 -1995	92 400	878 000	365 000	513 000
1995 -1996	234 000	782 000	314 000	467 000
1996 -1997	94 100	917 000	378 000	539 000
Average 1903 -1996	90 100	716 000	284 000	432 000

TABLE 8

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
MARCH , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
MAR 1	-	-	-	0	0	* 415	207	207	+207
MAR 2	261	-	0	0	0	* 380	190	190	+190
MAR 3	251	-	0	0	0	* 376	188	188	+188
MAR 4	246	-	0	0	0	* 376	188	188	+188
MAR 5	275	-	0	0	0	* 393	197	197	+197
MAR 6	271	-	0	0	0	* 415	207	207	+207
MAR 7	264	-	0	0	0	* 423	212	212	+212
MAR 8	268	-	0	0	0	* 432	216	216	+216
MAR 9	274	-	0	0	0	* 415	207	207	+207
MAR 10	296	-	0	0	0	* 380	190	190	+190
MAR 11	305	-	0	0	0	* 357	178	178	+178
MAR 12	312	-	0	0	0	* 354	177	177	+177
MAR 13	297	-	0	0	0	* 363	181	181	+181
MAR 14	283	-	0	0	0	* 380	190	190	+190
MAR 15	267	-	0	0	0	* 398	199	199	+199
15-Day Tot	-	-	-	0	0	* 5857	2927	2927	+2927
MAR 16	249	-	0	0	0	* 430	215	215	+215
MAR 17	249	-	0	0	0	* 480	240	240	+240
MAR 18	253	-	0	0	0	* 581	291	291	+291
MAR 19	261	-	0	0	0	* 2359	1179	1179	+1179
MAR 20	275	-	0	0	-3	* 15638	7819	7819	+7823
MAR 21	322	-	0	0	-35	* 12960	6480	6480	+6515
MAR 22	395	-	0	0	-78	* 6083	3041	3041	+3119
MAR 23	2091	-	0	0	-69	* 3560	1780	1780	+1849
MAR 24	11379	-	0	0	-52	* 2367	1184	1184	+1236
MAR 25	6295	-	0	0	-46	* 1711	855	855	+901
MAR 26	3672	-	0	0	-31	* 1477	739	739	+770
MAR 27	1838	-	0	0	-36	* 1763	881	881	+918
MAR 28	1359	-	0	0	-25	* 1797	899	899	+924
MAR 29	992	-	0	0	-22	* 1287	644	644	+665
MAR 30	1083	-	0	0	-21	* 985	492	492	+514
MAR 31	1496	-	0	0	-15	* 890	445	445	+460
16-Day Tot	32209	-	0	0	-433	* 54368	27184	27184	+27619
MAR Totals	-	-	-	0	-433	* 60225	30111	30111	+30546

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
* NATURAL FLOW IS EQUAL TO RECORDED FLOW AT THE GAUGE (11AA031) MILK RIVER AT EASTERN CROSSING LESS RECORDED FLOW AT VERDIGRIS COULEE (11AA038).

---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
APRIL , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
APR 1	1270	-	0	0	-21	* 1404	1053	351	+372
APR 2	886	-	3	0	-18	* 1166	874	291	+309
APR 3	638	-	3	0	-20	* 1008	756	252	+272
APR 4	631	-	2	0	-11	* 887	666	222	+233
APR 5	572	-	1	0	-15	* 765	574	191	+206
APR 6	453	-	2	0	-23	* 647	485	162	+185
APR 7	376	-	2	0	-22	* 549	411	137	+159
APR 8	330	-	2	0	-20	* 543	407	136	+156
APR 9	282	-	4	0	-18	* 535	401	134	+152
APR 10	260	-	5	0	-16	* 473	355	118	+134
APR 11	251	-	5	0	-15	* 450	338	113	+127
APR 12	249	-	5	0	-13	* 428	321	107	+120
APR 13	256	-	5	0	-10	* 431	323	108	+118
APR 14	260	-	7	0	-8	* 457	343	114	+122
APR 15	266	-	10	0	-6	* 459	344	115	+121
15-Day Tot	6980	-	56	0	-236	* 10202	7651	2551	+2786
APR 16	274	-	11	0	-5	* 484	363	121	+126
APR 17	297	-	16	0	-6	* 508	381	127	+133
APR 18	311	-	9	0	-5	* 471	353	118	+123
APR 19	345	-	11	0	-6	* 603	452	151	+157
APR 20	575	-	6	0	-6	* 1186	890	297	+303
APR 21	1735	-	3	0	-5	* 1939	1378	561	+566
APR 22	1745	-	0	0	-5	* 1568	1176	392	+397
APR 23	1385	-	0	0	-13	* 1291	969	323	+336
APR 24	1023	-	3	0	-7	* 1254	941	314	+321
APR 25	1068	-	3	0	-4	* 1309	982	327	+331
APR 26	989	-	5	0	-3	* 1275	957	319	+322
APR 27	930	-	2	0	-4	* 1189	891	297	+301
APR 28	772	-	4	0	-3	* 964	723	241	+244
APR 29	645	-	3	0	-3	* 870	652	217	+220
APR 30	635	-	3	0	-4	* 832	624	208	+212
15-Day Tot	12729	-	79	0	-79	* 15743	11732	4013	+4092
APR Totals	19709	-	135	0	-315	* 25945	19383	6564	+6878

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
* NATURAL FLOW IS EQUAL TO RECORDED FLOW AT THE GAUGE (11AA031) MILK RIVER AT EASTERN CROSSING LESS RECORDED FLOW AT VERDIGRIS COULEE (11AA038).

---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
MAY , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
MAY 1	734	-	1	0	-3	* 913	684	228	+231
MAY 2	936	-	0	0	-3	* 1163	872	291	+294
MAY 3	1091	-	3	0	-3	* 1232	924	308	+311
MAY 4	861	-	5	0	-3	* 1051	788	263	+266
MAY 5	778	-	4	0	-3	* 991	743	248	+251
MAY 6	772	-	4	0	-6	* 927	696	232	+238
MAY 7	726	-	1	0	-6	* 867	650	217	+223
MAY 8	692	-	2	0	-4	* 822	617	206	+210
MAY 9	714	-	3	0	-8	* 807	605	202	+210
MAY 10	716	-	2	0	-6	* 820	615	205	+212
MAY 11	746	-	7	0	-6	* 866	650	217	+223
MAY 12	846	79	30	0	-12	942	707	236	+248
MAY 13	736	151	30	0	-8	908	681	227	+235
MAY 14	668	187	37	0	-9	882	662	221	+230
MAY 15	731	92	52	0	-11	864	648	216	+228
15-Day Tot	11747	-	181	0	-91	14055	10542	3517	+3610
MAY 16	690	91	56	100	53	990	742	247	+195
MAY 17	646	224	48	100	51	1069	801	267	+216
MAY 18	698	270	26	100	45	1140	855	285	+240
MAY 19	691	269	66	100	46	1172	879	293	+247
MAY 20	651	302	91	100	42	1186	890	297	+255
MAY 21	666	235	51	100	51	1104	828	276	+225
MAY 22	683	252	16	100	52	1103	827	276	+223
MAY 23	742	110	13	100	42	1007	756	252	+210
MAY 24	698	121	17	100	44	980	735	245	+201
MAY 25	585	677	101	100	44	1507	1130	377	+333
MAY 26	537	665	20	100	41	1364	1023	341	+300
MAY 27	494	421	33	100	37	1085	814	271	+235
MAY 28	492	3432	118	100	31	4173	2495	1678	+1647
MAY 29	1039	3459	160	100	32	4790	2803	1986	+1954
MAY 30	3397	-1063	130	100	31	2595	1706	889	+858
MAY 31	4986	-3396	6	100	30	1727	1272	455	+425
16-Day Tot	17695	6069	952	1600	672	26992	18556	8435	+7764
MAY Totals	29442	-	1133	1600	581	41047	29098	11952	+11374

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
* NATURAL FLOW IS EQUAL TO RECORDED FLOW AT THE GAUGE (11AA031) MILK RIVER AT EASTERN CROSSING LESS RECORDED FLOW AT VERDIGRIS COULEE (11AA038).

---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
JUNE , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
JUN 1	2360	-1339	139	100	32	1292	969	323	+291
JUN 2	1266	-527	77	100	31	948	711	237	+206
JUN 3	924	-388	97	100	31	764	573	191	+160
JUN 4	770	-230	90	100	31	761	571	190	+159
JUN 5	708	-41	57	100	33	857	643	214	+182
JUN 6	674	61	166	100	37	1038	779	260	+223
JUN 7	619	79	68	100	33	900	675	225	+192
JUN 8	567	228	53	100	31	980	735	245	+214
JUN 9	614	291	72	100	31	1108	831	277	+246
JUN 10	711	276	24	100	30	1142	857	286	+256
JUN 11	674	251	36	100	30	1091	818	273	+243
JUN 12	622	209	51	100	30	1013	760	253	+223
JUN 13	515	365	48	100	30	1059	794	265	+235
JUN 14	457	499	92	100	30	1178	884	295	+265
JUN 15	513	615	100	100	23	1353	1014	338	+315
15-Day Tot	11994	349	1170	1500	463	15484	11614	3872	+3410
JUN 16	853	492	115	15	-12	1462	1097	366	+378
JUN 17	1336	-104	87	15	-12	1322	992	331	+343
JUN 18	1154	-216	82	15	-10	1024	768	256	+266
JUN 19	787	-97	66	15	-9	762	571	190	+199
JUN 20	607	-16	62	15	-8	659	494	165	+173
JUN 21	503	28	49	15	-8	586	440	147	+154
JUN 22	452	17	63	15	-7	541	406	135	+142
JUN 23	417	16	87	15	-5	529	397	132	+137
JUN 24	382	100	58	15	-4	551	414	138	+141
JUN 25	361	86	73	15	-2	534	400	133	+135
JUN 26	360	44	122	15	-1	540	405	135	+136
JUN 27	344	52	91	15	-2	500	375	125	+127
JUN 28	342	54	78	15	3	492	369	123	+120
JUN 29	344	99	81	15	4	543	408	136	+132
JUN 30	349	168	8	15	5	544	408	136	+131
15-Day Tot	8591	723	1122	225	-68	10589	7944	2648	+2714
JUN Totals	20585	1072	2292	1725	395	26073	19558	6520	+6124

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
JULY , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
JUL 1	323	226	24	27	21	621	466	155	+134
JUL 2	295	280	43	27	18	663	497	166	+147
JUL 3	312	148	49	27	23	559	419	140	+117
JUL 4	353	143	45	27	25	594	446	149	+123
JUL 5	475	123	65	27	27	717	538	179	+152
JUL 6	545	195	85	27	29	880	660	220	+191
JUL 7	556	110	66	27	30	789	592	197	+167
JUL 8	459	41	68	27	32	626	469	156	+125
JUL 9	384	-34	51	27	33	461	346	115	+82
JUL 10	324	-29	79	27	35	437	327	109	+74
JUL 11	294	-59	89	27	35	386	290	97	+61
JUL 12	272	-97	80	27	36	318	239	80	+43
JUL 13	255	-236	90	27	37	174	130	43	+6
JUL 14	246	-296	96	27	38	112	84	28	-10
JUL 15	229	-307	115	27	39	103	77	26	-13
15-Day Tot	5322	208	1045	405	458	7440	5580	1860	+1399
JUL 16	217	-278	104	27	39	109	82	27	-12
JUL 17	209	-287	42	27	39	30	22	7	-32
JUL 18	201	-279	94	27	40	83	62	21	-19
JUL 19	191	-252	111	27	40	117	88	29	-11
JUL 20	181	-225	73	27	41	97	73	24	-16
JUL 21	173	-217	82	27	41	106	80	27	-15
JUL 22	174	-189	138	27	41	191	143	48	+6
JUL 23	175	-201	106	27	42	148	111	37	-4
JUL 24	179	-292	98	27	42	54	41	14	-28
JUL 25	183	-294	63	27	42	22	16	5	-37
JUL 26	194	-298	90	27	42	55	41	14	-29
JUL 27	185	-257	109	27	42	106	80	27	-16
JUL 28	161	-251	112	27	43	92	69	23	-20
JUL 29	147	-236	83	27	43	63	47	16	-27
JUL 30	145	-266	117	27	43	65	49	16	-27
JUL 31	139	-286	106	27	43	29	21	7	-36
16-Day Tot	2854	-4108	1528	432	663	1367	1025	342	-323
JUL Totals	8176	-3900	2573	837	1121	8807	6605	2202	+1076

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
AUGUST , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
AUG 1	134	-318	87	22	35	0	0	0	-35
AUG 2	130	-288	89	22	35	0	0	0	-35
AUG 3	134	-325	110	22	35	0	0	0	-35
AUG 4	125	-318	131	22	35	0	0	0	-35
AUG 5	126	-310	121	22	35	0	0	0	-35
AUG 6	127	-294	103	22	36	0	0	0	-36
AUG 7	121	-323	108	22	36	0	0	0	-36
AUG 8	115	-291	30	22	36	0	0	0	-36
AUG 9	110	-286	48	22	36	0	0	0	-36
AUG 10	100	-216	65	22	36	7	5	2	-34
AUG 11	94	-140	88	22	34	98	73	24	-10
AUG 12	107	-163	89	22	34	89	67	22	-12
AUG 13	113	-193	81	22	35	59	44	15	-20
AUG 14	139	-198	75	22	35	74	55	18	-17
AUG 15	200	-149	9	22	35	117	88	29	-6
15-Day Tot	1875	-3812	1234	330	528	444	332	110	-418
AUG 16	176	-64	44	22	35	212	159	53	+18
AUG 17	156	-53	78	22	33	236	177	59	+26
AUG 18	136	-53	57	22	32	194	145	48	+17
AUG 19	132	-28	65	22	33	223	167	56	+22
AUG 20	164	-32	96	22	34	284	213	71	+37
AUG 21	160	-79	83	22	33	219	164	55	+21
AUG 22	273	-176	118	22	33	270	203	68	+34
AUG 23	235	-199	93	22	33	185	138	46	+13
AUG 24	191	-208	39	22	33	76	57	19	-14
AUG 25	169	-213	64	22	33	75	56	19	-15
AUG 26	152	-172	101	22	33	136	102	34	+0
AUG 27	135	-103	86	22	33	172	129	43	+10
AUG 28	130	-119	66	22	34	132	99	33	-1
AUG 29	128	-132	45	22	34	97	73	24	-10
AUG 30	127	-170	67	22	34	79	59	20	-14
AUG 31	147	-193	87	22	34	96	72	24	-10
16-Day Tot	2611	-1994	1189	352	534	2686	2013	672	+134
AUG Totals	4486	-5806	2423	682	1062	3130	2345	782	-284

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.

---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
SEPTEMBER, 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
SEP 1	122	-220	129	15	22	67	50	17	-5
SEP 2	105	-238	95	15	22	0	0	0	-22
SEP 3	96	-254	68	15	22	0	0	0	-22
SEP 4	90	-274	98	15	23	0	0	0	-23
SEP 5	86	-236	49	15	23	0	0	0	-23
SEP 6	84	-182	64	15	23	4	3	1	-22
SEP 7	84	-173	90	15	22	37	28	9	-13
SEP 8	83	-155	54	15	23	19	14	5	-18
SEP 9	80	-137	85	15	23	66	50	17	-7
SEP 10	83	-138	57	15	23	40	30	10	-13
SEP 11	87	-159	75	15	24	41	31	10	-13
SEP 12	87	-185	45	15	24	0	0	0	-24
SEP 13	87	-170	64	15	24	19	15	5	-19
SEP 14	88	-154	78	15	24	51	38	13	-11
SEP 15	85	-148	53	15	24	29	21	7	-17
15-Day Tot	1347	-2823	1104	225	346	373	280	94	-252
SEP 16	81	-101	70	0	0	50	38	13	+13
SEP 17	75	-63	22	0	0	34	26	9	+9
SEP 18	76	-97	19	0	0	0	0	0	+0
SEP 19	80	-140	44	0	0	0	0	0	+0
SEP 20	79	-108	55	0	0	25	19	6	+7
SEP 21	81	-101	61	0	-1	40	30	10	+11
SEP 22	89	-115	62	0	-1	35	26	9	+9
SEP 23	95	-139	77	0	0	34	25	8	+8
SEP 24	98	-104	72	0	0	65	49	16	+16
SEP 25	96	-111	78	0	0	63	47	16	+16
SEP 26	95	-119	96	0	0	72	54	18	+18
SEP 27	92	-110	97	0	0	79	59	20	+20
SEP 28	91	-143	136	0	0	83	62	21	+21
SEP 29	83	-158	73	0	0	0	0	0	+0
SEP 30	81	-182	98	0	-3	0	0	0	+3
15-Day Tot	1292	-1791	1060	0	-5	580	435	146	+151
SEP Totals	2639	-4614	2164	225	341	953	715	240	-101

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
---------- APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES ----------

TABLE 8 (continued)

SUMMARY OF DAILY
NET CHANGE, NATURAL FLOW, EVAPORATIVE AND NET CONSUMPTIVE USES OF
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
OCTOBER , 1997

1 Date at East X-ing	2 Natural Flow at West X-ing (C9,T2)	3 Net East-West Change (C10,T2)	4 Incmntl. Evapo-trans. Loss (C8,T4)	Total Consumptive Use 5 U.S. (C3,T3)	Total Consumptive Use 6 Canada (C8,T3)	7 Natural Flow at East X-ing (2+3+4 +5+6)	Share 8 U.S.	Share 9 Canada	10 Excess(+)/ Deficit(-) Delivery U.S. (9-6)
OCT 1	78	-152	62	0	-2	0	0	0	+2
OCT 2	75	-167	91	0	-1	0	0	0	+1
OCT 3	75	-89	58	0	0	44	33	11	+11
OCT 4	73	-27	73	0	0	119	89	30	+30
OCT 5	72	95	51	0	0	218	164	55	+55
OCT 6	73	224	33	0	0	330	248	83	+83
OCT 7	74	326	18	0	0	419	314	105	+105
OCT 8	75	455	21	0	0	550	413	138	+138
OCT 9	78	493	16	0	0	588	441	147	+147
OCT 10	82	223	14	0	0	318	239	80	+80
OCT 11	89	227	4	0	0	320	240	80	+80
OCT 12	102	266	0	0	-1	367	275	92	+92
OCT 13	106	251	9	0	0	366	275	92	+92
OCT 14	108	207	5	0	0	320	240	80	+80
OCT 15	109	176	4	0	0	289	216	72	+72
15-Day Tot	1269	2508	459	0	-4	4248	3187	1065	+1068
OCT 16	112	160	12	0	0	283	212	71	+71
OCT 17	112	149	7	0	0	268	201	67	+67
OCT 18	110	-	3	0	0	* 254	190	63	+64
OCT 19	111	-	1	0	0	* 238	178	59	+59
OCT 20	114	-	2	0	0	* 232	174	58	+58
OCT 21	114	-	2	0	0	* 232	174	58	+58
OCT 22	121	-	1	0	0	* 213	159	53	+53
OCT 23	117	-	1	0	0	* 211	158	53	+53
OCT 24	119	-	1	0	0	* 206	154	51	+51
OCT 25	121	-	1	0	0	* 196	147	49	+49
OCT 26	122	-	1	0	0	* 196	147	49	+49
OCT 27	121	-	2	0	0	* 191	143	48	+48
OCT 28	120	-	1	0	0	* 183	137	46	+46
OCT 29	121	-	2	0	0	* 174	130	43	+43
OCT 30	121	-	1	0	0	* 167	125	42	+42
OCT 31	126	-	1	0	0	* 159	119	40	+40
16-Day Tot	1882	-	39	0	0	* 3403	2548	850	+851
OCT Totals	3151	-	498	0	-4	* 7651	5735	1915	+1919

(i) ALL FIGURES ARE IN CUBIC DECAMETRES.
(ii) FOUR DAY LAG PERIOD IS APPLIED BETWEEN WEST AND EAST TO DETERMINE NATURAL FLOW AT EASTERN CROSSING.
* NATURAL FLOW IS EQUAL TO RECORDED FLOW AT THE GAUGE (11AA031) MILK RIVER AT EASTERN CROSSING LESS RECORDED FLOW AT VERDIGRIS COULEE (11AA038).

APPROVED BY: _____ FOR CANADA _____ FOR THE UNITED STATES

TABLE 9
HISTORICAL SUMMARY OF MARCH THROUGH OCTOBER COMPUTED NATURAL FLOW
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY

(cubic decametres)

YEAR	COMPUTED NATURAL FLOW	UNITED STATES SHARE	CANADIAN SHARE	YEAR	COMPUTED NATURAL FLOW	UNITED STATES SHARE	CANADIAN SHARE
				1941	31 200	21 500	9 730
1912	141 000	93 500	47 100	1942	105 000	75 900	29 600
1913	155 000	110 000	46 300	1943	143 000	98 600	44 900
1914	85 100	59 500	25 700	1944	28 000	20 000	8 010
1915	173 000	121 000	50 800	1945	53 800	36 100	17 600
1916	280 000	187 000	92 000	1946	51 400	35 000	16 400
1917	270 000	174 000	96 000	1947	204 000	128 000	75 000
1918	79 700	55 600	24 100	1948	254 000	168 000	86 000
1919	33 800	24 100	9 700	1949	69 900	49 700	20 200
1920	212 000	136 000	77 000	1950	149 000	106 000	42 900
1921	70 200	50 300	19 900	1951	343 000	226 000	116 000
1922	108 000	76 500	31 100	1952	249 000	154 000	94 700
1923	101 000	72 700	28 900	1953	317 000	200 000	117 000
1924	89 200	63 300	25 900	1954	181 000	127 000	54 600
1925	149 000	101 000	48 200	1955	197 000	133 000	63 500
1926	30 200	21 200	9 020	1956	139 000	97 300	41 600
1927	449 000	281 000	168 000	1957	130 000	88 400	40 800
1928	273 000	178 000	95 300	1958	139 000	89 700	49 600
1929	184 000	123 000	60 600	1959	159 000	105 000	54 500
1930	131 000	87 900	43 000	1960	121 000	76 400	45 000
1931	36 800	25 000	11 700	1961	46 700	32 800	14 100
1932	94 400	64 800	29 600	1962	72 200	48 500	23 700
1933	117 000	80 500	36 600	1963	34 300	23 700	10 600
1934	117 000	79 600	37 100	1964	154 000	104 000	49 700
1935	97 600	64 600	32 900	1965	284 000	181 000	103 000
1936	79 900	50 200	29 700	1966	147 000	98 600	48 000
1937	112 000	78 900	32 700	1967	310 000	194 000	116 000
1938	133 000	89 700	43 500	1968	139 000	96 600	42 700
1939	50 100	33 600	16 500	1969	236 000	147 000	88 900
1940	69 700	46 400	23 300	1970	121 000	84 700	36 500

The totals of the United States and Canadian shares may not agree with the computed natural flow as all figures have been rounded for this summary. The table is a direct conversion from English to metric units. Totals prior to 1985 may not concur in some cases.

TABLE 9 (continued)

HISTORICAL SUMMARY OF MARCH THROUGH OCTOBER COMPUTED NATURAL FLOW
MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY

(cubic decametres)

YEAR	COMPUTED NATURAL FLOW	UNITED STATES SHARE	CANADIAN SHARE	YEAR	COMPUTED NATURAL FLOW	UNITED STATES SHARE	CANADIAN SHARE
1971	128 000	91 300	36 600	1986	88 100	58 800	29 200
1972	228 000	148 000	80 300	1987	58 300	40 900	17 400
1973	44 500	29 600	14 900	1988	35 900	25 000	10 900
1974	117 000	82 200	34 500	1989	*117 000	78 500	38 300
1975	324 000	206 000	118 000	1990	121 000	82 200	38 700
1976	118 000	80 300	37 400	1991	148 000	105 000	42 800
1977	37 100	25 800	11 400	1992	38 900	26 900	12 000
1978	274 000	174 000	101 000	1993	160 000	110 000	50 800
1979	248 000	153 000	95 600	1994	188 000	115 000	72 600
1980	99 400	69 500	29 900	1995	229 000	155 000	74 100
1981	113 000	79 200	34 200	1996	200 000	125 000	75 500
1982	164 000	109 000	55 100				
1983	46 600	32 600	13 900	1997	174 000	114 000	60 300
1984	26 500	17 500	9 100	Average 1912-1996	141 000	93 400	47 100
1985	58 800	41 700	*17 100				

* Revised

The totals of the United States and Canadian shares may not agree with the computed natural flow as all figures have been rounded for this summary. The table is a direct conversion from English to SI units. Totals prior to 1985 may not concur in some cases.

TABLE 10

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY
1997

	1	2	3	4	5	6	7	8	9
Period Upper Lodge Area	Michel Reservoir Depletion	Greasewood Reservoir Depletion	Massy Reservoir Depletion	Total Depletion Upper Lodge Reservoirs	Channel Loss To Inter-National Boundary	Net Depletion Upper Lodge	Bare Creek Reservoir Depletion	Channel Loss To Inter-National Boundary	Net Depletion Bare Creek
	Observed	Observed	Observed	1 + 2 + 3	Computed	4 - 5	Observed	Computed	7 - 8
Feb 26-Mar 11	2	0	- 1	1	1	0	- 5	- 5	0
Mar 12 - 27	103	105	136	344	131	213	378	133	245
Mar 28-Apr 11	- 5	0	91	86	86	0	221	120	101
Apr 12 - 26	8	5	4	17	17	0	13	13	0
Apr 27-May 11	6	5	1	12	12	0	- 21	- 21	0
May 12 - 27	11	3	14	28	28	0	28	28	0
May 28-Jun 11	12	5	1	18	18	0	11	11	0
Jun 12 - 26	7	- 39	- 98	- 130	- 115	- 15	8	8	0
Jun 27-Jul 11	3	- 47	69	25	25	0	- 5	- 5	0
Jul 12 - 27	7	1	- 66	- 58	- 58	0	- 369	- 178	- 191
Jul 28-Aug 11	4	1	- 46	- 41	- 41	0	6	6	0
Aug 12 - 27	2	1	- 5	- 2	- 2	0	- 254	- 150	- 104
Aug 28-Sep 11	4	1	- 3	2	2	0	1	1	0
Sep 12 - 26	1	1	0	2	2	0	- 4	- 4	0
Sep 27-Oct 11	1	1	0	2	2	0	- 5	- 5	0
Oct 12 - 27	- 8	2	- 2	- 8	- 8	0	- 6	- 6	0
Total	158	45	96	299	100	198	- 3	- 54	51

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 10 (continued)

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY

1997

Period Cressday and Mitchell Reservoir Area	10 Cressday Reservoir Depletion Observed	11 Channel Loss To Inter-National Boundary Computed	12 Net Depletion Cressday 10 - 11	13 Mitchell Reservoir Depletion Observed	14 Channel Loss To Inter-National Boundary Computed	15 Net Depletion Mitchell 13 - 14	Period Jaydot Reservoir Area	16 Jaydot Reservoir Depletion Observed	17 Channel Loss To Inter-National Boundary Computed	18 Net Depletion Jaydot 16 - 17
Feb 27-Mar 12	- 24	- 24	0	7	7	0	Feb 27-Mar 13	- 2	- 2	0
Mar 13 - 28	383	91	292	999	116	883	Mar 14 - 29	- 1	- 1	0
Mar 29-Apr 12	- 128	- 77	- 51	- 38	- 38	0	Mar 30-Apr 13	185	41	144
Apr 13 - 27	29	29	0	- 270	- 86	- 184	Apr 14 - 28	0	0	0
Apr 28-May 12	- 44	- 44	0	- 5	- 5	0	Apr 29-May 13	- 7	- 7	0
May 13 - 28	205	91	114	51	51	0	May 14 - 29	102	42	60
May 29-Jun 12	- 82	- 75	- 7	11	11	0	May 30-Jun 13	- 19	- 19	0
Jun 13 - 27	5	5	0	- 90	- 76	- 14	Jun 14 - 28	8	8	0
Jun 28-Jul 12	- 11	- 11	0	- 78	- 75	- 3	Jun 29-Jul 13	- 6	- 6	0
Jul 13 - 28	19	19	0	- 3	- 3	0	Jul 14 - 29	- 1	- 1	0
Jul 29-Aug 12	- 28	- 28	0	- 8	- 8	0	Jul 30-Aug 13	0	0	0
Aug 13 - 28	26	26	0	2	2	0	Aug 14 - 29	- 3	- 3	0
Aug 29-Sep 12	- 20	- 20	0	7	7	0	Aug 30-Sep 13	4	4	0
Sep 13 - 27	- 6	- 6	0	- 9	- 9	0	Sep 14 - 28	- 1	- 1	0
Sep 28-Oct 12	- 14	- 14	0	- 15	- 15	0	Sep 29-Oct 13	- 5	- 5	0
Oct 13 - 28	8	8	0	- 14	- 14	0	Oct 14 - 29	- 5	- 5	0
Total	318	- 30	348	547	- 135	682	Total	249	45	204

All values are derived from data as published in Appendix B

All quantities in cubic decametres

TABLE 10 (continued)

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period Middle Creek Reservoir Area	19 Middle Creek Reservoir Inflow	20 Bedford Outlet	21 Flood Spillway	22 Irrigation Return Middle Creek Below Middle Creek Reservoir	23 Gross Depletion	24 Channel Loss To Inter-National Boundary	25 Net Depletion Middle Creek
	Observed	Observed	Observed	Observed	19-20-21-22	Computed	23 - 24
Feb 27-Mar 12	10	0	0	0	10	10	0
Mar 13 - 28	4 540	0	27	233	4 280	247	4 033
Mar 29-Apr 12	1 009	0	1 423	138	- 552	- 103	- 449
Apr 13 - 27	513	0	424	26	63	63	0
Apr 28-May 12	67	0	32	0	35	35	0
May 13 - 28	121	0	0	482	- 361	- 107	- 254
May 29-Jun 12	69	0	0	139	- 70	- 70	0
Jun 13 - 27	25	0	0	0	25	25	0
Jun 28-Jul 12	18	0	0	0	18	18	0
Jul 13 - 28	33	0	0	7	26	26	0
Jul 29-Aug 12	17	0	0	35	- 18	- 18	0
Aug 13 - 28	13	0	0	0	13	13	0
Aug 29-Sep 12	6	0	0	0	6	6	0
Sep 13 - 27	9	0	0	0	9	9	0
Sep 28-Oct 12	8	0	0	0	8	8	0
Oct 13 - 28	11	0	0	0	11	11	0
Total	6 469	0	1 906	1 060	3 503	173	3 330

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 10 (continued)

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY

1997

	26	27		28	29	30	31	32
Period Middle Creek Near Govenlock	Middle Creek Near Govenlock	Channel Loss To Middle Creek Above Lodge Creek	Period To Middle Creek Above Lodge Creek	Apparent Flow At Middle Creek Above Lodge Creek	Measured Flow At Middle Creek Above Lodge Creek	Water Use Stokke - Buchanan Projects	Channel Loss To Inter-National Boundary	Net Depletion Stokke - Buchanan
	Observed	Computed		26 - 27	Observed	28 - 29	Computed	30 - 31
Feb 28-Mar 13	0	0	Feb 29-Mar 14	0	0	0	0	0
Mar 14 - 29	3 808	57	Mar 15 - 30	3 751	5 288	-1 537	- 35	-1 503
Mar 30-Apr 13	564	29	Mar 31-Apr 14	535	541	- 6	- 6	0
Apr 14 - 28	107	20	Apr 15 - 29	87	86	1	1	0
Apr 29-May 13	48	19	Apr 30-May 14	29	7	22	19	3
May 14 - 29	408	31	May 15 - 30	377	61	316	29	287
May 30-Jun 13	239	27	May 31-Jun 14	212	491	- 279	- 29	- 250
Jun 14 - 28	41	19	Jun 15 - 29	22	77	- 55	- 20	- 35
Jun 29-Jul 13	7	7	Jun 30-Jul 14	0	17	- 17	- 17	0
Jul 14 - 29	4	4	Jul 15 - 30	0	1	- 1	- 1	0
Jul 30-Aug 13	1	1	Jul 31-Aug 14	0	7	- 7	- 7	0
Aug 14 - 29	0	0	Aug 15 - 30	0	0	0	0	0
Aug 30-Sep 13	0	0	Aug 31-Sep 14	0	0	0	0	0
Sep 14 - 28	0	0	Sep 15 - 29	0	0	0	0	0
Sep 29-Oct 13	1	1	Sep 30-Oct 14	0	0	0	0	0
Oct 14 - 29	40	20	Oct 15 - 30	20	0	20	20	0
Total	5 268	235	Total	5 033	6 576	-1 543	- 45	-1 498

All values are derived from data as published in Appendix B

All quantities in cubic decametres

TABLE 10 (continued)

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period	33	34	35	36	37	38	39
Altawan Reservoir Area	Altawan Reservoir Depletion	Spangler Ditch	Return Flow From Spangler Ditch Squaw Coulee	Return Flow From Bedford -Walburger Coulee	Gross Depletion	Channel Loss To Inter-National Boundary	Net Depletion Altawan
	Observed	Observed	Observed	Observed	33+34-35-36	Computed	37 - 38
Feb 28-Mar 13	7	0	0	0	7	7	0
Mar 14 - 29	3 598	0	0	0	3 598	110	3 488
Mar 30-Apr 13	- 890	544	1	0	- 347	- 46	- 301
Apr 14 - 28	274	155	108	0	321	45	276
Apr 29-May 13	10	0	94	0	- 84	- 39	- 45
May 14 - 29	171	979	4	0	1 146	94	1 052
May 30-Jun 13	17	213	0	0	230	52	178
Jun 14 - 28	- 14	0	0	0	- 14	- 14	0
Jun 29-Jul 13	12	0	8	0	4	4	0
Jul 14 - 29	- 759	747	0	0	- 12	- 12	0
Jul 30-Aug 13	- 590	593	0	0	3	3	0
Aug 14 - 29	23	0	0	0	23	23	0
Aug 30-Sep 13	- 37	0	0	0	- 37	- 36	- 1
Sep 14 - 28	- 11	0	0	0	- 11	- 11	0
Sep 29-Oct 13	- 17	0	0	0	- 17	- 17	0
Oct 14 - 29	- 32	0	0	0	- 32	- 32	0
Total	1 762	3 231	215	0	4 778	131	4 647

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 10 (continued)

NATURAL FLOW OF LODGE CREEK AT THE INTERNATIONAL BOUNDARY
1997

	40	41	42	43	44	45	46
Period At Inter-National Boundary	Net Depletion In Canada 6+9+12+15+18 +25+32+39	Minor Irrigation Diversions Reported	Lodge Creek At Inter-National Boundary Observed	Natural Flow Of Lodge Creek 40+41+42	U.S.A. Share Of Natural Flow 50% of 43	Excess Flow To U.S.A. 42 - 44	Deficit(-) To Date Sum of 45
Mar 1 - 15	0	0	2	2	1	1	0
Mar 16 - 31	7 652	3 159	28 400	39 211	19 606	8 794	0
Apr 1 - 15	- 557	638	2 116	2 197	1 099	1 017	0
Apr 16 - 30	92	262	1 075	1 429	714	361	0
May 1 - 15	- 42	24	413	395	197	216	0
May 16 - 31	1 259	17	677	1 953	976	- 299	- 299
Jun 1 - 15	- 79	0	686	607	303	383	0
Jun 16 - 30	- 64	0	116	52	26	90	0
Jul 1 - 15	- 3	0	18	15	7	11	0
Jul 16 - 31	- 191	0	1	0	0	1	0
Aug 1 - 15	0	0	0	0	0	0	0
Aug 16 - 31	- 104	0	0	0	0	0	0
Sep 1 - 15	- 1	0	0	0	0	0	0
Sep 16 - 30	0	0	0	0	0	0	0
Oct 1 - 15	0	0	0	0	0	0	0
Oct 16 - 31	0	0	0	0	0	0	0
Total	7 962	4100	33 504	45 861	22 929	10 575	0

All values are derived from data as published in Appendix B
All quantities in cubic decametres

Approved by: _____ For Canada _____ For the United States

TABLE 11

HISTORICAL SUMMARY OF MARCH THROUGH OCTOBER COMPUTED NATURAL AND RECORDED FLOW
LODGE CREEK AT INTERNATIONAL BOUNDARY

(cubic decametres)

YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW	YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW
1950	17 900	8 950	16 600	1980	2 140	1 070	712
1951	63 000	31 500	50 200	1981	1 260	630	407
1952	161 000	80 500	147 000	1982	38 800	19 400	22 400
1953	38 200	19 100	27 200	1983	4 660	2 330	2 480
1954	13 000	6 500	7 620	1984	937	469	600
1955	97 100	48 550	75 400	1985	21 300	10 650	9 960
1956	21 200	10 600	15 700	1986	93 900	46 950	75 100
1957	32 800	16 400	24 500	1987	31 300	15 650	20 700
1958	48 200	24 100	42 100	1988	2 990	1 495	1 370
1959	21 200	10 600	14 300	1989	4 160	2 080	1 920
1960	39 600	19 800	29 500	1990	29 800	14 900	16 000
1961	2 210	1 105	1 020	1991	13 900	6 950	7 670
1962	25 600	12 800	18 900	1992	398	199	0
1963	14 300	7 150	7 500	1993	46 200	23 100	26 700
1964	9 790	4 895	5 130	1994	28 200	14 100	18 200
1965	95 400	47 700	68 100	1995	3 760	1 880	2 360
1966	44 200	22 100	30 200	1996	68 400	34 200	53 400
1967	90 400	45 200	73 300	1997	45 900	22 950	33 500
1968	4 910	2 455	2 650	Average 1950-1996	32 800	16 400	23 500
1969	36 900	18 450	20 900				
1970	29 100	14 550	16 100				
1971	26 300	13 150	13 100				
1972	27 400	13 700	13 600				
1973	2 080	1 040	1 070				
1974	27 000	13 500	14 500				
1975	48 000	24 000	34 500				
1976	29 500	14 750	22 300				
1977	1 230	615	888				
1978	37 200	18 600	22 400				
1979	47 000	23 500	30 400				

TABLE 12

NATURAL FLOW OF BATTLE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period Reesor Lake Area	1 Reesor Lake Depletion	2 Channel Loss To International Boundary	3 Net Depletion Upper Battle Creek	Period Gaff Ditch Area	4 Gaff Ditch	5 Return Flow	6 Gross Depletion Gaff Ditch	7 Channel Loss To International Boundary	8 Net Depletion Gaff Ditch
	Observed	Computed	1 - 2		Measured	Computed	4 - 5	Computed	6 - 7
Feb 24-Mar 19	- 17	- 17	0	Feb 26-Mar 21	0	0	0	0	0
Mar 20-Apr 3	- 7	- 7	0	Mar 22-Apr5	0	0	0	0	0
Apr 4 - 18	19	19	0	Apr 6 - 20	163	57	106	106	0
Apr 19-May 3	36	36	0	Apr 21-May 5	740	259	481	146	335
May 4 - 19	71	71	0	May 6 - 21	740	259	481	156	325
May 20-Jun 3	46	46	0	May 22-Jun 5	247	86	161	146	15
Jun 4 - 18	49	49	0	Jun 6 - 20	417	146	271	146	125
Jun 19-Jul 3	27	27	0	Jun 21-Jul 5	8	0	8	8	0
Jul 4 -19	26	26	0	Jul 6 - 21	3	0	3	3	0
Jul 20-Aug 3	19	19	0	Jul 22-Aug 5	2	0	2	2	0
Aug 4 - 19	40	40	0	Aug 6 - 21	5	0	5	5	0
Aug 20-Sep 3	15	15	0	Aug 22-Sep 5	6	0	6	6	0
Sep 4 - 18	13	13	0	Sep 6 - 20	1	0	1	1	0
Sep 19-Oct 3	12	12	0	Sep 21-Oct 5	0	0	0	0	0
Oct 4-Oct 19	- 14	- 14	0	Oct 6 - 21	0	0	0	0	0
Oct 20 - 25	- 5	- 5	0	Oct 22-27	0	0	0	0	0
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Total	330	330	0	Total	2 332	807	1 525	726	800

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 12 (continued)

NATURAL FLOW OF BATTLE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period Cypress Lake Area	9 West Inflow Canal	10 West Outflow Canal	11 West Inflow Canal Drain	12 Total Release From Cypress Lake	13 Net Diversion To Cypress Lake	14 Vidora Ditch	15 Return Flow	16 Gross Depletion Cypress Lake	17 Channel Loss To Inter-National Boundary	18 Net Depletion Cypress Lake
	Measured	Measured	Measured	10 + 11	9 - 12	Measured	Computed	13+14-15	Computed	16 - 17
Feb 27-Mar 22	3 499	27	0	27	3 472	0		3 472	184	3 289
Mar 23-Apr 6	8 224	428	1	429	7 795	0		7 795	110	7 685
Apr 7- 21	1 013	0	1	1	1 012	0		1 012	110	902
Apr 22-May 6	626	141	0	141	485	0		485	110	375
May 7 - 22	175	1 128	0	1 128	- 953	435		- 518	- 117	- 401
May 23-Jun 6	1 024	4 620	1	4 621	-3 597	1 820	498	-2 275	- 110	-2 165
Jun 7 -21	218	12	1	13	205	3	67	141	110	31
Jun 22-Jul 6	163	8	2	10	153	0		153	110	43
Jul 7 - 22	53	87	0	87	- 34	0		- 34	- 34	0
Jul 23-Aug 6	40	0	0	0	40	0		40	40	0
Aug 7 - 22	25	0	0	0	25	0		25	25	0
Aug 23-Sep 6	4	0	0	0	4	0		4	4	0
Sep 7 - 21	113	0	0	0	113	0		113	110	3
Sep 22-Oct 6	11	0	0	0	11	0		11	11	0
Oct 7 - 22	0	0	0	0	0	0		0	0	0
Oct 23 - 28	2	0	0	0	2	0		2	2	0
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Total	15 190	6 451	6	6 457	8 733	2 258	565	10 426	665	9 762

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 12 (continued)

NATURAL FLOW OF BATTLE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period Consul Area	19 Richardson Ditch	20 McKinnon Ditch	21 Return Flow	22 Gross Depletion At Consul	23 Channel Loss To International Boundary	24 Net Depletion At Consul
	Measured	Measured	Computed	19+20-21	Computed	22 - 23
Feb 28-Mar 23	0	0		0	0	0
Mar 24-Apr 7	0	0		0	0	0
Apr 8 - 22	0	0		0	0	0
Apr 23-May 7	0	0		0	0	0
May 8 - 23	411	155	29	537	79	458
May 24-Jun 7	1 160	1 166	694	1 632	74	1 558
Jun 8 - 22	0	0		0	0	0
Jun 23-Jul 7	0	0		0	0	0
Jul 8 - 23	0	0		0	0	0
Jul 24-Aug 7	0	0		0	0	0
Aug 8 - 23	0	0		0	0	0
Aug 24-Sep 7	0	0		0	0	0
Sep 8 - 22	0	0		0	0	0
Sep 23-Oct 7	0	0		0	0	0
Oct 8 - 23	0	0		0	0	0
Oct 24-29	0	0		0	0	0
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Total	1 571	1 321	723	2 169	153	2 016

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 12 (continued)

NATURAL FLOW OF BATTLE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period Nashlyn Area	25 Nashlyn Canal	26 Return Flow	27 Gross Depletion At Nashlyn	28 Channel Loss To International Boundary	29 Net Depletion At Nashlyn
	Measured	Computed	25 - 26	Computed	27 - 28
Feb 29-Mar 24	49	0	49	49	0
Mar 25-Apr 8	1 533	323	1 210	36	1 174
Apr 9 - 23	932	292	640	36	604
Apr 24-May 8	37	22	15	15	0
May 9 - 24	0	0	0	0	0
May 25-Jun 8	669	166	503	36	467
Jun 9 - 23	7	3	4	4	0
Jun 24-Jul 8	0	0	0	0	0
Jul 9 - 24	0	0	0	0	0
Jul 25-Aug 8	0	0	0	0	0
Aug 9 - 24	0	0	0	0	0
Aug 25-Sep 8	0	0	0	0	0
Sep 9 - 23	13	0	13	13	0
Sep 24-Oct 8	0	0	0	0	0
Oct 9 - 24	0	0	0	0	0
Oct 25 - 30	0	0	0	0	0
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Total	3 240	806	2 434	190	2 245

* Release From Nashlyn Reservoir in June 24 to July 8 period.

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 12 (continued)

NATURAL FLOW OF BATTLE CREEK AT THE INTERNATIONAL BOUNDARY
1997

Period At International Boundary	30 Net Depletion In Canada	31 Battle Creek At International Boundary	32 Apparent Natural Flow Of Battle Creek	33 Adjustment For Minor Diversions & Dom. Use	34 Natural Flow Of Battle Creek	35 U.S.A. Share Of Natural Flow	36 Excess Flow To The U.S.A.	37 Deficit(-) To Date
	3+8+18+24+29	Measured	30 + 31	Reported	32 + 33	50% of 34	31 - 35	Sum of 36
Mar 1 - 25	3 289	3 825	7 114	362	7 476	3 738	87	0
Mar 26-Apr 9	8 859	27 505	36 364	2 023	38 387	19 194	8 311	0
Apr 10 - 24	1 506	4 327	5 833	1 185	7 018	3 509	818	0
Apr 25-May 9	710	2 129	2 839	40	2 879	1 440	689	0
May 10 - 25	382	941	1 323	515	1 838	919	22	0
May 26-Jun 9	- 125	2 770	2 645	450	3 095	1 548	1 222	0
Jun 10 - 24	156	638	794	12	806	403	235	0
Jun 25-Jul 9	43	498	541	0	541	271	227	0
Jul 10 - 25	0	387	387	0	387	194	193	0
Jul 26-Aug 9	0	36	36	0	36	18	18	0
Aug 10 - 25	0	46	46	0	46	23	23	0
Aug 26-Sep 9	0	91	91	0	91	46	45	0
Sep 10 - 24	3	10	13	0	13	7	3	0
Sep 25-Oct 9	0	4	4	0	4	2	2	0
Oct 10 - 25	0	228	228	0	228	114	114	0
Oct 26 - 31	0	146	146	0	146	73	73	0
Total	14 823	43 581	58 404	4 587	62 991	31 499	12 082	0

Approved by : _____ For Canada

All values are derived from data as published in Appendix B
All quantities in cubic decametres

_____ For the United States

TABLE 13

HISTORICAL SUMMARY OF MARCH THROUGH OCTOBER COMPUTED NATURAL AND RECORDED FLOW
BATTLE CREEK AT INTERNATIONAL BOUNDARY
(cubic decametres)

YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW	YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW
1940	45 000	22 500	32 100	1970	38 300	19 150	22 600
1941	31 300	15 650	20 900	1971	23 800	11 900	15 400
1942	27 500	13 750	13 500	1972	27 500	13 750	17 200
1943	40 700	20 350	28 000	1973	11 800	5 900	6 170
1944	13 000	6 500	9 460	1974	23 700	11 850	15 200
1945	11 000	5 500	9 970	1975	54 500	27 250	32 400
1946	12 800	6 400	8 590	1976	34 500	17 250	21 200
1947	13 900	6 950	8 540	1977	5 850	2 925	3 330
1948	23 100	11 550	9 670	1978	28 500	14 250	16 700
1949	1 650	825	2 160	1979	47 500	23 750	27 600
1950	23 800	11 900	12 700	1980	9 960	4 980	5 860
1951	35 900	17 950	20 400	1981	8 900	4 450	5 610
1952	138 000	69 000	128 000	1982	36 100	18 050	21 900
1953	46 600	23 300	34 800	1983	17 700	8 850	9 660
1954	40 900	20 450	31 500	1984	5 490	2 745	2 820
1955	111 000	55 500	118 000	1985	20 800	10 400	10 500
1956	31 600	15 800	24 900	1986	75 200	37 600	49 500
1957	33 900	16 950	23 000	1987	36 400	18 200	18 500
1958	34 300	17 150	25 000	1988	9 940	4 970	4 650
1959	22 400	11 200	14 700	1989	8 590	4 295	5 090
1960	34 500	17 250	19 400	1990	19 400	9 700	10 700
1961	6 970	3 485	5 500	1991	*18 800	9 400	9 930
1962	9 090	4 545	6 010	**1992	7 490	3 745	4 820
1963	9 920	4 960	5 800	**1993	34 500	17 250	17 800
1964	13 100	6 550	6 670	**1994	34 400	17 200	18 300
1965	67 400	33 700	34 000	1995	17 700	8 850	9 310
1966	45 900	22 950	24 900	1996	79 400	39 700	38 100
1967	80 500	40 250	67 700	1997	63 000	31 500	43 600
1968	20 100	10 050	12 800	Average 1940-1996	31 500	15 800	21 100
1969	35 500	17 750	21 600				

* Revised

** For comparison purposes totals for Mar. 1 to Oct. 31 are used. Additional periods are not included.

TABLE 14

NATURAL FLOW OF FRENCHMAN RIVER AT THE INTERNATIONAL BOUNDARY
1997

	1	2	3	4	5		6	7	8	9	10	11
Period For Cypress Lake Area	Belanger Creek Diversion	Cypress Lake East Outflow Canal	Gross Depletion At Cypress Lake	Channel Loss To Inter - National Boundary	Net Depletion At Cypress Lake	Period For Eastend Area	Eastend Reservoir Depletion	Eastend Canal	Return Flow	Gross Depletion At Eastend	Channel Loss At Inter - National Boundary	Net Depletion At Eastend
	Measured	Measured	1 - 2	Computed	3 - 4		Observed	Measured	Computed	6+7-8	Computed	9-10
Feb 21-Mar 6	0	24	- 24	- 24	0	Feb 23-Mar 8	- 2	0	0	- 2	- 2	0
Mar 7 - 22	3 034	153	2 881	553	2328	Mar 9 - 24	653	0	0	653	242	411
Mar 23-Apr 6	4 013	706	3 307	653	2654	Mar 25-Apr 8	833	0	0	833	262	571
Apr 7 - 21	741	278	463	264	199	Apr 9 - 23	511	0	0	511	233	278
Apr 22-May 6	540	527	13	13	0	Apr 24-May 8	188	0	0	188	185	3
May 7 - 22	191	125	66	66	0	May 9 - 24	- 751	2 074	519	804	349	455
May 23-Jun 6	645	292	353	268	85	May 25-Jun 8	511	1 361	340	1 532	589	943
Jun 7 -21	372	137	235	227	8	Jun 9 -23	109	1	0	110	110	0
Jun 22-Jul 6	112	156	- 44	- 44	0	Jun 24-Jul 8	403	0	0	403	272	131
Jul 7 - 22	0	31	- 31	- 31	0	Jul 9 - 24	- 488	753	188	77	77	0
Jul 23-Aug 6	0	3	- 3	- 3	0	Jul 25-Aug 8	-1 469	1 821	455	- 103	- 103	0
Aug 7 - 22	0	6	- 6	- 6	0	Aug 9 - 24	199	0	0	199	198	1
Aug 23-Sep 6	0	5	- 5	- 5	0	Aug 25-Sep 8	- 2	0	0	- 2	- 2	0
Sep 7 - 21	0	14	- 14	- 14	0	Sep 9 - 23	41	0	0	41	41	0
Sep 22-Oct 6	0	26	- 26	- 26	0	Sep 24-Oct 8	50	0	0	50	50	0
Oct 7 - 22	11	48	- 37	- 37	0	Oct 9 - 24	32	0	0	32	32	0
Oct 24-Nov7		0	0	0	0	Oct 25-Nov 8	- 42	0	0	- 42	- 42	0
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Total	9 659	2 531	7 128	1 854	5274	Total	818	6 010	1 502	5 326	2 533	2 793

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 14 (continued)

NATURAL FLOW OF FRENCHMAN RIVER AT THE INTERNATIONAL BOUNDARY
1997

Period For Val Marie Area	12 Huff Lake Net Depletion	13 Newton Lake Net Depletion	14 Total Change In Reservoir Contents	15 Huff Lake Gravity Canal	16 Huff Lake Pumping Canal	17 Newton Lake Main Canal	18 Total Canal Diversion	19 Return flow	20 Gross Depletion At Val Marie	21 Channel Loss To Boundary	22 Net Depletion At Val Marie
	Observed	Observed	12+13	Measured	Measured	Measured	15+16+17	Computed	14+18-19	Computed	20-21
Feb 27-Mar 12	471	20	491	0	0	0	0	0	491	90	401
Mar 13 - 28	2 984	1 496	4 480	0	0	0	0	0	4 480	255	4 225
Mar 29-Apr 12	126	3 056	3 182	0	0	0	0	0	3 182	260	2 922
Apr 13 - 27	88	99	187	0	0	0	0	0	187	81	106
Apr 28-May 12	- 150	211	61	0	31	0	31	8	84	75	9
May 13 - 28	-1 287	-2 118	-3 405	1 044	947	3 405	5 396	1 349	642	135	507
May 29-Jun 12	1 674	1 233	2 907	341	47	416	804	201	3 510	624	2 886
Jun 13 - 27	95	- 356	- 261	0	0	0	0	0	- 261	- 104	- 157
Jun 28-Jul 12	289	331	620	0	0	0	0	0	620	161	459
Jul 13 - 28	-1 427	-3 387	-4 814	706	651	3 632	4 989	1 247	-1 072	- 238	- 834
Jul 29-Aug 12	-1 507	109	-1 398	1 129	670	861	2 660	665	597	158	439
Aug 13 - 28	347	105	452	10	78	0	88	22	518	149	369
Aug 29-Sep 12	196	- 52	144	0	0	0	0	0	144	81	63
Sep 13 - 27	117	- 102	15	0	0	0	0	0	15	15	0
Sep 28-Oct 12	219	- 81	138	0	0	0	0	0	138	78	60
Oct 13 - 28	223	- 64	159	0	0	0	0	0	159	84	75
Oct 29-Nov 12	183	- 421	- 238	0	0	0	0	0	- 238	- 84	- 154
	---	---	---	---	---	---	---	---	---	---	---
Total	2 458	500	2 958	3 230	2 424	8 314	13 968	3 492	13 434	1 903	11 531

All values are derived from data as published in Appendix B
All quantities in cubic decametres

TABLE 14 (continued)

NATURAL FLOW OF FRENCHMAN RIVER AT THE INTERNATIONAL BOUNDARY
1997

Period At Inter - National Boundary	23 Net Depletion In Canada	24 Frenchman River At Inter - National Boundary	25 Apparent Natural Flow Of Frenchman River	26 Adjustment For Minor Diversions And Domestic Use	27 Natural Flow Of Frenchman River	28 U.S.A. Share Of Natural Flow	29 Excess Flow To The U.S.A.	30 Deficit(-) To Date
	5+11+22	Measured	23+24	Reported	25+26	50% of 27	24-28	Sum Of 29
Mar 1 - 15	401	92	493	30	523	261	- 169	- 169
Mar 16 - 31	6 964	112 861	119 825	1 459	121 284	60 642	52 219	0
Apr 1 - 15	6 147	29 771	35 918	1 128	37 046	18 523	11 248	0
Apr 16 - 30	583	9 810	10 393	328	10 721	5 360	4 450	0
May 1 - 15	12	3 023	3 035	481	3 516	1 758	1 265	0
May 16 - 31	962	2 053	3 015	1 072	4 087	2 044	9	0
Jun 1 - 15	3 914	4 609	8 523	497	9 020	4 510	99	0
Jun 16 - 30	- 150	2 114	1 964	220	2 184	1 092	1 022	0
Jul 1 - 15	590	232	822	33	855	427	- 195	- 195
Jul 16 - 31	- 834	1 397	563	268	831	415	982	0
Aug 1 - 15	439	538	977	129	1 106	553	- 15	- 15
Aug 16 - 31	370	53	423	0	423	212	- 159	- 174
Sep 1 - 15	63	10	73	0	73	37	- 27	- 201
Sep 16 - 30	0	5	5	0	5	3	2	- 199
Oct 1 - 15	60	4	64	0	64	32	- 28	- 227
Oct 16 - 31	75	165	240	0	240	120	45	- 182
Total	19 598	166 737	186 335	5 645	191 980	95 989	70 748	- 182

Approved by: _____ For Canada

_____ For the United States

All values are derived from data as published in Appendix B

All quantities in cubic decametres

TABLE 15

HISTORICAL SUMMARY OF MARCH TO OCTOBER COMPUTED NATURAL AND RECORDED FLOW
FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
(cubic decametres)

YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW	YEAR	COMPUTED NATURAL FLOW	CANADIAN & U.S.A. SHARES	RECORDED FLOW
1940	101 000	50 500	84 100	1970	133 000	66 500	102 000
1941	71 100	35 550	57 600	1971	57 100	28 550	39 400
1942	72 200	36 100	52 200	1972	45 900	22 950	25 000
1943	165 000	82 500	147 000	1973	27 500	13 750	14 700
1944	69 600	34 800	50 600	1974	104 000	52 000	75 600
1945	42 600	21 300	28 400	1975	92 000	46 000	60 700
1946	39 800	19 900	26 500	1976	90 700	45 350	74 000
1947	65 100	32 550	43 200	1977	12 700	6 350	8 260
1948	49 000	24 500	31 000	1978	67 900	33 950	41 300
1949	17 700	8 850	8 010	1979	108 000	54 000	77 400
1950	93 300	46 650	73 600	1980	33 400	16 700	17 800
1951	137 000	68 500	111 000	1981	18 100	9 050	8 300
1952	445 000	222 500	434 000	1982	115 000	57 500	82 500
1953	92 400	46 200	72 000	1983	44 200	22 100	23 000
1954	110 000	55 000	92 500	1984	11 900	5 950	5 640
1955	230 000	115 000	210 000	1985	42 500	21 250	22 200
1956	59 700	29 850	42 000	1986	107 000	53 500	74 100
1957	48 000	24 000	32 700	1987	79 600	39 800	59 500
1958	79 400	39 700	64 300	1988	13 500	6 750	6 050
1959	64 000	32 000	41 200	1989	22 800	11 400	12 000
1960	93 000	46 500	75 400	1990	34 400	17 200	19 900
1961	23 100	11 550	11 500	1991	101 000	50 500	72 100
1962	78 100	39 050	48 200	1992	11 100	5 550	5 980
1963	57 700	28 850	41 800	1993	77 300	38 650	49 200
1964	25 100	12 550	13 300	1994	97 900	48 950	76 400
1965	132 000	66 000	95 100	1995	25 100	12 550	12 300
1966	91 200	45 600	66 500	1996	169 000	84 500	134 000
1967	131 000	65 500	108 000	1997	192 000	96 000	167 000
1968	49 700	24 850	27 100	Average 1940-1996	80 200	40 100	60 700
1969	97 900	48 950	71 500				

APPENDIX B

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International Gauging Stations

Joint Review and Approval of Records

Pursuant to Article V of the International Joint Commission Order of October 4, 1921, the International Gauging Stations listed below have been operated and maintained by the Monitoring and Operations Branch and the United States Geological Survey on a joint basis.

It is hereby certified that the annexed records have been computed in accordance with standard procedures of each country and jointly reviewed and approved on this 10th day of February, 1998.

St. Mary River at International Boundary	05AE027
Lake Sherburne at Sherburne, Montana	05AE036
St. Mary Canal at St. Mary Crossing	05AE029
Milk River at Eastern Crossing of International Boundary	11AA031
Milk River at Western Crossing of International Boundary	11AA025
North Fork Milk River near Browning, Montana	11AA032
North Milk River near International Boundary	11AA001
Milk River at Milk River, Alberta	11AA005
Verdigris Coulee near the Mouth	11AA038

R Boals

Field Representative for Canada

Robert E. Lamm

Field Representative for the United States

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

ST MARY RIVER AT INTERNATIONAL BOUNDARY

05020500 05AE027

DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1997
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	e5.95	e4.25	e3.68	15.1	38.2	143	45.6	19.9	20.5	11.7	8.83	7.25
2	e5.95	e4.25	e3.68	15.3	39.1	157	43.6	19.3	16.2	12.0	8.92	6.97
3	e5.95	e3.96	e3.96	15.4	39.4	151	41.6	18.4	13.9	15.3	9.12	e6.51
4	e5.66	e3.96	e3.96	14.6	39.9	136	39.9	17.6	12.7	19.1	9.23	e6.23
5	e5.38	e3.68	e3.96	14.7	38.5	128	39.4	15.5	11.9	17.9	9.26	e5.95
6	e5.38	e3.68	e3.96	14.8	36.0	124	39.4	13.8	11.4	17.8	9.29	e5.38
7	e5.66	e3.68	e3.68	14.1	36.0	116	40.2	12.8	11.1	17.8	9.12	e5.10
8	e5.66	e3.68	e3.68	14.0	34.0	108	40.5	13.1	11.0	17.3	9.12	e4.81
9	e5.66	e3.40	e3.68	14.0	35.1	102	46.7	13.8	11.8	16.6	9.09	e4.53
10	e5.10	e3.40	e3.40	14.1	38.2	96.0	53.2	13.1	12.6	16.3	9.00	e4.25
11	e5.10	e3.40	e3.40	14.1	40.8	107	58.0	12.5	12.8	15.5	8.98	e4.53
12	e5.10	e3.40	e3.40	13.6	43.0	145	57.5	12.6	12.5	15.4	9.03	e4.53
13	e5.10	e3.11	e3.68	13.0	49.3	147	53.2	12.3	11.4	15.7	e8.78	e4.25
14	e5.10	e3.11	e3.68	12.7	56.6	131	46.4	13.5	10.0	15.9	e8.78	e3.96
15	e4.81	e3.11	e3.68	12.8	64.6	119	41.3	16.0	9.32	16.5	e8.64	e3.68
16	e4.81	e3.96	e3.68	13.9	77.0	109	38.5	22.5	8.61	16.8	e8.50	e3.68
17	e4.81	e4.81	e3.96	16.0	94.0	103	34.0	25.6	8.58	15.3	e8.50	e3.96
18	e4.81	e5.10	e4.25	16.5	116	101	30.3	24.6	9.63	14.1	e8.35	e3.68
19	e4.53	e4.81	e7.08	16.5	118	99.7	27.8	21.9	10.7	13.3	8.30	e3.68
20	e4.53	e4.53	e28.3	18.7	104	97.1	28.2	19.4	11.9	12.7	8.30	e3.68
21	e4.53	e4.25	e42.5	20.3	92.6	90.6	30.6	19.2	12.9	12.3	8.30	e3.68
22	e4.25	e3.96	e31.1	21.7	83.3	83.5	32.0	20.6	13.3	12.0	8.18	e3.54
23	e4.25	e3.96	e22.7	23.2	74.5	76.5	32.6	21.5	13.3	11.7	8.04	e3.40
24	e4.25	e3.68	20.0	23.6	70.2	68.5	32.3	22.5	12.8	11.4	8.10	e3.40
25	e3.96	e3.68	12.1	24.5	86.1	59.7	30.3	23.1	12.3	11.2	8.01	e3.11
26	e3.96	e3.68	14.6	26.0	123	50.7	28.3	22.7	12.1	11.2	7.70	e2.83
27	e3.96	e3.96	15.7	29.4	101	43.6	24.6	22.9	11.9	11.3	7.70	e2.55
28	e3.96	e3.96	15.9	32.0	92.0	39.4	20.9	23.9	11.9	10.4	7.59	e2.27
29	e3.96	---	15.7	33.7	88.6	41.3	18.5	24.5	11.3	9.46	7.67	e2.12
30	e3.96	---	15.6	36.2	92.6	45.0	19.0	23.6	11.0	9.20	7.42	e1.98
31	e4.25	---	15.4	---	109	---	19.5	22.7	---	8.89	---	e1.98
TOTAL	150.34	108.41	324.05	564.5	2150.6	3018.6	1133.9	585.4	361.34	432.05	255.85	127.47
MEAN	4.85	3.87	10.5	18.8	69.4	101	36.6	18.9	12.0	13.9	8.53	4.11
MAX	5.95	5.10	42.5	36.2	123	157	58.0	25.6	20.5	19.1	9.29	7.25
MIN	3.96	3.11	3.40	12.7	34.0	39.4	18.5	12.3	8.58	8.89	7.42	1.98

FOR THE YEAR 1997:
TOTAL DISCHARGE: 796 000 DAM3.
MAX INST DISCHARGE: 160 M3/S ON JUNE 2 AT 2230 HRS (G.H. 2.527M).
MIN DAILY DISCHARGE: 1.98 M3/S DEC. 30,31.

e--ESTIMATED.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY- WRD

05015500 LAKE SHERBURNE AT SHERBURNE, MONTANA 05AE036

Monthend gage heights and contents at 2400 hours

Date	Gage height (metres)	Contents (cubic decametres)	Change in contents
Sept. 30, 1996	14.591	21 040	
Oct. 31, 1996	15.469	24 390	+ 3 350
Nov. 30, 1996	15.526	28 630	+ 4 240
Dec. 31, 1996	17.474	32 640	+ 4 010
--	--	--	--
		1996 calendar year	- 4 400
Jan. 31, 1997	18.285	36 220	+ 3 580
Feb. 28, 1997	18.812	38 600	+ 2 380
Mar. 31, 1997	19.602	42 270	+ 3 670
Apr. 30, 1997	19.096	39 910	- 2 360
May 31, 1997	21.092	49 490	+ 9 580
June 30, 1997	25.634	75 770	+26 280
July 31, 1997	26.405	80 830	+ 5 060
Aug. 31, 1997	23.073	60 240	-20 590
Sept. 30, 1997	17.111	31 080	-29 160
--	--	--	--
		1997 water year	-10 040
Oct. 31, 1997	17.867	34 360	+ 3 280
Nov. 30, 1997	17.639	33 360	- 1 000
Dec. 31, 1997	18.075	35 280	+ 1 920
--	--	--	--
		1997 calendar year	+ 2 640

Maximum contents:83 380 DAM3 at 1000 hrs on July 10 (gage height 26.777m).
Minimum contents:29 150 DAM3 at 0200 hrs on Oct 04 (gage height 16.651m).

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

WATER SURVEY OF CANADA ST. MARY CANAL AT ST. MARY CROSSING STATION NO. 05AE029

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	16.9	16.3	17.2	14.6	16.2	0		1
2			0	0	0	17.1	16.2	17.2	15.9	15.1	0		2
3			0	0	0	17.2	16.1	17.1	15.7	11.3	0		3
4			0	0	0	17.1	16.0	17.1	15.7	5.35	0		4
5			0	0	.411	17.1	16.0	16.8	15.6	2.81			5
6			0	0	5.35	17.0	16.1	16.8	15.6	2.10			6
7			0	0	6.29	16.9	16.5	17.0	15.4	.057 A			7
8			0	0	9.20	16.8	17.3	16.8	15.7	0			8
9			0	0	10.9	16.8	17.5	16.3	16.4	0			9
10			0	0	10.9	16.7	17.6	16.5	16.5	0			10
11			0	0	11.9	16.5	17.8	16.9	16.5	0			11
12			0	0	13.9	14.9	17.8	17.0	16.5	0			12
13			0	0	14.8	14.8	17.7	17.0	16.4	0			13
14			0	0	15.0	14.5	17.6	17.0	16.3	0			14
15			0	0	15.1	14.4	17.4	16.6	16.5	0			15
16			0	0	15.2	15.2	17.3	16.8	16.8	0			16
17			0	0	15.5	17.0	17.2	16.8	16.8	0			17
18			0	0	15.9	17.0	17.1	16.8	16.8	0			18
19			0	0	16.2	17.0	17.0	16.8	17.0	0			19
20			0	0	17.2	16.9	16.9	16.6	17.0	0			20
21			0	0	17.6	16.8	17.1	16.7	17.1	0			21
22			0	0	17.5	16.7	17.1	16.8	17.1	0			22
23			0	0	17.3	16.5	17.1	16.8	17.3	0			23
24			0	0	17.3	16.8	17.1	17.0	17.2	0			24
25			0	0	17.6	16.7	17.1	16.9	17.2	0			25
26			0	0	17.1	16.3	17.0	16.8	17.2	0			26
27			0	0	17.0	16.4	16.9	16.4	16.7	0			27
28			0	0	17.0	17.0	16.9	15.1	16.8	0			28
29			0	0	16.9	17.0	17.1	14.0	16.7	0			29
30			0	0	17.0	16.3	17.2	13.9	16.8	0			30
31			0		17.2		17.2	13.8		0			31
TOTAL			0	0	383.251	494.3	527.2	511.3	493.8	52.917			TOTAL
MEAN			0	0	12.4	16.5	17.0	16.5	16.5	1.71			MEAN
DAM3			0	0	33100	42700	45600	44200	42700	4570			DAM3
MAX			0	0	17.6	17.2	17.8	17.2	17.3	16.2			MAX
MIN			0	0	0	14.4	16.0	13.8	14.6	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT

MEAN DISCHARGE,10.1 M3/S

TOTAL DISCHARGE, 213000 DAM3

MAXIMUM DAILY DISCHARGE,17.8 M3/S ON JUL 11

MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE,

A-MANUAL GAUGE

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY

06135000 11AA031

DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1997
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	e6.23	16.5	e10.6	31.7	22.2	15.0	14.8	15.6	---	---
2	---	---	e5.66	13.7	13.5	27.9	22.9	15.6	13.3	15.5	---	---
3	---	---	e5.10	e11.9	14.3	25.4	22.3	15.2	12.3	16.2	---	---
4	---	---	e4.81	e10.4	12.2	25.5	22.5	15.2	11.9	17.0	---	---
5	---	---	e4.81	e9.03	11.5	26.9	23.4	15.4	12.3	18.1	---	---
6	---	---	e4.96	e7.76	10.8	27.4	24.9	15.6	14.0	18.4	---	---
7	---	---	e5.10	e6.60	10.1	27.0	23.9	15.1	14.7	17.8	---	---
8	---	---	e5.24	e6.51	9.57	28.3	21.7	15.3	14.8	15.0	---	---
9	---	---	e5.10	e6.40	9.43	29.7	19.9	15.2	14.9	11.0	---	---
10	---	---	e4.81	e5.66	9.57	30.3	19.4	15.7	14.9	e6.46	---	---
11	---	---	e4.53	e5.38	10.1	29.4	18.7	16.5	14.6	5.97	---	---
12	---	---	e4.25	e5.10	16.1	28.3	18.8	16.8	14.2	5.49	---	---
13	---	---	e4.39	e5.10	18.3	28.6	17.5	15.9	14.9	4.90	---	---
14	---	---	e4.39	e5.38	19.2	29.4	16.8	15.6	15.4	4.25	---	---
15	---	---	e4.53	e5.38	19.3	31.7	16.6	17.1	15.5	3.74	---	---
16	---	---	e4.81	e5.66	20.2	33.1	16.9	18.0	16.1	3.37	---	---
17	---	---	e5.10	e5.95	22.7	30.9	16.7	17.8	16.4	3.11	---	---
18	---	---	e5.66	e6.51	24.8	26.6	16.7	17.6	16.0	2.94	---	---
19	---	---	e7.08	e7.05	25.1	23.6	16.8	17.6	15.6	e2.75	---	---
20	---	---	e28.3	e13.8	25.4	22.1	17.1	18.2	16.1	e2.69	---	---
21	---	---	e99.1	22.5	25.0	22.6	17.1	17.6	16.3	e2.69	---	---
22	---	---	e255	18.2	26.3	23.0	17.2	17.9	16.3	e2.46	---	---
23	---	---	e153	15.1	25.9	22.5	17.0	17.2	16.3	e2.44	---	---
24	---	---	e77.3	14.6	26.1	22.9	15.9	16.5	16.7	e2.38	---	---
25	---	---	e39.6	15.2	32.3	22.3	15.9	16.2	16.7	e2.27	---	---
26	---	---	e31.1	14.8	32.0	21.7	16.0	16.5	16.6	e2.27	---	---
27	---	---	24.9	13.8	28.9	21.2	16.3	17.0	16.7	e2.21	---	---
28	---	---	21.6	e11.2	64.3	21.2	16.2	17.0	16.2	e2.12	---	---
29	---	---	23.1	e10.1	74.2	21.8	16.2	16.8	16.1	e2.01	---	---
30	---	---	23.6	e9.68	53.0	22.1	15.8	16.3	16.0	e1.93	---	---
31	---	---	19.1	---	38.8	---	15.6	16.2	---	e1.84	---	---
TOTAL	---	---	892.26	304.95	739.57	785.1	574.9	509.6	456.6	214.89	---	---
MEAN	---	---	28.8	10.2	23.9	26.2	18.5	16.4	15.2	6.93	---	---
MAX	---	---	255	22.5	74.2	33.1	24.9	18.2	16.7	18.4	---	---
MIN	---	---	4.25	5.10	9.43	21.2	15.6	15.0	11.9	1.84	---	---

FOR THE SEASON, MARCH TO OCTOBER:
TOTAL DISCHARGE: 386 900 DAM3.
MAX INST DISCHARGE: 283 M3/S ON MAR 22 AT 0700 HRS (G.H. 3.462M BACKWATER FROM ICE JAM)
MIN DAILY DISCHARGE: 1.84 M3/S ON OCT 31.

e--ESTIMATED.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

WATER SURVEY OF CANADA MILK RIVER AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY STATION NO. 11AA025

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			2.70 B	5.49	7.91	7.17	4.68	.892	.432	.301	.845		1
2			2.65 B	4.33	7.86	6.89	5.54	.901	.405	.312	.908		2
3			2.60 B	3.50 B	7.38	6.29	5.73	.836	.402	.322	1.00		3
4			2.65 B	3.00 B	6.96	5.66	4.63	.769	.397	.329	.855 A		4
5			2.75 B	2.50 B	7.24	6.03	3.79	.709	.388	.341			5
6			2.95 B	2.30 B	7.24	7.30	3.13	.596	.394	.382			6
7			3.05 B	2.20 B	7.58	6.90	2.78	.517	.445	.467			7
8			3.10 B	2.12 B	8.80	6.38	2.52	.589	.437	.580			8
9			2.90 B	2.20 B	7.55	5.17	2.33	.629	.464	.631			9
10			2.80 B	2.30 B	6.74	4.52	2.23	.987	.481	.650			10
11			2.70 B	2.45 B	7.53	4.98	2.05	1.72	.418	.667			11
12			2.60 B	2.60 B	7.05	8.71	1.92	1.44	.366	.696			12
13			2.60 B	2.81	6.51	14.5	1.82	1.21	.328	.702			13
14			2.65 B	2.89 A	7.17	12.5	1.73	1.01	.319	.703			14
15			2.75 B	3.14	7.09	8.32	1.62	.929	.326	.723			15
16			2.90 B	4.82	6.60	6.29	1.50	.968	.351	.755			16
17			3.30 B	9.88 A	6.78	5.08	1.41	1.12	.367	.753			17
18			4.00 B	17.4	6.88	4.50	1.39	2.54	.435	.772			18
19			10.0 B	14.5	7.63	4.12	1.43	2.10	.504	.763			19
20			109 B	10.4	7.20	3.74	1.48	1.61	.507	.777			20
21			67.2 A	11.0	5.86	3.50	1.50	1.36	.484	.811			21
22			40.8 A	10.2	5.40	3.39	1.65	1.19	.482	.821			22
23			20.0 E	9.57	4.93	3.30	1.58	.993	.468	.805			23
24			14.6 A	7.83	4.68	3.28	1.30	.879	.453	.798			24
25			10.4	6.37	8.17	3.25	1.13	.825	.427	.802			25
26		3.02 B	11.4	6.22	34.7	3.36	1.08	.872	.402	.810			26
27		2.90 B	15.9	7.22	55.7	3.09	1.01	1.13	.365	.861			27
28		2.85 B	13.0	9.58	25.7	2.76	.980	.841	.333	.847			28
29			8.83	11.5	13.4	2.79	.934	.654	.325	.881			29
30			6.26	8.87	9.59	3.24	.958	.543	.311	.885			30
31			6.03		7.86		.877	.475		.856			31
TOTAL			385.07	189.19	321.69	167.01	66.709	31.834	12.216	20.803			TOTAL
MEAN			12.4	6.31	10.4	5.57	2.15	1.03	.407	.671			MEAN
DAM3			33300	16300	27800	14400	5760	2750	1060	1800			DAM3
MAX			109	17.4	55.7	14.5	5.73	2.54	.507	.885			MAX
MIN			2.60	2.12	4.68	2.76	.877	.475	.311	.301			MIN

SUMMARY FOR THE MONTHS MAR TO OCT
MEAN DISCHARGE, 4.88 M3/S
TOTAL DISCHARGE, 103000 DAM3
MAXIMUM DAILY DISCHARGE, 109 M3/S ON MAR 20
MINIMUM DAILY DISCHARGE, .301 M3/S ON OCT 1

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, NOT VALID, PEAK OCCURRED UNDER ICE, SHELTER DESTROYED.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

NORTH FORK MILK RIVER ABOVE ST MARY CANAL NEAR BROWNING, MONTANA

06133500 11AA032

DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1997
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	e.481	e1.13	1.10	1.02	.821	.566	.566	.538	---	---
2	---	---	e.481	e.911	1.08	.906	.765	.566	.566	.538	---	---
3	---	---	e.453	e.850	1.02	.878	.708	.566	.566	.538	---	--
4	---	---	e.453	e.821	1.05	.906	.680	.566	.566	.538	---	---
5	---	---	e.425	e.765	1.02	1.08	.651	.566	.538	.566	---	---
6	---	---	e.481	e.708	1.05	.934	.623	.566	.566	.566	---	---
7	---	---	e.481	e.708	1.05	.906	.623	.566	.566	.566	---	---
8	---	---	e.510	e.765	.991	.821	.623	.651	.566	.595	---	---
9	---	---	e.538	e.765	.963	.793	.623	.680	.538	.595	---	---
10	---	---	e.481	e.708	.991	.765	.623	.623	.538	.595	---	---
11	---	---	e.396	e.623	.934	.963	.595	.595	.566	.595	---	---
12	---	---	e.283	e.566	.934	1.16	.595	.595	.566	.595	---	---
13	---	---	e.283	e.623	.963	.963	.595	.595	.538	.595	---	---
14	---	---	e.278	e.708	.906	.850	.595	.566	.566	.566	---	---
15	---	---	e.266	e.850	.906	.793	.595	.595	.595	.566	---	---
16	---	---	e.283	e1.84	.934	.736	.595	.934	.566	.566	---	---
17	---	---	e.425	10.2	.934	.736	.595	.736	.566	.566	---	---
18	---	---	e.566	2.80	1.02	.736	.623	.623	.595	.623	---	---
19	---	---	e14.2	1.53	.963	.708	.595	.623	.595	.595	---	---
20	---	---	e22.7	1.44	.878	.680	.595	.595	.623	.595	---	---
21	---	---	e5.66	1.36	.906	.680	.623	.595	.623	.595	---	---
22	---	---	e1.70	1.25	.821	.708	.595	.566	e.623	.595	---	---
23	---	---	e1.27	1.19	.793	.680	.566	.566	e.595	.595	---	---
24	---	---	e1.13	1.10	1.02	.680	.566	.623	e.595	.595	---	---
25	---	---	e1.08	1.10	3.85	.736	.566	.651	.538	.595	---	---
26	---	---	e1.13	1.13	4.62	.680	.595	.595	.538	.595	---	---
27	---	---	e1.42	1.27	2.01	.651	.595	.566	.538	.595	---	---
28	---	---	e1.70	1.25	1.61	.651	.566	.566	.538	.595	---	---
29	---	---	e1.42	1.13	1.25	.821	.566	.566	.538	.595	---	---
30	---	---	e1.13	1.10	1.10	.850	.595	.566	.538	.595	---	---
31	---	---	e1.27	---	1.05	---	.566	.566	---	.595	---	---
TOTAL	---	---	63.374	41.191	38.717	24.471	19.117	18.799	17.016	18.042	---	---
MEAN	---	---	2.04	1.37	1.25	.82	.62	.61	.57	.58	---	---
MAX	---	---	22.7	10.2	4.62	1.16	.821	.934	.623	.623	---	---
MIN	---	---	.266	.566	.793	.651	.566	.566	.538	.538	---	---

FOR THE SEASON, MARCH TO OCTOBER:
TOTAL DISCHARGE: 36 350 DAM3.
MAX INST DISCHARGE: 81.0 M3/S ON MAR 19, TIME UNRECORDED, (GAGE HEIGHT 3.200M).
MIN DAILY DISCHARGE: .266 M3/S MAR. 15.

e--ESTIMATED.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

WATER SURVEY OF CANADA NORTH MILK RIVER NEAR INTERNATIONAL BOUNDARY STATION NO. 11AA001

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			.820 B	1.39	1.12	20.2	17.3	18.1	14.6	16.7	.601		1
2			.770 B	1.39	1.11	19.8	17.1	18.1	15.7	15.5	.612		2
3			.760 B	1.45	1.02	19.8	16.9	18.0	16.3	13.7	.621		3
4			.750 B	1.30	1.02	20.0	16.6	17.9	16.2	9.41	.618		4
5			.750 B	1.37	.981	20.3	16.5	17.8	16.1	4.95	.614 A		5
6			.780 B	1.45	.977	19.8	16.6	17.6	16.1	3.50			6
7			.820 B	1.35	3.97	19.6	16.6	17.6	16.0	2.88			7
8			.810 B	1.20	6.39	19.4	17.4	18.1	15.9	1.83			8
9			.800 B	1.00	9.00	19.2	17.9	17.5	16.4	1.36			9
10			.790 B	.877	10.3	19.1	18.0	16.9	16.7	1.20			10
11			.820 B	.760	10.7	19.6	18.1	17.1	16.8	1.04			11
12			.881 B	.730	12.1	19.5	18.2	17.3	16.9	.827			12
13			1.10 B	1.06	13.6	17.6	18.2	17.2	16.8	.683			13
14			1.30 B	1.49	14.5	16.9	18.2	17.2	16.8	.662			14
15			1.25 B	2.21	14.9	16.4	18.1	17.0	16.9	.647			15
16			1.20 B	4.53	15.3	16.0	18.2	17.6	17.0	.639			16
17			3.00 B	9.69	15.5	17.2	18.2	17.4	17.1	.618			17
18			5.18 B	5.10	16.5	18.3	18.0	17.4	17.2	.655			18
19			56.7 B	2.74	17.0	18.2	17.9	17.4	17.4	.661			19
20			30.6 B	2.32	17.5	18.0	17.8	17.3	17.4	.648			20
21			6.80	2.20	18.6	17.8	17.8	17.3	17.5	.637			21
22			2.53	2.00	18.9	17.8	17.8	17.3	17.5	.636			22
23			2.28	1.84	19.1	17.3	17.7	17.2	17.5	.615			23
24			2.12	1.62	19.9	17.3	17.8	17.5	17.4	.657			24
25		1.54 B	2.04	1.55	26.0	17.4	17.8	17.5	17.5	.653			25
26		1.20 B	2.49	1.49	30.6	16.8	17.8	17.4	17.7	.667			26
27		1.00 B	2.38	1.51	22.4	16.5	17.9	17.3	17.0	.642			27
28		.900 B	1.90	1.47	21.5	16.9	17.7	16.5	17.1	.621			28
29			1.62	1.29	20.6	17.8	18.0	15.4	16.9	.628			29
30			1.58	1.12	20.3	17.6	18.0	14.7	17.0	.631			30
31			1.58		20.3		18.0	14.6		.616			31
TOTAL			137.201	59.497	421.688	548.1	548.1	533.2	503.4	85.113			TOTAL
MEAN			4.43	1.98	13.6	18.3	17.7	17.2	16.8	2.75			MEAN
DAM3			11900	5140	36400	47400	47400	46100	43500	7350			DAM3
MAX			56.7	9.69	30.6	20.3	18.2	18.1	17.7	16.7			MAX
MIN			.750	.730	.977	16.0	16.5	14.6	14.6	.615			MIN

SUMMARY FOR THE MONTHS MAR TO OCT
MEAN DISCHARGE,11.6 M3/S
TOTAL DISCHARGE, 245000 DAM3
MAXIMUM DAILY DISCHARGE,56.7 M3/S ON MAR 19
MINIMUM DAILY DISCHARGE, .615 M3/S ON OCT 23

A-MANUAL GAUGE
B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, NOT VALID, PEAK OCCURRED DURING ICE CONDITIONS.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

WATER SURVEY OF CANADA MILK RIVER AT MILK RIVER STATION NO. 11AA005

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	.810 B	1.55 B	4.80 B	9.90	10.4	27.5	21.2	17.9	14.4	17.1	1.53	1.74 B	1
2	.820 B	2.00 B	4.40 B	9.66	9.97	26.3	22.0	18.1	14.4	16.9	1.49	1.49 B	2
3	.840 B	2.25 B	4.35 B	8.05 B	9.96	25.3	22.9	18.3	15.8	16.1	1.53	1.19 B	3
4	.890 B	2.35 B	4.35 B	5.50 B	9.05	24.8	21.7	18.0	16.4	14.5	1.63	1.04 B	4
5	.930 B	2.40 B	4.55 B	4.80 B	8.72	26.0	20.4	17.7	16.2	10.8	1.63	.871 B	5
6	.970 B	2.37 B	4.80 B	4.50 B	8.96	26.6	19.3	17.4	16.3	7.02	1.61	.830 B	6
7	.994 B	2.30 B	4.90 B	4.30 B	8.87	26.4	18.8	17.1	16.5	4.88	1.68	.805 B	7
8	1.00 B	2.17 B	5.00 B	4.15 B	11.3	25.4	18.2	18.1	16.2	4.18	1.74	.779 B	8
9	.970 B	2.10 B	4.80 B	4.08 B	16.4	24.2	18.9	18.6	16.2	3.44	1.32 B	.800 B	9
10	.900 B	2.08 B	4.40 B	4.10 B	17.6	23.0	19.4	17.6	16.7	2.67	1.28 B	.841 B	10
11	.800 B	2.07 B	4.13 B	4.20 B	18.5	23.2	19.1	17.4	17.2	2.22	1.26 B	.852 B	11
12	.720 B	2.09 B	4.10 B	4.25 E	19.3	26.8	19.0	18.5	17.2	2.06	1.25 B	.876 B	12
13	.670 B	2.10 B	4.20 B	4.40 E	19.7	30.2	19.1	18.4	17.1	2.00	1.23 B	.922 B	13
14	.645 B	2.15 B	4.40 B	4.60 E	21.1	30.2	19.1	18.5	17.1	1.95	1.24 B	.938 B	14
15	.640 B	2.22 B	4.61 B	4.90 E	22.8	26.1	18.8	18.5	17.4	1.76	1.25 B	.980 B	15
16	.635 B	2.45 B	4.98 B	6.45 A	22.6	22.9	18.5	19.1	17.3	1.65	1.27 B	1.03 B	16
17	.640 B	2.70 B	5.56 B	9.46	22.6	21.1	18.2	19.5	17.4	1.59	1.30 B	1.07 B	17
18	.665 B	4.30 B	6.73 B	23.9	23.4	21.4	18.5	19.1	17.6	1.70	1.32 B	1.10 B	18
19	.710 B	6.00 B	27.3 B	22.5	24.4	21.5	18.2	20.1	17.8	1.69	1.37 B	1.09 B	19
20	.840 B	6.90 B	181 B	15.8	25.3	20.8	18.3	19.4	18.0	1.67	1.42 B	1.07 B	20
21	1.05 B	7.40 B	150 B	13.5	24.7	20.4	18.5	18.8	17.9	1.65	1.48 B	1.05 B	21
22	1.25 B	7.60 B	70.4	13.6	24.7	20.3	18.4	18.2	17.9	1.64	1.53 B	1.00 B	22
23	1.35 B	7.75 B	41.2	12.7	24.6	19.9	18.3	17.9	17.9	1.64	1.58 B	.943 B	23
24	1.55 B	7.70 B	27.4	11.8	24.4	19.4	18.3	18.0	18.0	1.63	1.62 B	.886 B	24
25	1.60 B	7.30 B	19.8	9.94	26.9	19.7	18.2	18.3	17.8	1.57	1.67 B	.860 B	25
26	1.68 B	7.00 B	17.1	8.73	47.0	19.7	18.3	17.9	17.9	1.49	1.73 B	.790 B	26
27	1.66 B	6.20 B	20.4	8.90	74.0	19.2	18.2	17.7	18.0	1.82	1.80 B	.810 B	27
28	1.50 B	5.70 B	20.8	10.1	55.8	18.8	18.0	17.8	17.1	1.58	1.83 B	.862 B	28
29	1.40 B		14.9	12.7	38.1	19.8	17.9	16.9	17.1	1.62	1.46 B	.866 B	29
30	1.37 B		11.4	12.6	31.7	21.6	18.1	15.4	17.1	1.60	1.84 B	.882 B	30
31	1.43 B		10.3		29.1		17.9	14.6		1.60		.913 B	31
TOTAL	31.929	111.20	697.06	274.07	731.93	698.5	589.7	558.8	509.9	133.72	44.89	30.176	TOTAL
MEAN	1.03	3.97	22.5	9.14	23.6	23.3	19.0	18.0	17.0	4.31	1.50	.973	MEAN
DAM3	2760	9610	60200	23700	63200	60400	51000	48300	44100	11600	3880	2610	DAM3
MAX	1.68	7.75	181	23.9	74.0	30.2	22.9	20.1	18.0	17.1	1.84	1.74	MAX
MIN	.635	1.55	4.10	4.08	8.72	18.8	17.9	14.6	14.4	1.49	1.23	.779	MIN

SUMMARY FOR THE MONTHS JAN TO DEC
MEAN DISCHARGE, 12.1 M3/S
TOTAL DISCHARGE, 381000 DAM3
MAXIMUM DAILY DISCHARGE, 181 M3/S ON MAR 20
MINIMUM DAILY DISCHARGE, .635 M3/S ON JAN 16

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, NOT VALID, ICE CONDITIONS.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

WATER SURVEY OF CANADA VERDIGRIS COULEE NEAR THE MOUTH STATION NO. 11AA038

(PRELIMINARY) DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.232 B	.037	.380	.242	.011	.025	.003	.013		1
2			0 B	.129 B	.036	.384	.219	.010	.018	0	.013		2
3			0 B	.175 B	.033	.361	.196	.011	.011	0	.006		3
4			0 B	.270 B	.066	.314	.178	.008	.012	0	.003		4
5			0 B	.250 B	.069	.355	.166	.009	.027	0	.001 A		5
6			0 B	.230 E	.051	.376	.145	.007	.019	0			6
7			0 B	.210 E	.094	.386	.124	.006	.012	0			7
8			0 B	.185 E	.075	.392	.108	.007	.011	0			8
9			0 B	.170 E	.073	.392	.100	.025	.007	.001			9
10			0 B	.146 A	.140	.387	.090	.021	.002	.007			10
11			0 B	.115 E	.097	.392	.078	.014	0	.004			11
12			0 B	.090 E	.105	.396	.067	.011	0	0			12
13			0 B	.070 E	.133	.469	.063	.012	0	0			13
14			0 B	.063 E	.098	.419	.060	.017	0	0			14
15			0 B	.074 E	.121	.421	.056	.036	0	0			15
16			0 B	.055 A	.187	.399	.048	.052	0	.002			16
17			0 B	.072	.174	.383	.043	.036	0	0			17
18			.040 B	.072	.227	.370	.041	.031	.004	0			18
19			.400 B	.060	.116	.367	.035	.035	.008	0			19
20			.900 B	.056	.104	.356	.032	.034	.007	0			20
21			.800 B	.153	.221	.340	.030	.033	.001	0			21
22			.600 B	.084	.199	.321	.025	.034	0	0			22
23			.531 B	.049	.206	.304	.021	.036	0	0			23
24			.363 B	.039	.240	.292	.020	.033	0	0			24
25		0 B	.422 B	.043	.286	.299	.019	.039	0	0			25
26		0 B	.291 B	.039	.353	.248	.017	.031	0	0			26
27		0 B	.249 B	.032	.338	.238	.016	.027	0	0			27
28		0 B	.246 B	.050	.356	.224	.015	.026	.032	0			28
29			.175 B	.037	.362	.262	.014	.028	.023	0			29
30			.245 B	.037	.368	.299	.012	.028	.008	0			30
31			.206 B		.378		.010	.022		0			31
TOTAL			5.468	3.287	5.343	10.526	2.290	.730	.227	.017			TOTAL
MEAN			.176	.110	.172	.351	.074	.024	.008	.001			MEAN
DAM3			472	284	462	909	198	63.1	19.6	1.47			DAM3
MAX			.900	.270	.378	.469	.242	.052	.032	.007			MAX
MIN			0	.032	.033	.224	.010	.006	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT

MEAN DISCHARGE, .114 M3/S
TOTAL DISCHARGE, 2410 DAM3
MAXIMUM DAILY DISCHARGE, .900 M3/S ON MAR 20
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DEFINED, OCCURRED DURING ICE CONDITIONS.

APPROVED BY FIELD REPRESENTATIVES OF THE UNITED STATES AND CANADA

International Gauging Stations

Joint Review and Approval of Records

Pursuant to Article V of the International Joint Commission Order of October 4, 1921, the International Gauging Stations listed below have been operated and maintained by the Monitoring and Operations Branch and the United States Geological Survey on a joint basis.

It is hereby certified that the annexed records have been computed in accordance with standard procedures of each country and jointly reviewed and approved on this 10th day of February, 1998.

Lodge Creek below McRae Creek at International Boundary	11AB083
Middle Creek near Saskatchewan Boundary	11AB009
Middle Creek below Middle Creek Reservoir	11AB001
Middle Creek above Lodge Creek	11AB008
Middle Creek near Govenlock	11AB108
Altawan Reservoir near Govenlock	11AB089
Spangler Ditch near Govenlock	11AB060
Battle Creek at International Boundary	11AB027
Gaff Ditch near Merryflat	11AB102
Cypress Lake West Inflow Canal	11AB078
Cypress Lake West Inflow Canal Drain	11AB085
Cypress Lake West Outflow Canal	11AB077
Vidora Ditch near Consul	11AB084
Richardson Ditch near Consul	11AB058
McKinnon Ditch near Consul	11AB044
Nashlyn Canal near Consul	11AB018
Frenchman River at International Boundary	11AC041
Belanger Creek Diversion to Cypress Lake	11AC064
Cypress Lake	11AC037
Cypress Lake East Outflow Canal	11AC060
Eastend Reservoir	11AC055
Eastend Canal near Eastend	11AC052
Huff Lake	11AC063
Huff Lake Gravity Canal	11AC065
Huff Lake Pumping Canal	11AC066
Newton Lake	11AC056
Newton Lake Main Canal	11AC054

R Boals
Field Representative for Canada

Robert E Stein
Field Representative for the United States

WATER SURVEY OF CANADA LODGE CREEK BELOW MCRAE CREEK AT INTERNATIONAL BOUNDARY STATION NO. 11AB083

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR		APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	B	6.60	.499	1.31	.032	0	0	0			1
2			0	B	4.77	.486	.998	.030	0	0	0			2
3			0	B	3.35	.470	1.08	.026	0	0	0			3
4			0	B	2.55	.425	1.08	.022	0	0	0			4
5			0	B	1.73	.387	.921	.018	0	0	0			5
6			0	B	1.24	.377	.650	.017	0	0	0			6
7			0	B	1.01	.336	.435	.015	0	0	0			7
8			0	B	.780	.271	.263	.012	0	0	0			8
9			0	B	.584	.357	.210	.009	0	0	0			9
10			0	B	.459	.284	.194	.007	0	0	0			10
11			.005	B	.372	.168	.187	.005	0	0	0			11
12			.010	B	.312	.209	.195	.004	0	0	0			12
13			.005	B	.270	.256	.156	.002	0	0	0			13
14			0	B	.239	.147	.134	.002	0	0	0			14
15			0	B	.226	.112	.128	.002	0	0	0			15
16			0	B	.201	.112	.123	.002	0	0	0			16
17			0	B	.175	.120	.107	.001	0	0	0			17
18			0	B	.158	.088	.108	.001	0	0	0			18
19			.010	B	.813	.068	.111	.001	0	0	0			19
20			.500	B	.937	.047	.088	.001	0	0	0			20
21			2.00	B	.838	.088	.076	.001	0	0	0			21
22			5.00	B	1.34	.122	.087	.001	0	0	0			22
23			10.0	B	1.39	.202	.135	.001	0	0	0			23
24			20.0	B	1.13	.264	.111	.001	0	0	0			24
25			40.0	B	1.16	.179	.101	0	0	0	0			25
26			64.0		1.14	.248	.096	.001	0	0	0			26
27			76.7		.995	.383	.075	0	0	0	0			27
28			50.5		.825	.863	.050	0	0	0	0			28
29			32.6		.744	2.00	.034	0	0	0	0			29
30			17.7		.599	1.71	.040	0	0	0	0			30
31			9.69			1.34		0	0		0			31
TOTAL			328.720		36.937	12.618	9.283	.214	0	0	0			TOTAL
MEAN			10.6		1.23	.407	.309	.007	0	0	0			MEAN
DAM3			28400		3190	1090	802	18.5	0	0	0			DAM3
MAX			76.7		6.60	2.00	1.31	.032	0	0	0			MAX
MIN			0		.158	.047	.034	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, 1.58 M3/S
TOTAL DISCHARGE, 33500 DAM3
MAXIMUM DAILY DISCHARGE,76.7 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 87.9 M3/S AT 03:30 CST ON MARCH 27

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

STORAGE FACTORS AND EVAPORATION LOSSES
1997

MICHEL RESERVOIR 11AB091

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	304.418		0	304.413	304.422	903	905	2
2	304.653		0	304.422	304.883	905	1008	103
3	304.871		0	304.883	304.858	1008	1003	-5
4	304.854	0.060	10	304.858	304.850	1003	1001	-2
5	304.829	0.093	16	304.850	304.808	1001	991	-10
6	304.816	0.040	7	304.808	304.823	991	995	4
7	304.815	0.094	16	304.823	304.806	995	991	-4
8	304.774	0.130	22	304.806	304.742	991	976	-15
9	304.709	0.103	18	304.742	304.675	976	961	-15
10	304.629	0.158	27	304.675	304.583	961	941	-20
11	304.548	0.121	20	304.583	304.512	941	925	-16
12	304.478	0.109	18	304.512	304.443	925	909	-16
13	304.408	0.121	20	304.443	304.372	909	893	-16
14	304.352	0.062	10	304.372	304.332	893	884	-9
15	304.313	0.054	9	304.332	304.293	884	876	-8
16	304.277	0.000	0	304.293	304.260	876	868	-8

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

GREASEWOOD RESERVOIR 11AB092

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	27.578		0	27.578	27.578	29	29	0
2	28.847		0	27.578	30.115	29	134	105
3	30.118	0.000	0	30.115	30.120	134	134	0
4	30.125	0.060	3	30.120	30.130	134	136	2
5	30.135	0.093	4	30.130	30.140	136	137	1
6	30.146	0.040	2	30.140	30.151	137	138	1
7	30.156	0.094	4	30.151	30.160	138	139	1
8	29.860	0.130	5	30.160	29.560	139	95	-44
9	28.900	0.103	3	29.560	28.240	95	45	-50
10	28.210	0.158	3	28.240	28.180	45	44	-2
11	28.165	0.121	2	28.180	28.150	44	43	-1
12	28.135	0.109	2	28.150	28.120	43	42	-1
13	28.108	0.121	2	28.120	28.095	42	41	-1
14	28.085	0.062	1	28.095	28.075	41	41	-1
15	28.065	0.054	1	28.075	28.055	41	40	-1
16	28.088	0.000	0	28.055	28.120	40	42	2

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

MASSY RESERVOIR 11AB104

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	24.510		0	24.730	24.290	2	1	-1
2	26.145		0	24.290	28.000	1	137	136
3	28.475		0	28.000	28.950	137	228	91
4	28.940	0.060	6	28.950	28.930	228	226	-2
5	28.895	0.093	8	28.930	28.860	226	219	-7
6	28.911	0.040	4	28.860	28.962	219	229	10
7	28.924	0.094	9	28.962	28.885	229	221	-8
8	28.303	0.130	8	28.885	27.720	221	115	-106
9	28.085	0.103	6	27.720	28.450	115	178	63
10	28.010	0.158	9	28.450	27.570	178	103	-75
11	27.185	0.121	6	27.570	26.800	103	51	-52
12	26.715	0.109	4	26.800	26.630	51	42	-9
13	26.555	0.121	4	26.630	26.480	42	35	-7
14	26.460	0.062	2	26.480	26.440	35	33	-2
15	26.420	0.054	2	26.440	26.400	33	31	-2
16	26.383	0.000	0	26.400	26.365	31	30	-2

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

BARE CREEK RESERVOIR 11AB094

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	1135.852	0.000	0	1135.858	1135.845	1366	1361	-5
2	1136.293	0.000	0	1135.845	1136.740	1361	1739	378
3	1136.969	0.000	0	1136.740	1137.198	1739	1960	221
4	1137.192	0.060	20	1137.198	1137.185	1960	1953	-7
5	1137.133	0.093	31	1137.185	1137.080	1953	1901	-52
6	1137.096	0.040	13	1137.080	1137.111	1901	1916	15
7	1137.091	0.094	31	1137.111	1137.070	1916	1896	-20
8	1137.035	0.130	42	1137.070	1137.000	1896	1862	-34
9	1136.963	0.103	32	1137.000	1136.925	1862	1825	-37
10	1136.453	0.158	43	1136.925	1135.980	1825	1413	-412
11	1135.951	0.121	28	1135.980	1135.922	1413	1391	-22
12	1135.544	0.109	23	1135.922	1135.165	1391	1114	-277
13	1135.134	0.121	22	1135.165	1135.102	1114	1093	-21
14	1135.079	0.062	11	1135.102	1135.055	1093	1078	-15
15	1135.033	0.054	10	1135.055	1135.010	1078	1063	-15
16	1135.000	0.000	0	1135.010	1134.990	1063	1057	-6

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

CRESSDAY RESERVOIR 11AB097

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	963.515	0.000	0	963.545	963.485	472	448	-24
2	963.825	0.000	0	963.485	964.165	448	831	383
3	964.071	0.000	0	964.165	963.977	831	703	-128
4	963.976	0.066	30	963.977	963.975	703	702	-1
5	963.903	0.098	41	963.975	963.830	702	617	-85
6	963.980	0.036	16	963.830	964.130	617	806	189
7	964.033	0.098	46	964.130	963.935	806	678	-128
8	963.893	0.131	55	963.935	963.850	678	628	-50
9	963.808	0.101	39	963.850	963.765	628	578	-50
10	963.728	0.158	57	963.765	963.690	578	540	-38
11	963.619	0.120	39	963.690	963.547	540	473	-67
12	963.539	0.109	33	963.547	963.530	473	466	-7
13	963.463	0.120	34	963.530	963.395	466	412	-54
14	963.370	0.064	17	963.395	963.345	412	389	-23
15	963.319	0.046	11	963.345	963.293	389	364	-25
16	963.302	0.000	0	963.293	963.310	364	372	8

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

MITCHELL RESERVOIR 11AB099

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	33.253		0	33.240	33.265	233	240	7
2	34.313		0	33.265	35.360	240	1239	999
3	35.335	0.000	0	35.360	35.310	1239	1201	-38
4	35.093	0.066	32	35.310	34.875	1201	899	-302
5	34.838	0.098	42	34.875	34.801	899	852	-47
6	34.830	0.036	15	34.801	34.858	852	888	36
7	34.834	0.098	42	34.858	34.810	888	857	-31
8	34.685	0.131	52	34.810	34.560	857	715	-142
9	34.443	0.101	35	34.560	34.325	715	602	-113
10	34.268	0.158	48	34.325	34.210	602	551	-51
11	34.161	0.120	34	34.210	34.111	551	509	-42
12	34.076	0.109	29	34.111	34.040	509	482	-27
13	34.008	0.120	31	34.040	33.975	482	458	-24
14	33.940	0.064	16	33.975	33.905	458	433	-25
15	33.870	0.046	11	33.905	33.835	433	407	-26
16	33.814	0.000	0	33.835	33.792	407	393	-14

EVAPORATION STATION IS ALTAWAN

STORAGE FACTORS AND EVAPORATION LOSSES
1997

JAYDOT RESERVOIR 11AB098

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	920.293		0	920.300	920.286	247	245	-2
2	920.284		0	920.286	920.282	245	244	-1
3	920.624	0.000	0	920.282	920.965	244	429	185
4	920.940	0.071	20	920.965	920.915	429	409	-20
5	920.871	0.100	26	920.915	920.826	409	376	-33
6	920.938	0.036	10	920.826	921.050	376	468	92
7	920.995	0.101	31	921.050	920.940	468	418	-50
8	920.903	0.132	35	920.940	920.865	418	391	-27
9	920.823	0.100	24	920.865	920.780	391	361	-30
10	920.723	0.157	32	920.780	920.665	361	328	-33
11	920.624	0.119	21	920.665	920.582	328	307	-21
12	920.541	0.108	17	920.582	920.500	307	287	-20
13	920.467	0.113	17	920.500	920.433	287	274	-13
14	920.407	0.072	10	920.433	920.380	274	263	-11
15	920.355	0.038	5	920.380	920.330	263	253	-10
16	920.318	0.000	0	920.330	920.305	253	248	-5

EVAPORATION STATION IS ALTAWAN

WATER SURVEY OF CANADA MIDDLE CREEK NEAR SASKATCHEWAN BOUNDARY STATION NO. 11AB009

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			.007	1.18	.076	.052	.015 E	.015 A	.005 E	.001	.009		1
2			.007	.719	.058	.039	.014 E	.013 E	.004 E	.001	.008		2
3			.008	.466	.047	.031	.014 E	.013 E	.003 A	.003	.009		3
4			.008	.447	.041	.028	.014 E	.013 E	.003 E	.006	.009		4
5			.008	.355	.038	.028 A	.014 E	.013 E	.004 E	.006	.009		5
6			.008	.197	.037	.033 E	.013 E	.013 A	.004 E	.006	.010 A		6
7			.008	.346	.036	.036 E	.013 E	.013 E	.005 E	.008			7
8			.007	.310	.037	.033 E	.013 A	.013 E	.005 E	.008			8
9			.009	.109	.035	.030 E	.013	.012 E	.005 A	.008			9
10			.009	.087	.034	.028 E	.013	.012 E	.006	.008			10
11			.009	.129	.032	.028 E	.012	.012 E	.006	.008			11
12			.010	.466	.035	.026 E	.019	.012 E	.006	.009			12
13			.009	.327	.038	.026 E	.022	.012 E	.007	.008			13
14			.009	.280	.037	.024 E	.029	.011 E	.006	.009			14
15			.009	.126	.035	.024 E	.031	.011 E	.007	.008			15
16			.008	.106	.034	.022 E	.030	.011 E	.008	.008			16
17			.009	.297	.032	.022 E	.027	.011 E	.007	.008			17
18			.009	.798	.031	.020 E	.025	.011 E	.007	.008			18
19			.010	.939	.030	.020 E	.025	.010 E	.007	.007			19
20			.019	.716	.025	.018 E	.024	.010 A	.007	.008			20
21			1.67	.653	.026	.018 E	.021	.010 E	.007	.008			21
22			4.72	.591	.023	.018 E	.020	.009 E	.006	.008			22
23			3.98 B	.416	.026	.017 E	.020	.009 E	.005	.008			23
24			1.96 B	.268	.029	.017 E	.021	.009 E	.005	.008			24
25		.006 A	3.38	.181	.062	.017 E	.021	.008 E	.006	.009			25
26		.008	7.73 B	.130	.081	.016 E	.023	.008 E	.006	.009			26
27		.007	19.5 B	.111	.464	.016 E	.021	.008 E	.005	.009			27
28		.007	9.52	.093	.425	.016 E	.018	.007 E	.006	.009			28
29			3.40	.088	.212	.015 E	.016	.006 E	.005	.009			29
30			2.10	.087	.119	.015 E	.016	.006 E	.003	.009			30
31			1.37		.079		.016	.006 E		.010			31
TOTAL			59.510	11.018	2.314	.733	.593	.327	.166	.232			TOTAL
MEAN			1.92	.367	.075	.024	.019	.011	.006	.007			MEAN
DAM3			5140	952	200	63.3	51.2	28.3	14.3	20.0			DAM3
MAX			19.5	1.18	.464	.052	.031	.015	.008	.010			MAX
MIN			.007	.087	.023	.015	.012	.006	.003	.001			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .306 M3/S
TOTAL DISCHARGE, 6470 DAM3
MAXIMUM DAILY DISCHARGE,19.5 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, .001 M3/S ON OCT 1

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, 25.8 M3/S B AT 09:15 CST ON MARCH 27

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA MIDDLE CREEK RESERVOIR BEDFORD OUTLET STATION NO. 11AB114

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	0	0	0	0	0			1
2			0	0	0	0	0	0	0	0			2
3			0	0	0	0	0	0	0	0			3
4			0	0	0	0	0	0	0	0			4
5			0	0	0	0	0	0	0	0			5
6			0	0	0	0	0	0	0	0			6
7			0	0	0	0	0	0	0	0			7
8			0	0	0	0	0	0	0	0			8
9			0	0	0	0	0	0	0	0			9
10			0	0	0	0	0	0	0	0			10
11			0	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	0	0	0	0	0	0			13
14			0	0	0	0	0	0	0	0			14
15			0	0	0	0	0	0	0	0			15
16			0	0	0	0	0	0	0	0			16
17			0	0	0	0	0	0	0	0			17
18			0	0	0	0	0	0	0	0			18
19			0	0	0	0	0	0	0	0			19
20			0	0	0	0	0	0	0	0			20
21			0	0	0	0	0	0	0	0			21
22			0	0	0	0	0	0	0	0			22
23			0	0	0	0	0	0	0	0			23
24			0	0	0	0	0	0	0	0			24
25			0	0	0	0	0	0	0	0			25
26			0	0	0	0	0	0	0	0			26
27			0	0	0	0	0	0	0	0			27
28			0	0	0	0	0	0	0	0			28
29			0	0	0	0	0	0	0	0			29
30			0	0	0	0	0	0	0	0			30
31			0		0		0	0		0			31
TOTAL			0	0	0	0	0	0	0	0			TOTAL
MEAN			0	0	0	0	0	0	0	0			MEAN
DAM3			0	0	0	0	0	0	0	0			DAM3
MAX			0	0	0	0	0	0	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT VALID EXTREMES: ANNUAL, STANDARD & OPERATING - BOTH

MEAN DISCHARGE, 0 M3/S
TOTAL DISCHARGE, 0 DAM3
MAXIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

WATER SURVEY OF CANADA MIDDLE CREEK RESERVOIR FLOOD SPILLWAY STATION NO. 11AB115

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 E	1.30 E	.040 E	0 E	0 E	0 E	0 E	0 E			1
2			0 E	1.31 E	.034 E	0 E	0 E	0 E	0 E	0 E			2
3			0 E	1.32 A	.030 E	0 E	0 E	0 E	0 E	0 E			3
4			0 E	1.28 E	.026 E	0 E	0 E	0 E	0 E	0 E			4
5			0 E	1.21 E	.022 E	0 E	0 E	0 E	0 E	0 E			5
6			0 E	1.18 E	.018 E	0 E	0 E	0 E	0 E	0 E			6
7			0 E	1.15 E	.013 E	0 E	0 E	0 E	0 E	0 E			7
8			0 E	1.12 E	.009 E	0 E	0 E	0 E	0 E	0 E			8
9			0 E	.960 E	.007 E	0 E	0 E	0 E	0 E	0 E			9
10			0 E	.890 E	.004 E	0 E	0 E	0 E	0 E	0 E			10
11			0 E	.840 E	.002 E	0 E	0 E	0 E	0 E	0 E			11
12			0 E	.790 E	.001 E	0 E	0 E	0 E	0 E	0 E			12
13			0 E	.720 E	.001 E	0 E	0 E	0 E	0 E	0 E			13
14			0 E	.650 E	0 E	0 E	0 E	0 E	0 E	0 E			14
15			0 E	.590 E	0 E	0 E	0 E	0 E	0 E	0 E			15
16			0 E	.540 E	0 E	0 E	0 E	0 E	0 E	0 E			16
17			0 E	.450 E	0 E	0 E	0 E	0 E	0 E	0 E			17
18			0 E	.380 E	0 E	0 E	0 E	0 E	0 E	0 E			18
19			0 E	.320 E	0 E	0 E	0 E	0 E	0 E	0 E			19
20			0 E	.265 E	0 E	0 E	0 E	0 E	0 E	0 E			20
21			0 E	.220 E	0 E	0 E	0 E	0 E	0 E	0 E			21
22			0 E	.185 E	0 E	0 E	0 E	0 E	0 E	0 E			22
23			0 E	.160 E	0 E	0 E	0 E	0 E	0 E	0 E			23
24			0 E	.135 E	0 E	0 E	0 E	0 E	0 E	0 E			24
25			0 E	.112 E	0 E	0 E	0 E	0 E	0 E	0 E			25
26			.024 E	.093 E	0 E	0 E	0 E	0 E	0 E	0 E			26
27			.070 E	.080 E	0 E	0 E	0 E	0 E	0 E	0 E			27
28			.220 E	.066 E	0 E	0 E	0 E	0 E	0 E	0 E			28
29			.677 A	.056 E	0 E	0 E	0 E	0 E	0 E	0 E			29
30			1.20 E	.048 A	0 E	0 E	0 E	0 E	0 E	0 E			30
31			1.30 A		0 E		0 E	0 E		0 E			31
TOTAL			3.491	18.420	.207	0	0	0	0	0			TOTAL
MEAN			.113	.614	.007	0	0	0	0	0			MEAN
DAM3			302	1590	17.9	0	0	0	0	0			DAM3
MAX			1.30	1.32	.040	0	0	0	0	0			MAX
MIN			0	.048	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .090 M3/S
TOTAL DISCHARGE, 1910 DAM3
MAXIMUM DAILY DISCHARGE, 1.32 M3/S ON APR 3
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE

E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA MIDDLE CREEK BELOW MIDDLE CREEK RESERVOIR STATION NO. 11AB001

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.043	0	.178	0	.034	0	0	0		1
2			0 B	.008	0	.115	0	.020	0	0	0		2
3			0 B	.019	0	.061	0	.012	0	0	0		3
4			0 B	.066	0	.010	0	.005	0	0	0		4
5			0 B	.044	0	.002	0	.001	0	0	0		5
6			0 B	.040	0	0	0	0	0	0	0		6
7			0 B	.038	0	0	0	0	0	0			7
8			0 B	.037	0	0	0	0	0	0			8
9			0 B	.037	0	0	0	0	0	0			9
10			0 B	.035	0	0	0	0	0	0			10
11			0 B	.030	0	0	0	0	0	0			11
12			0 B	.017	0	0	0	0	0	0			12
13			0 B	0	0	0	0	0	0	0			13
14			0 B	0	0	0	0	0	0	0			14
15			0 B	0	0	0	0	0	0	0			15
16			0 B	.009	0	0	0	0	0	0			16
17			0 B	.045	0	0	0	0	0	0			17
18			0 B	.024	0	0	0	0	0	0			18
19			0 B	.008	0	0	0	0	0	0			19
20			0 B	.009	0	0	0	0	0	0			20
21			0 B	.044	0	0	0	0	0	0			21
22			0 B	.122	0	0	0	0	0	0			22
23			0 B	.028	0	0	0	0	0	0			23
24			0 B	.007	.880	0	0	0	0	0			24
25			0 B	.004	1.53	0	0	0	0	0			25
26			.069 B	.002	1.43	0	0	0	0	0			26
27			1.15 B	.001	1.22	0	0	0	0	0			27
28			1.48	0	.521	0	.079	0	0	0			28
29			.998	0	.261	0	.103	0	0	0			29
30			.124	0	.422	0	.155	0	0	0			30
31			.066		.559		.078	0		0			31
TOTAL			3.887	.717	6.823	.366	.415	.072	0	0			TOTAL
MEAN			.125	.024	.220	.012	.013	.002	0	0			MEAN
DAM3			336	61.9	590	31.6	35.9	6.22	0	0			DAM3
MAX			1.48	.122	1.53	.178	.155	.034	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .050 M3/S
TOTAL DISCHARGE, 1060 DAM3
MAXIMUM DAILY DISCHARGE, 1.53 M3/S ON MAY 25
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 1.880 M3/S B AY 10:00 CST ON MARCH 27

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA MIDDLE CREEK ABOVE LODGE CREEK STATION NO. 11AB008

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	1.31	.010	.809	.034	0	0	0	0		1
2			0 B	.904	.009	.969	.028	0	0	0	0		2
3			0 B	.685	.008	.999	.022	.019	0	0	0		3
4			0 B	.372	.007	.923	.016	.032	0	0	0		4
5			0 B	.119	.006	.650	.012	.011	0	0	0		5
6			0 B	.118	.005	.196	.011	.004	0	0	0		6
7			0 B	.120	.005	.093	.009	.002	0	0			7
8			0 B	.103	.004	.048	.007	.002	0	0			8
9			0 B	.115	.004	.036	.006	.002	0	0			9
10			0 B	.118	.003	.031	.006	.001	0	0			10
11			0 B	.122	.003	.026	.005	.002	0	0			11
12			0 B	.118	.003	.025	.004	.003	0	0			12
13			0 B	.117	.002	.033	.003	.002	0	0			13
14			0 B	.117	.002	.021	.004	.002	0	0			14
15			0 B	.108	.002	.016	.003	.001	0	0			15
16			0 B	.094	.002	.021	.002	.001	0	0			16
17			0 B	.095	.002	.025	.002	.001	0	0			17
18			0 B	.092	.001	.024	.001	0	0	0			18
19			0 B	.091	.001	.023	.001	0	0	0			19
20		0 B	0 B	.093	.001	.157	.001	0	0	0			20
21		0 B	0 B	.102	.001	.164	.001	0	0	0			21
22		0 B	.003 B	.093	.002	.122	.001	0	0	0			22
23		0 B	.265 B	.076	.003	.118	0	0	0	0			23
24		0 B	1.92 B	.036	.004	.096	0	0	0	0			24
25		0 B	8.00 B	.022	.037	.044	0	0	0	0			25
26		0 B	13.6	.031	.059	.028	0	0	0	0			26
27		0 B	15.8	.032	.050	.022	0	0	0	0			27
28		0 B	12.5	.019	.041	.017	0	0	0	0			28
29			6.04	.014	.133	.017	0	0	0	0			29
30			3.07	.012	.362	.024	0	0	0	0			30
31			1.82		.820		0	0		0			31
TOTAL			63.018	5.448	1.592	5.777	.179	.085	0	0			TOTAL
MEAN			2.03	.182	.051	.193	.006	.003	0	0			MEAN
DAM3			5440	471	138	499	15.5	7.34	0	0			DAM3
MAX			15.8	1.31	.820	.999	.034	.032	0	0			MAX
MIN			0	.012	.001	.016	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .311 M3/S
TOTAL DISCHARGE, 6570 DAM3
MAXIMUM DAILY DISCHARGE,15.8 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 16.9 M3/S AT 19:45 CST ON MARCH 27

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA MIDDLE CREEK NEAR GOVENLOCK STATION NO. 11AB108

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1		0 B	0 B	.737	.072	.209	.008	.001	0	0	.031		1
2		0 B	0 B	.526	.054	.312	.009	.001	0	0	.029		2
3		0 B	0 B	.509	.042	.251	.009	.001	0	0	.029		3
4		0 B	0 B	.461	.040	.180	.008	.001	0	0	.030		4
5		0 B	0 B	.328	.038	.155	.006	0	0	0	.033 A		5
6		0 B	0 B	.392	.037	.147	.004	0	0	0			6
7		0 B	0 B	.220	.035	.135	.003	0	0	0			7
8		0 B	0 B	.161	.026	.121	.002	0	0	0			8
9		0 B	0 B	.150	.019	.107	.003	0	0	0			9
10		0 B	0 B	.124	.015	.093	.004	0	0	0			10
11		0 B	0 B	.098	.012	.081	.004	0	0	0			11
12		0 B	0 B	.093	.010	.073	.004	0	0	0			12
13		0 B	0 B	.069	.010	.064	.004	0	0	.016			13
14		0 B	0 B	.145	.009	.064	.004	0	0	.026			14
15		0 B	0 B	.061	.009	.057	.003	0	0	.025			15
16		0 B	0 B	.047	.009	.052	.003	0	0	.029			16
17		0 B	0 B	.070	.009	.053	.003	0	0	.029			17
18		0 B	0 B	.117	.007	.042	.003	0	0	.026			18
19		0 B	0 B	.040	.007	.037	.003	0	0	.028			19
20		0 B	.024 B	.075	.007	.033	.004	0	0	.028			20
21		0 B	.060 B	.095	.006	.028	.004	0	0	.029			21
22		0 B	.089 B	.034	.006	.025	.004	0	0	.030			22
23		0 B	.959 B	.026	.008	.022	.003	0	0	.030			23
24		0 B	3.21 B	.055	.023	.018	.003	0	0	.030			24
25		0 B	5.16 B	.101	.048	.015	.003	0	0	.029			25
26		0 B	15.5 B	.214	.729	.013	.003	0	0	.030			26
27		0 B	13.8	.091	1.60	.010	.003	0	0	.029			27
28		0 B	3.16	.067	1.27	.007	.002	0	0	.030			28
29			2.11	.058	.969	.008	.002	0	0	.031			29
30			1.55	.085	.552	.008	.002	0	0	.030			30
31			1.11		.285		.001	0		.032			31
TOTAL		0	46.732	5.249	5.963	2.420	.121	.004	0	.537			TOTAL
MEAN		0	1.51	.175	.192	.081	.004	0	0	.017			MEAN
DAM3		0	4040	454	515	209	10.5	.346	0	46.4			DAM3
MAX		0	15.5	.737	1.60	.312	.009	.001	0	.032			MAX
MIN		0	0	.026	.006	.007	.001	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .249 M3/S
TOTAL DISCHARGE, 5280 DAM3
MAXIMUM DAILY DISCHARGE,15.5 M3/S ON MAR 26
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE
B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 28.8 M3/S B AT 23:59 CST ON MARCH 26

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA ALTAWAN EVAPORATION STATION NO. 11EV089

DAILY EVAPORATION IN METRES FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1				0	0	.011	.005	.011	.010	0 A			1
2				0	.010	.008	.006	.011	.010	.011			2
3				0	.006	.009	.006	.011	.009	0			3
4				0	.007	.012	.008	.012	.008	0			4
5				0	.007	.005	.008	.010	.008	0			5
6				0	.006	0	.009	.010	.006	.011			6
7				0	.007	.005	.009	0	.009	0			7
8				0	.007	.005	.010	0	.007	0			8
9				0	.008	.003	.005	.002	.007	0			9
10				0	.009	.004	.009	.005	.007	0			10
11				0	.009	.001	.009	.007	.007	0			11
12				0	.010	.010	.009	.008	.006	0			12
13				0	.008	.010	.010	.008	0	0			13
14				0	.007	.005	.011	.001	.002	0			14
15				0	.010	.007	.012	.005	-.004	0			15
16				.021	.011	.009	.012	.006	.005	0			16
17				.006	.006	.010	.007	.005	.002	0			17
18				.006	.006	.009	.010	.005	.003	0			18
19				.005	.008	.010	.009	.007	.003	0			19
20				0	.009	.005	.009	.007	.003	0			20
21				0	.004	.009	.009	.009	.005	0			21
22				0	0	.009	.012	.010	.007	0			22
23				.012	-.005	.009	.011	.005	.007	0			23
24				0	-.007	.008	.009	.007	.007	0			24
25				.005	-.031	.009	.010	.009	.007	0			25
26				.005	.003	.012	.009	.008	.008	0			26
27				.005	.002	.011	.009	.008	.008	0			27
28				.006	.006	.011	.009	.007	.008	0			28
29				.006	.007	-.007	.009	.008	.008	0			29
30				0	.008	.004	.012	.008	.008	0			30
31					.011		.012	.008		0			31
TOTAL				.077	.149	.213	.284	.218	.181	.022			TOTAL
MEAN				.003	.005	.007	.009	.007	.006	.001			MEAN
DAM3				6.65	12.9	18.4	24.5	18.8	15.6	1.90			DAM3
MAX				.021	.011	.012	.012	.012	.010	.011			MAX
MIN				0	-.031	-.007	.005	0	-.004	0			MIN

SUMMARY FOR THE MONTHS APR TO OCT:

MEAN EVAPORATION, .005 M

TOTAL EVAPORATION: NOT DETERMINED

MAXIMUM DAILY EVAPORATION, .021 M3/S ON APR 16

MINIMUM DAILY EVAPORATION, -.031 M3/S ON MAY 25

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

STORAGE FACTORS AND EVAPORATION LOSSES
1997

ALTAWAN RESERVOIR 11AB089

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	898.157		0	898.154	898.159	4087	4094	7
2	899.237		0	898.159	900.315	4094	7692	3598
3	900.069	0.000	0	900.315	899.822	7692	6802	-890
4	899.875	0.071	88	899.822	899.927	6802	6988	186
5	899.895	0.100	125	899.927	899.862	6988	6873	-115
6	899.898	0.036	45	899.862	899.933	6873	6999	126
7	899.902	0.102	127	899.933	899.871	6999	6889	-110
8	899.821	0.133	165	899.871	899.770	6889	6710	-179
9	899.739	0.100	123	899.770	899.707	6710	6599	-111
10	899.431	0.157	188	899.707	899.154	6599	5652	-947
11	898.931	0.119	135	899.154	898.708	5652	4927	-725
12	898.678	0.107	118	898.708	898.648	4927	4832	-95
13	898.598	0.110	120	898.648	898.547	4832	4675	-157
14	898.519	0.071	76	898.547	898.490	4675	4588	-87
15	898.471	0.038	41	898.490	898.452	4588	4530	-58
16	898.442	0.000	0	898.452	898.431	4530	4498	-32

EVAPORATION STATION IS ALTAWAN

WATER SURVEY OF CANADA SPANGLER DITCH NEAR GOVENLOCK STATION NO. 11AB060

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	.294	0	.647	0	.927	0	0			1
2			0	.484	0	.004	0	.919	0	0			2
3			0	.484	0	.001	0	.908	0	0			3
4			0	.491	0	0	0	.904	0	0			4
5			0	.493	0	0	0	.895	0	0			5
6			0	.496	0	0	0	.423	0	0			6
7			0	.500	0	0	0	.002	0	0			7
8			0	.504	0	0	0	0	0	0			8
9			0	.508	0	0	0	0	0	0			9
10			0	.511	0	0	0	0	0	0			10
11			0	.510	0	0	0	0	0	0			11
12			0	.509	0	0	0	0	0	0			12
13			0	.506	0	0	0	0	0	0			13
14			0	.504	0	0	0	0	0	0			14
15			0	.513	0	0	0	0	0	0			15
16			0	.519	0	0	0	0	0	0			16
17			0	.261	0	0	0	0 A	0	0			17
18			0	.002	0	0	0	0	0	0			18
19			0	0	0	0	0	0	0	0			19
20			0	0	.828	0	0	0	0	0			20
21			0	0	1.12	0	.755	0	0	0			21
22			0	0	1.13	0	1.02	0	0	0			22
23			0	0	1.16	0	1.01	0	0	0			23
24			0	0	1.17	0	.999	0	0	0			24
25			0	0	1.19	0	.991	0	0	0			25
26			0	0	1.22	0	.978	0	0	0			26
27			0	0	1.20	0	.970	0	0	0			27
28			0	0	1.19	0	.963	0	0	0			28
29			0	0	1.12	0	.960	0	0	0			29
30			0 A	0	.911	0	.945	0	0	0			30
31			.001		.905		.936	0		0			31
TOTAL			.001	8.089	13.144	.652	10.527	4.978	0	0			TOTAL
MEAN			0	.270	.424	.022	.340	.161	0	0			MEAN
DAM3			.086	699	1140	56.3	910	430	0	0			DAM3
MAX			.001	.519	1.22	.647	1.02	.927	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .153 M3/S
TOTAL DISCHARGE, 3240 DAM3
MAXIMUM DAILY DISCHARGE, 1.22 M3/S ON MAY 26
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTAIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA SQUAW COULEE NEAR WILLOW CREEK STATION NO. 11AB103

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.125	.002	.127	0	0	0	0	0		1
2			0 B	.091	0	.091	0	0	0	0			2
3			0 B	.078	0	.130	0	0	0	0			3
4			0 B	.062	0	.072	0	0	0	0			4
5			0 B	.047	0	.043	0	0	0	0			5
6			0 B	.044	0	.029	0	0	0	0			6
7			0 B	.042	0	.019	0	.019	0	0			7
8			0 B	.040	0	.016	0	.031	0	0			8
9			0 B	.040	0	.015	0	.018	0	0			9
10			0 B	.040	0	.013	0	.012	0	0			10
11			0 B	.039	0	.012	0	.007	0	0			11
12			0 B	.038	0	.012	0	.003	0	0			12
13			0 B	.036	0	.009	0	.001	0	0			13
14			0 B	.033	0	.008	0	0	0	0			14
15			0 B	.028	0	.006	0	0	0	0			15
16			0 B	.023	0	.004	0	0	0	0			16
17			0 B	.020	0	.002	0	0	0	0			17
18			.001 E	.257	0	.001	0	0	0	0			18
19			.024 E	.818	0	0	0	0	0	0			19
20		0 B	.070 E	.631	0	.007	0	0	0	0			20
21		0 B	.180 E	.465	0	.013	0	0	0	0			21
22		0 B	.400 E	.288	0	.006	0	0	0	0			22
23		0 B	1.20 E	.142	0	.002	0	0	0	0			23
24		0 B	4.18 A	.106	0	0	0	0	0	0			24
25		0 B	4.63	.080	0	0	0	0	0	0			25
26		0 B	6.78	.048	0	0	0	0	0	0			26
27		0 B	3.40	.024	.615	0	0	0	0	0			27
28		0 B	1.08	.013	.320	0	0	0	0	0			28
29			.574	.008	.314	0	0	0	0	0			29
30			.338	.004	.293	0	0	0	0	0			30
31			.204		.210		0	0		0			31
TOTAL			23.061	3.710	1.754	.637	0	.091	0	0			TOTAL
MEAN			.744	.124	.057	.021	0	.003	0	0			MEAN
DAM3			1990	321	152	55.0	0	7.86	0	0			DAM3
MAX			6.78	.818	.615	.130	0	.031	0	0			MAX
MIN			0	.004	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .119 M3/S
TOTAL DISCHARGE, 2530 DAM3
MAXIMUM DAILY DISCHARGE, 6.78 M3/S ON MAR 26
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

MAXIMUM INSTANTANEOUS DISCHARGE, 9.02 M3/S AT 10:56 CST ON MARCH 26, 1997

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

LODGE CREEK BASIN - SASKATCHEWAN
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		Sept	
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	1-15	Total
205			36.9	26.4										63.3
410		20.7	8.9											29.6
787		10.3	9.4											19.7
788			9.9											9.9
831			39.9	16.0										55.9
832			46.4	18.6										65.0
1582		9.2	3.9											13.1
1583		10.9	4.7											15.6
4382		2.1	2.1											4.2
4446		5.8	0.7											6.5
8250		10.3	10.3											20.6
8299			5.3											5.3
10600			51.1	20.4										71.5
10663														
10789		6.8	11.3											18.1
10877		12.0	4.5											16.5
11727		4.2	3.2											7.4
11746		7.9	6.1											14.0
11768		23.8												23.8
12478			3.5	1.4										4.9
12479			4.8	1.9										6.7
12480			8.2	3.3										11.5
12481			8.2	3.3										11.5
12482			26.0	10.4										36.4
15028					24.0	17.1								41.1
Total Sask.	0	124	305	102	24	17	0	0	0	0	0	0	0	572

LODGE CREEK BASIN - ALBERTA
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		Sept	
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	1-15	Total
370														
412														0.0
415														
2130														
2935														
3787														
8097 & 397														
9654														
12719														
13803														
14535														0.0
14562														
15617														
16378														
16878														
303M &365M														
920M														
1830M														
20452M														
Total Alberta	0	3035	333	160	0	0	0	0	0	0	0	0	0	3528
Total Sask.	0	124	305	102	24	17	0	0	0	0	0	0	0	572
Total Entire Basin	0	3159	638	262	24	17	0	0	0	0	0	0	0	4100

Alberta Environment did not supply individual license allocations.
Water Rights Data supplied by Saskatchewan Water Corporation and Alberta Environment.

WATER SURVEY OF CANADA BATTLE CREEK AT INTERNATIONAL BOUNDARY STATION NO. 11AB027

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			.080 B	11.2	1.54	1.28	.249	.020	.069	.002			1
2			.080 B	7.41	1.47	1.91	.255	.016	.055	.002			2
3			.080 B	5.16	1.45	2.13	.350	.011	.046	.001			3
4			.075 B	5.06	1.63	1.15	.409	.008	.030	.001			4
5			.075 B	6.20	1.51	.721	.494	.005	.022	.001			5
6			.075 B	4.56	1.33	.722	.706	.003	.019	.001			6
7			.075 B	4.23	1.20	1.13	.760	.002	.014	.001			7
8			.080 B	4.84	1.14	1.20	.592	.002	.011	.001			8
9			.080 B	4.18	1.03	1.24	.483	.002	.008	.001			9
10			.080 B	4.41	.908	1.52	.439	.001	.006	0			10
11			.090 B	4.57	.835	1.03	.479	.001	.005	.001			11
12			.100 B	3.73	.769	.714	.479	.001	.006	.038			12
13			.090 B	3.41	.689	.541	.438	0	.006	.090			13
14			.085 B	3.04	.664	.495	.408	0	.005	.093			14
15			.080 B	2.79	.618	.431	.369	0	.003	.111			15
16			.080 B	2.60	.568	.332	.329	0	.003	.149			16
17			.080 B	2.87	.532	.301	.283	0	.006	.196			17
18			.085 B	3.45	.497	.363	.241	0	.006	.180			18
19			.100 B	3.39	.476	.323	.201	0	.010	.209			19
20			.200 B	3.16	.420	.288	.179	0	.012	.221			20
21			.500 B	3.44	.373	.266	.162	.038	.012	.247			21
22			2.00 B	3.38	.406	.281	.149	.114	.013	.265			22
23			5.00 B	2.98	.544	.243	.125	.095	.012	.280			23
24			10.0 B	2.86	1.23	.257	.106	.098	.010	.285			24
25			25.0 B	2.63	1.36	.276	.091	.183	.009	.278			25
26			55.0 B	2.39	4.31	.294	.091	.187	.007	.285			26
27			69.2	2.11	3.74	.254	.094	.155	.005	.285			27
28			65.6	1.91	3.39	.209	.073	.127	.004	.270			28
29			39.7	1.72	3.98	.189	.041	.114	.003	.279			29
30			20.9	1.58	3.42	.247	.028	.108	.002	.282			30
31			15.1		1.74		.024	.086		.291			31
TOTAL			309.770	115.26	43.769	20.337	9.127	1.377	.419	4.346			TOTAL
MEAN			9.99	3.84	1.41	.678	.294	.044	.014	.140			MEAN
DAM3			26800	9960	3780	1760	789	119	36.2	375			DAM3
MAX			69.2	11.2	4.31	2.13	.760	.187	.069	.291			MAX
MIN			.075	1.58	.373	.189	.024	0	.002	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, 2.06 M3/S
TOTAL DISCHARGE, 43600 DAM3
MAXIMUM DAILY DISCHARGE,69.2 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON AUG 13

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 97.2 M3/S B AT 22:03 CST ON MAR 26

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

STORAGE FACTORS AND EVAPORATION LOSSES

1997

REESOR RESERVOIR 11AB090

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	1226.399	0.000	0	1226.415	1226.382	1627	1610	-17
2	1226.376	0.000	0	1226.382	1226.369	1610	1603	-7
3	1226.376	0.033	12	1226.369	1226.383	1603	1610	7
4	1226.397	0.060	22	1226.383	1226.410	1610	1624	14
5	1226.434	0.126	46	1226.410	1226.458	1624	1649	25
6	1226.492	0.034	12	1226.458	1226.525	1649	1683	34
7	1226.538	0.095	35	1226.525	1226.550	1683	1697	14
8	1226.540	0.107	39	1226.550	1226.529	1697	1685	-12
9	1226.503	0.147	53	1226.529	1226.476	1685	1658	-27
10	1226.441	0.152	55	1226.476	1226.405	1658	1622	-36
11	1226.412	0.093	34	1226.405	1226.418	1622	1628	6
12	1226.389	0.124	45	1226.418	1226.359	1628	1598	-30
13	1226.346	0.076	27	1226.359	1226.332	1598	1584	-14
14	1226.313	0.090	32	1226.332	1226.293	1584	1564	-20
15	1226.276	0.011	4	1226.293	1226.258	1564	1546	-18
16	1226.253	0.000	0	1226.258	1226.248	1546	1541	-5
EVAPORATION STATION IS ALTAWAN								
	0	0.000	0.000	1226	0	1541	0	-1541

WATER SURVEY OF CANADA GAFF DITCH NEAR MERRYFLAT STATION NO. 11AB102

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.001 B	.593	.002	.008	.001	.004	0	.001		1
2			0 B	.001 B	.639	.001	.010	.001	.004	0	.001		2
3			0 B	0 B	.620	.001	.010	.001	.003	0	.001		3
4			0 B	0 B	.596	.001	.011	.001	.003	0	.001		4
5			0 B	0 B	.690	.001	.009	.002	.001	0	.001		5
6			0 B	0 B	.568	.345	.009	.002	0	0	.001 A		6
7			0 B	0 B	.600	.513	.005	.002	.001	0			7
8			0 B	0 B	.594	.519	.003	.003	.001	0			8
9			0 B	0 B	.637	.521	.003	.003	.001	0			9
10			0 B	0 B	.636	.522	.002	.003	.001	0			10
11			0 B	0 B	.604	.494	.002	.003	.001	0			11
12			0 B	.001 B	.537	.477	.001	.005	.002	0			12
13			0 B	.002 B	.153	.451	.001	.005	.003	0			13
14			0 B	.008 B	.267	.313	.001	.003	0	.001			14
15			0 B	.124 B	.629	.263	.001	.003	0	.001			15
16			0 B	.249 B	.597	.259	.001	.003	0	.001			16
17			0 B	.347 B	.566	.105	.001	.004	0	.001			17
18			0 B	.404 B	.548	.020	.002	.006	0	.001			18
19			0 B	.402	.541	.016	.001	.006	0	.001			19
20			0 B	.348	.541	.014	.001	.006	0	.001			20
21			0 B	.449	.543	.010	.001	.006	0	.001			21
22			0 B	.508	.517	.010	.001	.006	0	.001			22
23			0 B	.480	.563	.004	.002	.007	0	.001			23
24			0 B	.357	.630	.001	.002	.007	0	.001			24
25			0 B	.627	.780	.001	.001	.007	0	.001			25
26			0 B	.614	.331	.001	.002	.006	0	.001			26
27			0 B	.599	.017	.002	.002	.006	0	.001			27
28			.001 B	.599	.008	.003	.002	.007	0	.001			28
29			.001 B	.612	.006	.001	.001	.007	0	.001			29
30			.001 B	.584	.004	.007	.001	.004	0	.001			30
31			.001 B		.003		.001	.004		.001			31
TOTAL			.004	7.316	14.558	4.878	.098	.130	.025	.018			TOTAL
MEAN			0	.244	.470	.163	.003	.004	.001	.001			MEAN
DAM3			.346	632	1260	421	8.47	11.2	2.16	1.56			DAM3
MAX			.001	.627	.780	.522	.011	.007	.004	.001			MAX
MIN			0	0	.003	.001	.001	.001	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .110 M3/S
TOTAL DISCHARGE, 2340 DAM3
MAXIMUM DAILY DISCHARGE, .780 M3/S ON MAY 25
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

A-MANUAL GAUGE
B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 0.916 M3/S AT 05:45 CST ON MAY 26

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA CYPRESS LAKE WEST INFLOW CANAL STATION NO. 11AB078

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1		0 B	0 B	3.24	.181	.706	.061	.030	0	0	.019		1
2		0 B	0 B	2.60	.184	.163	.046	.029	0	0	.021		2
3		0 B	0 B	1.76	.173	.141	.047	.028	0	0	.022		3
4		0 B	0 B	1.65	.168	.137	.047	.027	0	0	.023 A		4
5		0 B	0 B	1.30 B	.187	.131	.047	.026	0	0			5
6		0 B	0 B	1.22 B	.223	.149	.049	.025	0	0			6
7		0 B	0 B	1.14 B	.204	.435	.047	.024	0	0			7
8		0 B	0 B	1.05 B	.193	.330	.045	.024	0	0			8
9		0 B	0 B	.975 B	.177	.263	.043	.021	0	0			9
10		0 B	0 B	.895 B	.159	.172	.042	.019	0	0			10
11		0 B	0 B	.815 B	.153	.166	.040	.018	.576	0			11
12		0 B	0 B	.730 B	.131	.067	.038	.018	.109	0			12
13		0 B	0 B	.650 B	.095	.051	.037	.018	.079	0			13
14		0 B	0 B	.766 B	.093	.045	.036	.018	.067	0			14
15		0 B	0 B	.718	.095	.045	.034	.018	.083	0			15
16		0 B	0 B	.557	.110	.071	.034	.018	.090	0			16
17		0 B	0 B	.488	.106	.176	.036	.017	.076	0			17
18		0 B	.100 B	.515	.108	.182	.035	.017	.075	0			18
19		0 B	1.50 B	.778	.107	.175	.035	.016	.062	0			19
20		0 B	10.0 B	.826	.102	.170	.036	.015	.046	0			20
21		0 B	15.5 B	.826	.094	.177	.036	.014	.043	0			21
22		0 B	13.4 B	.872	.097	.186	.036	.012	.040	0			22
23		0 B	15.4 B	1.04	.104	.180	.035	.010	.035	0			23
24		0 B	11.0 B	1.06	.110	.181	.035	.011	.029	0			24
25		0 B	7.15 B	.915	.189	.174	.034	.010	.016	0			25
26		0 B	8.02 B	.704	.206	.181	.035	.007	.003	0			26
27		0 B	10.8 B	.636	2.08	.174	.033	.005	0	0			27
28		0 B	11.2 B	.464	2.84	.168	.033	.003	0	.027			28
29			11.4	.232	1.97	.180	.032	0	0	.025			29
30			4.77	.208	1.53	.171	.032	0	0	.023			30
31			3.67		1.40		.031	0		.020			31
TOTAL		0	123.910	29.630	13.569	5.547	1.207	.498	1.429	.095			TOTAL
MEAN		0	4.00	.988	.438	.185	.039	.016	.048	.003			MEAN
DAM3		0	10700	2560	1170	479	104	43.0	123	8.21			DAM3
MAX		0	15.5	3.24	2.84	.706	.061	.030	.576	.027			MAX
MIN		0	0	.208	.093	.045	.031	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .718 M3/S
TOTAL DISCHARGE, 15200 DAM3
MAXIMUM DAILY DISCHARGE,15.5 M3/S ON MAR 21
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

A-MANUAL GAUGE
B-ICE CONDITIONS

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA CYPRESS LAKE WEST OUTFLOW CANAL STATION NO. 11AB077

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1		0 B	0 B	.561	.142	2.03	.001	0	0	0	0		1
2		0 B	0 B	.580	.139	1.70	.001	0	0	0	0		2
3		0 B	0 B	.381	.137	1.07	.001	0	0	0	0 A		3
4		0 B	0 B	.010 B	.134	.883	.001	0	0	0			4
5		0 B	0 B	0 B	.131	.851	.001	0	0	0			5
6		0 B	0 B	0 B	.129	.740	.081	0	0	0			6
7		0 B	0 B	0 B	.128	.051	.206	0	0	0			7
8		0 B	0 B	0 B	.127	.023	.202	0	0	0			8
9		0 B	0 B	0 B	.125	.020	.197	0	0	0			9
10		0 B	0 B	0 B	.122	.017	.191	0	0	0			10
11		0 B	0 B	0 B	.120	.012	.173	0	0	0			11
12		0 B	0 B	0 B	.118	.007	.037	0	0	0			12
13		0 B	0 B	0	.112	.004	.005	0	0	0			13
14		0 B	0 B	0	.107	.003	0	0	0	0			14
15		0 B	0 B	0	.074	.001	0	0	0	0			15
16		0 B	0 B	0	.105	.001	0	0	0	0			16
17		0 B	0 B	0	.111	0	0	0	0	0			17
18		0 B	0 B	0	.117	0	0	0	0	0			18
19		0 B	.010 B	0	.120	0	0	0	0	0			19
20		0 B	.050 B	0	2.59	0	0	0	0	0			20
21		0 B	.100 B	0	4.41	0	0	0	0	0			21
22		0 B	.155 B	0	4.57	0	0	0	0	0			22
23		0 B	.186 B	0	4.79	0	0	0	0	0			23
24		0 B	.152 B	.008	5.21	.001	0	0	0	0			24
25		0 B	.181 B	.032	5.71	.002	0	0	0	0			25
26		0 B	.352 B	.111	5.95	.001	0	0	0	0			26
27		0 B	.455 B	.180	5.57	.001	0	0	0	0			27
28		0 B	.352 B	.191	5.45	.001	0	0	0	0			28
29			.572 B	.156	5.35	.001	0	0	0	0			29
30			.597 B	.147	4.98	.002	0	0	0	0			30
31			.579 B		3.19		0	0		0			31
TOTAL		0	3.741	2.357	60.068	7.422	1.097	0	0	0			TOTAL
MEAN		0	.121	.079	1.94	.247	.035	0	0	0			MEAN
DAM3		0	323	204	5190	641	94.8	0	0	0			DAM3
MAX		0	.597	.580	5.95	2.03	.206	0	0	0			MAX
MIN		0	0	0	.074	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .305 M3/S
TOTAL DISCHARGE, 6450 DAM3
MAXIMUM DAILY DISCHARGE, 5.95 M3/S ON MAY 26
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

A-MANUAL GAUGE
B-ICE CONDITIONS

APPROVED BY THE FIELD REPRESENTAIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA CYPRESS LAKE WEST INFLOW CANAL DRAIN STATION NO. 11AB085

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.001 B	0	.001	.002	0	0	0			1
2			0 B	.001 B	0	.001	.002	0	0	0			2
3			0 B	.001 B	0	.001	.002	0	0	0			3
4			0 B	.001 B	0	.001	.001	0	0	0			4
5			0 B	.001 B	0	.001	.001	0	0	0			5
6			0 B	.001 B	0	.001	.001	0	0	0			6
7			0 B	.001 B	0	.001	.001	0	0	0			7
8			0 B	.001 B	0	.001	.001	0	0	0			8
9			0 B	.001 B	0	.001	.001	0	0	0			9
10			0 B	.001 B	0	.001	.001	0	0	0			10
11			0 B	.001 B	0	.001	.001	0	.001	0			11
12			0 B	.001 B	0	.001	.001	0	.001	0			12
13			0 B	.001 B	0	.001	0	0	.001	0			13
14			0 B	.001 B	0	.001	0	0	.001	0			14
15			0 B	.001 B	0	.001	0	0	.001	0			15
16			0 B	.001	0	.001	0	0	0	0			16
17			0 B	0	0	.001	0	0	0	0			17
18			0 B	0	0	.002	0	0	0	0			18
19			.001 B	0	0	.002	0	0	0	0			19
20			.001 B	0	0	.002	0	0	0	0			20
21			.001 B	0	0	.002	0	0	0	0			21
22			.001 B	0	0	.002	0	0	0	0			22
23			.001 B	0	0	.002	0	0	0	0			23
24			.001 B	0	.001	.002	0	0	0	0			24
25			.001 B	0	.001	.002	0	0	0	0			25
26			.001 B	0	.001	.002	0	0	0	0			26
27			.001 B	0	.001	.002	0	0	0	0			27
28			.001 B	0	.001	.002	0	0	0	0			28
29			.001 B	0	.001	.002	0	0	0	0			29
30			.001 B	0	.001	.002	0	0	0	0			30
31			.001 B		.001		0	0		0			31
TOTAL			.013	.016	.008	.043	.015	0	.005	0			TOTAL
MEAN			0	.001	0	.001	0	0	0	0			MEAN
DAM3			1.12	1.38	.691	3.72	1.30	0	.432	0			DAM3
MAX			.001	.001	.001	.002	.002	0	.001	0			MAX
MIN			0	0	0	.001	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, 0 M3/S

TOTAL DISCHARGE, 8.64 DAM3

MAXIMUM DAILY DISCHARGE, .002 M3/S ON JUN 18

MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA VIDORA DITCH NEAR CONSUL STATION NO. 11AB084

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	1.02	0	0	0	0			1
2			0	0	0	1.23	0	0	0	0			2
3			0	0	0	.970	0	0	0	0			3
4			0	0	0	.758	0	0	0	0			4
5			0	0	0	.732	0	0	0	0			5
6			0	0	0	.597	0	0	0	0			6
7			0	0	0	.010	.002	0	0	0			7
8			0	0	0	.006	.002	0	0	0			8
9			0	0	0	.004	.001	0	0	0			9
10			0	0	0	.003	.001	0	0	0			10
11			0	0	0	.003	.001	0	0	0			11
12			0	0	0	.001	0	0	0	0			12
13			0	0	0	.001	0	0	0	0			13
14			0	0	0	.002	0	0	0	0			14
15			0	0	0	0	0	0	0	0			15
16			0	0	0	0	0	0	0	0			16
17			0	0	0	0	0	0	0	0			17
18			0	0	0	0	0	0	0	0			18
19			0	0	0	0	0	0	0	0			19
20			0	0	1.31	0	0	0	0	0			20
21			0	0	1.90	0	0	0	0	0			21
22			0	0	1.83	0	0	0	0	0			22
23			0	0	1.88	0	0	0	0	0			23
24			0	0	1.89	0	0	0	0	0			24
25			0	0	1.92	0	0	0	0	0			25
26			0	0	1.97	0	0	0	0	0			26
27			0	0	1.91	0	0	0	0	0			27
28			0	0	1.91	0	0	0	0	0			28
29			0	0	1.89	0	0	0	0	0			29
30			0	0	1.73	0	0	0	0	0			30
31			0		.660		0	0		0			31
TOTAL			0	0	20.800	5.337	.007	0	0	0			TOTAL
MEAN			0	0	.671	.178	0	0	0	0			MEAN
DAM3			0	0	1800	461	.605	0	0	0			DAM3
MAX			0	0	1.97	1.23	.002	0	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .107 M3/S
TOTAL DISCHARGE, 2260 DAM3
MAXIMUM DAILY DISCHARGE, 1.97 M3/S ON MAY 26
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA RICHARDSON DITCH NEAR CONSUL STATION NO. 11AB058

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	.024	0	0	0	0			1
2			0	0	0	.015	0	0	0	0			2
3			0	0	0	.010	0	0	0	0			3
4			0	0	0	.006	0	0	0	0			4
5			0	0	0	.004	0	0	0	0			5
6			0	0	0	.002	0	0	0	0			6
7			0	0	0	.001	0	0	0	0			7
8			0	0	0	0	0	0	0	0			8
9			0	0	0	0	0	0	0	0			9
10			0	0	0	0	0	0	0	0			10
11			0	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	0	0	0	0	0	0			13
14			0	0	0	0	0	0	0	0			14
15			0	0	0	0	0	0	0	0			15
16			0	0	0	0	0	0	0	0			16
17			0	0	0	0	0	0	0	0			17
18			0	0	0	0	0	0	0	0			18
19			0	0	0	0	0	0	0	0			19
20			0	0	0	0	0	0	0	0			20
21			0	0	1.34	0	0	0	0	0			21
22			0	0	1.67	0	0	0	0	0			22
23			0	0	1.75	0	0	0	0	0			23
24			0	0	1.85	0	0	0	0	0			24
25			0	0	1.84	0	0	0	0	0			25
26			0	0	1.80	0	0	0	0	0			26
27			0	0	1.82	0	0	0	0	0			27
28			0	0	1.84	0	0	0	0	0			28
29			0	0	1.76	0	0	0	0	0			29
30			0	0	1.72	0	0	0	0	0			30
31			0		.738		0	0		0			31
TOTAL			0	0	18.128	.062	0	0	0	0			TOTAL
MEAN			0	0	.585	.002	0	0	0	0			MEAN
DAM3			0	0	1570	5.36	0	0	0	0			DAM3
MAX			0	0	1.85	.024	0	0	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .074 M3/S
TOTAL DISCHARGE, 1580 DAM3
MAXIMUM DAILY DISCHARGE, 1.85 M3/S ON MAY 24
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA MCKINNON DITCH NEAR CONSUL STATION NO. 11AB044

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	.829	0	0	0	0			1
2			0	0	0	.545	0	0	0	0			2
3			0	0	0	.207	0	0	0	0			3
4			0	0	0	.006	0	0	0	0			4
5			0	0	0	.003	0	0	0	0			5
6			0	0	0	.001	0	0	0	0			6
7			0	0	0	0	0	0	0	0			7
8			0	0	0	0	0	0	0	0			8
9			0	0	0	0	0	0	0	0			9
10			0	0	0	0	0	0	0	0			10
11			0	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	0	0	0	0	0	0			13
14			0	0	0	0	0	0	0	0			14
15			0	0	0	0	0	0	0	0			15
16			0	0	0	0	0	0	0	0			16
17			0	0	0	0	0	0	0	0			17
18			0	0	0	0	0	0	0	0			18
19			0	0	0	0	0	0	0	0			19
20			0	0	0	0	0	0	0	0			20
21			0	0	0	0	0	0	0	0			21
22			0	0	.739	0	0	0	0	0			22
23			0	0	1.06	0	0	0	0	0			23
24			0	0	1.18	0	0	0	0	0			24
25			0	0	1.32	0	0	0	0	0			25
26			0	0	1.48	0	0	0	0	0			26
27			0	0	1.74	0	0	0	0	0			27
28			0	0	1.73	0	0	0	0	0			28
29			0	0	1.66	0	0	0	0	0			29
30			0	0	1.62	0	0	0	0	0			30
31			0		1.18		0	0		0			31
TOTAL			0	0	13.709	1.591	0	0	0	0			TOTAL
MEAN			0	0	.442	.053	0	0	0	0			MEAN
DAM3			0	0	1180	137	0	0	0	0			DAM3
MAX			0	0	1.74	.829	0	0	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .062 M3/S
TOTAL DISCHARGE, 1320 DAM3
MAXIMUM DAILY DISCHARGE, 1.74 M3/S ON MAY 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA NASHLYN CANAL NEAR CONSUL STATION NO. 11AB018

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	1.07	.011	1.18	0	0	0	0			1
2			0 B	1.06	.009	1.14	0	0	0	0			2
3			0 B	1.04	.008	1.07	0	0	0	0			3
4			0 B	1.10	.007	1.04	0	0	0	0			4
5			0 B	1.13	.005	.591	0	0	0	0			5
6			0 B	1.20 A	.004	.069	0	0	0	0			6
7			0 B	1.18 E	.003	.038	0	0	0	0			7
8			0 B	1.17 E	.002	.026	0	0	0	0			8
9			0 B	1.15 E	.002	.021	0 A	0	0	0			9
10			0 B	1.14 E	.001	.017	0	0	0	0			10
11			0 B	1.12 E	.001	.014	0	0	0	0			11
12			0 B	1.11 E	0	.011	0	0	0	0			12
13			0 B	1.09 E	0	.008	0	0	0	0			13
14			0 B	1.08 E	0	.004	0	0	0	0			14
15			0 B	1.06 A	0	.001	0	0	0	0			15
16			0 B	.783	0	0	0	0	.022	0			16
17			0 B	.351	0	0	0	0	.041	0			17
18			0 B	.333	0	0	0	0	.033	0			18
19			0 B	.330	0	0	0	0	.028	0			19
20			0 B	.331	0	0	0	0	.018	0			20
21			0 B	.325	0	0	0	0	.010	0			21
22			0 B	.321	0	0	0	0	.002	0			22
23			.100 B	.258	0	0	0	0	0	0			23
24			.472 B	.233	0	0	0	0	0	0			24
25			1.35 B	.060	0	0	0	0	0	0			25
26			1.31 B	.028	0	0	0	0	0	0			26
27			2.38 B	.020	0	0	0	0	0	0			27
28			.918	.016	0	0	0	0	0	0			28
29			.872	.013	.320	0	0	0	0	0			29
30			.998	.011	1.11	0	0	0	0	0			30
31			.960		1.16		0	0		0			31
TOTAL			9.360	20.113	2.643	5.230	0	0	.154	0			TOTAL
MEAN			.302	.670	.085	.174	0	0	.005	0			MEAN
DAM3			809	1740	228	452	0	0	13.3	0			DAM3
MAX			2.38	1.20	1.16	1.18	0	0	.041	0			MAX
MIN			0	.011	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .153 M3/S
TOTAL DISCHARGE, 3240 DAM3
MAXIMUM DAILY DISCHARGE, 2.38 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

MAXIMUM INSTANTANEOUS DISCHARGE, NOT DETERMINED

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

BATTLE CREEK BASIN - SASKATCHEWAN
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-25	26-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	Total
52		8.2		16.6	6.6								31.4
59	8.2				12.3	41.1							61.6
71			24.7										24.7
73			5.3										5.3
77					24.7								24.7
86					8.8	26.3	7.0						42.1
181		19.7											19.7
190		41.9	188.5										230.4
219		13.2	13.2										26.4
237		55.9											55.9
323		55.9	55.9										111.8
338													0.0
358													0.0
606	2.1	10.7	3.6										16.4
622		20.4	81.6										102.0
710													0.0
765		16.4											16.4
900	14.0	104.8	7.0										125.8
985		18.3	1.4										19.7
1247													0.0
1499		11.9	4.6										16.5
1753	33.7												33.7
1754		38.4	11.0										49.4
1786													0.0
2124		14.8											14.8
2159		4.9											4.9
2282		6.6											6.6
2283	1.6	13.2											14.8
2500		3.3											3.3
2755	5.5	49.6											55.1
2841													0.0
2954		0.9	0.7										1.6
3586													0.0
3739		15.6	6.2										21.8
3855	2.5	9.9											12.4
3930	0.5	1.1											1.6
3931	1.1	2.2											3.3
4851		11.4	8.3										19.7
5141													0.0
5193	6.2												6.2

continued ...

BATTLE CREEK BASIN - SASKATCHEWAN (continued)
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-25	26-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	Total
5263		32.2	17.2										49.4
5292	23.0												23.0
5293	0.3	5.0	2.0										7.3
5420		9.9	1.6										11.5
5421		20.6											20.6
5422		4.9											4.9
5441	18.5	18.5											37.0
5442		36.2											36.2
5453		31.2											31.2
5455	8.7	16.3	5.4										30.4
5512	3.6	5.4											9.0
5527	43.6												43.6
5528			10.7										10.7
5529			10.7										10.7
5539													0.0
5540													0.0
5557	10.7												10.7
5784		8.2											8.2
5874													0.0
5940		51.6	4.3										55.9
6139		7.5	3.1										10.6
6150		9.9											9.9
6308		17.3											17.3
6387		6.6											6.6
6714		9.0	9.0										18.0
6719		20.6	20.6										41.2
6795													0.0
7144					24.7								24.7
7241		4.9											4.9
8056			20.6										20.6
8107	7.8	14.5	4.8										27.1
8192		15.9	6.3										22.2
8228		4.1	16.4										20.5
8229		18.6											18.6
8314		13.1	13.1										26.2
8336		19.7											19.7
8498		1.6											1.6
8559													0.0
8575		12.3	61.7										74.0
8646		18.9											18.9
8647		7.1	5.2										12.3
8648		6.1	2.1										8.2

continued ...

BATTLE CREEK BASIN - SASKATCHEWAN (continued)
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		Jul y		August		
number	1-25	26-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	10-24	25-9	Total
8649		6.6	4.9										11.5
8973													0.0
8998		39.5											39.5
9321													0.0
9344		27.1											27.1
9579	3.3												3.3
9759													0.0
9760													0.0
9803					16.6	16.6							33.2
9811		9.7	2.6										12.3
9917	6.2												6.2
10138													0.0
10340		4.9											4.9
11191	3.4	3.6	1.2										8.2
11192	2.0	7.5	2.0										11.5
11805	0.9	3.2											4.1
13756					18.1	45.4							63.5
14422					55.8	50.7							106.5
14994					84.1	76.5							160.6
15610				6.5	42.2								48.7
Shepherd Ditch													0.0
Sub-Total	207	1099	638	23	294	257	7	0	0	0	0	0	2525
Adams L.													0
Alberta Use		100	68.0										168
Domestic Use	155	824	479	17	221	193	5	0	0	0	0	0	1894
Total	362	2023	1185	40	515	450	12	0	0	0	0	0	4587

Alberta Environment did not supply individual license allocations.

Water Rights Data supplied by Saskatchewan Water Corporation and Alberta Environment.

Domestic use estimated at 75 percent of irrigation use.

Totals of columns and rows may not add exactly due to rounding.

WATER SURVEY OF CANADA FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY STATION NO. 11AC041

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			.100 B	95.3	3.79	1.08	.319	.896	.011	.002	2.34		1
2			.080 B	65.4	3.09	1.02	.259	.810	.011	.001	2.24		2
3			.060 B	51.6	2.95	.708	.220	.775	.009	.001	1.07		3
4			.030 B	39.5	2.87	.559	.197	.693	.008	.001	.467		4
5			.010 B	26.9	2.80	.671	.182	.784	.007	.001	.265 A		5
6			.030 B	17.7	2.76	.546	.177	.541	.008	.012			6
7			.050 B	12.6	2.19	.733	.174	.390	.009	.007			7
8			.080 B	8.32	1.56	.719	.164	.426	.008	.005			8
9			.060 B	5.68	1.91	2.40	.145	.290	.007	.003			9
10			.100 B	4.07	2.02	5.66	.154	.196	.007	.003			10
11			.110 B	2.92	1.99	8.34	.151	.140	.008	.003			11
12			.090 B	2.66	1.97	8.98	.152	.106	.007	.003			12
13			.090 B	3.04	1.92	8.81	.146	.070	.007	.002			13
14			.090 B	3.96	1.72	7.28	.133	.055	.007	.003			14
15			.080 B	4.92	1.45	5.84	.115	.058	.007	.002			15
16			.080 B	7.49	1.38	5.50	.111	.064	.005	.002			16
17			.060 B	7.90	.987	4.23	.110	.045	.005	.002			17
18			.060 B	10.4	.997	2.98	.331	.031	.006	.002			18
19			.060 B	10.2	1.10	2.22	1.15	.046	.005	.002			19
20			1.00 B	6.55	1.37	1.43	1.35	.049	.004	.001			20
21			10.0 B	5.69	1.40	1.35	1.11	.048	.004	.001			21
22			15.0 B	7.43	1.47	1.25	1.12	.044	.004	.001			22
23			20.0 B	8.99	1.55	.894	1.48	.042	.004	.001			23
24			30.0 B	8.08	1.29	.760	1.12	.041	.003	.014			24
25			80.0 B	6.38	1.93	.728	.893	.041	.003	.046			25
26			187	7.68	2.27	.698	.962	.037	.003	.061			26
27			215	7.51	2.30	.674	1.03	.046	.003	.058			27
28			223	6.98	1.97	.671	1.00	.025	.003	.058			28
29			208	6.62	1.42	.609	1.39	.021	.002	.072			29
30			178	5.64	1.28	.478	1.59	.018	.002	.102			30
31			139		1.05		1.42	.015		1.49			31
TOTAL			1307.320	458.11	58.754	77.818	18.855	6.843	.177	1.962			TOTAL
MEAN			42.2	15.3	1.90	2.59	.608	.221	.006	.063			MEAN
DAM3			113000	39600	5080	6720	1630	591	15.3	170			DAM3
MAX			223	95.3	3.79	8.98	1.59	.896	.011	1.49			MAX
MIN			.010	2.66	.987	.478	.110	.015	.002	.001			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, 7.88 M3/S
TOTAL DISCHARGE, 167000 DAM3
MAXIMUM DAILY DISCHARGE, 223 M3/S ON MAR 28
MINIMUM DAILY DISCHARGE, .001 M3/S ON OCT 2

A-MANUAL GAUGE
B-ICE CONDITIONS

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA BELANGER CREEK DIVERSION TO CYPRESS LAKE STATION NO. 11AC064

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	.807	.001	.322	0	0	0	0			1
2			0 B	.402	0	.311	0	0	0	0			2
3			0 B	.563	.072	.307	0	0	0	0			3
4			0 B	.466	.157	.304	0	0	0	0			4
5			0 B	.680	.134	.299	0	0	0	0			5
6			0 B	.798	.132	.316	0	0	0	0			6
7			0 B	.780	.119	.347	0	0	0	0			7
8			0 B	.597	.121	.351	0	0	0	0			8
9			0 B	.555	.129	.352	0	0	0	0			9
10			0 B	.507	.117	.357	0	0	0	0			10
11			0 B	.564	.109	.346	0	0	0	0			11
12			0 B	.504	.102	.335	0	0	0	0			12
13			0 B	.327	.091	.314	0	0	0	0			13
14			0 B	.341	.090	.304	0	0	0	0			14
15			0 B	.356	.090	.290	0	0	0	0			15
16			0 B	.387	.089	.272	0	0	0	0			16
17			0 B	.492	.088	.256	0	0	0	0			17
18			0 B	.821	.141	.227	0	0	0	.025			18
19			0 B	.817	.240	.195	0	0	0	.023			19
20		0 B	8.32 B	.723	.225	.191	0	0	0	.025			20
21		0 B	15.3 B	.801	.227	.173	0	0	0	.028			21
22		0 B	11.5 B	1.45	.232	.173	0	0	0	.027			22
23		0 B	9.51 B	1.89	.314	.161	0	0	0	.030			23
24		0 B	6.69 B	1.32	.447	.148	0	0	0	.016			24
25		0 B	5.04 B	.713	.820	.186	0	0	0	0			25
26		0 B	5.70	.198	1.33	.152	0	0	0	0			26
27		0 B	8.15	.100	.882	.122	0	0	0	0			27
28		0 B	3.57	.052	.625	.115	0	0	0	0 A			28
29			1.84	.019	.475	.116	0	0	0	0 E			29
30			1.24	.008	.381	.125	0	0	0	0 E			30
31			.985		.335		0	0		0 E			31
TOTAL			77.845	18.038	8.315	7.467	0	0	0	.174			TOTAL
MEAN			2.51	.601	.268	.249	0	0	0	.006			MEAN
DAM3			6730	1560	718	645	0	0	0	15.0			DAM3
MAX			15.3	1.89	1.33	.357	0	0	0	.030			MAX
MIN			0	.008	0	.115	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .456 M3/S
TOTAL DISCHARGE, 9670 DAM3
MAXIMUM DAILY DISCHARGE,15.3 M3/S ON MAR 21
MINIMUM DAILY DISCHARGE, 0 M3/S ON SEVERAL DAYS

MAXIMUM INSTANTANEOUS DISCHARGE NOT DETERMINED

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA CYPRESS LAKE STATION NO. 11AC037

DAILY MEAN WATER LEVELS IN METRES FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			973.376	974.478	974.614	974.443	974.369	974.222	974.110	974.009			1
2			973.378	974.491 A	974.613	974.468	974.360	974.218	974.101	974.001			2
3			973.379	974.504	974.612	974.467	974.354	974.211	974.094	973.998			3
4			973.379	974.515	974.612	974.432	974.354	974.207	974.087	973.992			4
5			973.379	974.515	974.612	974.423	974.349	974.202	974.086	973.990			5
6			973.380	974.516	974.608	974.421	974.345	974.197	974.081	973.989			6
7			973.383	974.517	974.608	974.422	974.341	974.195	974.078	973.991			7
8			973.382	974.519	974.602	974.429	974.337	974.208	974.074	973.990			8
9			973.383	974.521	974.602	974.435	974.333	974.205	974.067	973.985			9
10			973.386	974.523	974.604	974.437	974.336	974.193	974.065	973.979			10
11			973.384	974.524	974.591	974.436	974.332	974.190	974.062	973.981			11
12			973.388	974.525	974.592	974.434	974.325	974.184	974.067	973.985			12
13			973.394	974.528	974.588	974.430	974.321	974.179	974.066	973.977			13
14			973.396	974.532	974.582	974.429	974.316	974.177	974.063	973.970			14
15			973.394	974.532	974.581	974.423	974.310	974.177	974.060	973.968			15
16			973.398	974.532	974.581	974.419	974.306	974.172	974.063	973.966			16
17			973.403	974.537	974.575	974.413	974.304	974.166	974.060	973.969			17
18			973.409	974.540 A	974.568	974.407	974.301	974.164	974.058	973.971			18
19			973.414	974.529 A	974.562	974.404	974.296	974.160	974.051	973.964			19
20			973.482	974.531	974.555	974.399	974.292	974.157	974.048	973.964			20
21			973.685	974.545	974.531	974.393	974.286	974.154	974.046	973.961			21
22			973.836	974.553	974.510 A	974.392	974.279	974.147	974.044	973.961			22
23			973.965	974.564	974.499	974.382	974.273	974.143	974.041	973.962			23
24			974.065	974.576	974.496	974.383	974.267	974.144	974.040	973.961			24
25			974.127	974.587	974.506	974.380	974.264	974.139	974.038	973.957			25
26		973.371 A	974.193	974.596	974.493	974.376	974.259	974.136	974.032	973.955			26
27		973.372	974.275	974.601	974.482	974.371	974.252	974.131	974.021	973.950			27
28		973.376	974.347	974.605	974.479	974.368	974.246	974.128	974.014	973.952 A			28
29			974.407	974.605	974.472	974.377	974.239	974.123	974.014	973.951 E			29
30			974.442	974.611	974.461	974.372	974.231	974.120	974.011	973.950 E			30
31			974.463		974.451		974.225	974.118		973.950 E			31
TOTAL			30183.672	29236.252	30211.242	29232.365	30203.402	30199.267	29221.742	30193.149			TOTAL
MEAN			973.667	974.542	974.556	974.412	974.303	974.170	974.058	973.973			MEAN
MAX			974.463	974.611	974.614	974.468	974.369	974.222	974.110	974.009			MAX
MIN			973.376	974.478	974.451	974.368	974.225	974.118	974.011	973.950			MIN

SUMMARY FOR THE YEAR 1997

MAXIMUM DAILY WATER LEVEL 974.614 METRES ON MAY 1
MINIMUM DAILY WATER LEVEL 973.371 METRES ON FEB 26

MAXIMUM INSTANTANEOUS WATER LEVEL WAS NOT DETERMINED
MINIMUM INSTANTANEOUS WATER LEVEL WAS NOT DETERMINED

WATER LEVELS ARE REFERRED TO GEODETIC SURVEY OF CANADA DATUM

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA CYPRESS LAKE EAST OUTFLOW CANAL STATION NO. 11AC060

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			.020 B	.598	.477	.156	.199	.002	.004	.021			1
2			.018 B	.602	.350	.166	.154	.001	.003	.025			2
3			.016 B	.527	.094	.148	.128	.001	.004	.020			3
4			.015 B	.407	.059	.134	.094	.001	.004	.022			4
5			.014 B	.247	.049	.124	.070	.001	.003	.019			5
6			.013 B	.157	.049	.110	.061	.001	.003	.020			6
7			.013 B	.153	.043	.104	.052	.001	.003	.024			7
8			.013 B	.151	.053	.103	.045	.001	.004	.028			8
9			.013 B	.155	.056	.094	.038	.002	.004	.033			9
10			.014 B	.169	.051	.092	.033	.002	.005	.035			10
11			.014 B	.202	.066	.115	.028	.003	.007	.034			11
12			.015 B	.227	.077	.114	.023	.004	.011	.034			12
13			.015 B	.232	.075	.101	.022	.004	.010	.035			13
14			.016 B	.196	.081	.091	.020	.005	.010	.037			14
15			.018 B	.195	.081	.085	.018	.005	.015	.036			15
16			.021 B	.198	.078	.083	.015	.004	.014	.036			16
17			.025 B	.184	.077	.078	.020	.005	.012	.039			17
18			.050 B	.202	.086	.125	.015	.005	.016	.040			18
19			.100 B	.234	.117	.130	.009	.006	.015	.039			19
20		.020 B	.263 B	.250	.170	.122	.008	.006	.016	.036			20
21		.020 B	.531 B	.472	.174	.147	.007	.006	.017	.038			21
22		.020 B	.653 B	.706	.159	.141	.007	.005	.019	.038			22
23		.020 B	.672 B	.661	.206	.130	.006	.004	.020	.038			23
24		.020 B	.603 B	.604	.318	.135	.005	.004	.017	.040			24
25		.021 B	.953 B	.561	.405	.124	.004	.004	.018	.036			25
26		.022 B	1.13 B	.533	.354	.119	.003	.003	.022	.038			26
27		.022 B	.629 B	.503	.353	.111	.003	.004	.021	.034			27
28		.022 B	.322	.477	.300	.107	.002	.004	.018	.033 A			28
29			.212	.499	.246	.108	.002	.004	.018	.032 E			29
30			.472	.483	.203	.130	.002	.003	.020	.031 E			30
31			.643		.162		.002	.004		.030 E			31
TOTAL			7.506	10.785	5.069	3.527	1.095	.105	.353	1.001			TOTAL
MEAN			.242	.360	.164	.118	.035	.003	.012	.032			MEAN
DAM3			649	932	438	305	94.6	9.07	30.5	86.5			DAM3
MAX			1.13	.706	.477	.166	.199	.006	.022	.040			MAX
MIN			.013	.151	.043	.078	.002	.001	.003	.019			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .120 M3/S
TOTAL DISCHARGE, 2540 DAM3
MAXIMUM DAILY DISCHARGE, 1.13 M3/S ON MAR 26
MINIMUM DAILY DISCHARGE, .001 M3/S ON SEVERAL DAYS

MAXIMUM INSTANTANEOUS DISCHARGE NOT DETERMINED

A-MANUAL GAUGE
B-ICE CONDITIONS
E-ESTIMATED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

STORAGE FACTORS AND EVAPORATION LOSSES
1997

EASTEND RESERVOIR 11AC055

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	916.720	0.000	0	916.721	916.719	597	595	- 2
2	917.063	0.000	0	916.719	917.407	595	1248	653
3	917.731	0.000	0	917.407	918.054	1248	2081	833
4	918.209	0.029	31	918.054	918.363	2081	2561	480
5	918.391	0.079	95	918.363	918.419	2561	2654	93
6	918.152	0.059	62	918.419	917.885	2654	1841	- 813
7	918.052	0.022	22	917.885	918.219	1841	2330	489
8	918.227	0.076	83	918.219	918.235	2330	2356	26
9	918.329	0.085	98	918.235	918.423	2356	2661	305
10	918.227	0.117	128	918.423	918.030	2661	2045	- 616
11	917.308	0.093	71	918.030	916.585	2045	505	-1 540
12	916.701	0.073	36	916.585	916.816	505	668	163
13	916.778	0.106	56	916.816	916.739	668	610	- 58
14	916.742	0.071	37	916.739	916.745	610	614	4
15	916.744	0.100	52	916.745	916.742	614	612	- 2
16	916.758	0.018	9	916.742	916.773	612	635	23
17	916.743	0.005	3	916.773	916.712	635	590	- 45

EVAPORATION STATION IS VAL MARIE

WATER SURVEY OF CANADA EASTEND CANAL NEAR EASTEND STATION NO. 11AC052

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	.967	0	2.07	0	0			1
2			0	0	0	.739	0	2.00	0	0			2
3			0	0	0	.427	0	1.63	0	0			3
4			0	0	0	.272	0	.126	0	0			4
5			0	0	0	.102	0	.002	0	0			5
6			0	0	0	.024	0	0	0	0			6
7			0	0	0	.013	0	0	0	0			7
8			0	0	0	.009	0	0	0	0			8
9			0	0	0	.005	0	0	0	0			9
10			0	0	0	.002	0	0	0	0			10
11			0	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	1.17	0	0	0	0	0			13
14			0	0	1.82	0	0	0	0	0			14
15			0	0	1.91	0	0	0	0	0			15
16			0	0	1.96	0	0	0	0	0			16
17			0	0	2.10	0	0	0	0	0			17
18			0	0	2.10	0	0	0	0	0			18
19			0	0	2.14	0	0	0	0	0			19
20			0	0	2.18	0	0	0	0	0			20
21			0	0	2.19	0	1.46	0	0	0			21
22		0	0	0	2.16	0	2.38	0	0	0			22
23		0	0	0	2.16	0	2.45	0	0	0			23
24		0	0	0	2.11	0	2.42	0	0	0			24
25		0	0	0	2.10	0	2.41	0	0	0			25
26		0	0	0	2.09	0	2.41	0	0	0			26
27		0	0	0	2.00	0	2.32	0	0	0			27
28		0	0	0	2.01	0	2.04	0	0	0			28
29			0	0	1.87	0	2.02	0	0	0			29
30			0	0	1.64	0	1.99	0	0	0			30
31			0		1.49		2.06	0		0			31
TOTAL			0	0	37.20	2.560	23.960	5.828	0	0			TOTAL
MEAN			0	0	1.20	.085	.773	.188	0	0			MEAN
DAM3			0	0	3210	221	2070	504	0	0			DAM3
MAX			0	0	2.19	.967	2.45	2.07	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .284 M3/S
TOTAL DISCHARGE, 6010 DAM3
MAXIMUM DAILY DISCHARGE, 2.45 M3/S ON JUL 23
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA VAL MARIE EVAPORATION STATION NO. 11EV063

DAILY PAN EVAPORATION IN METRES FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1				0 E	.001	.009	0	.007	.006	.006			1
2				0 E	.005	.008	.005	.007	.012	.006			2
3				0 E	.007	.008	.007	.007	.010	.008			3
4				0 E	.005	.011	.006	.008	.008	.009 E			4
5				0 E	.006	.010	.005	.011	.006	.005			5
6				0 E	.009	-.039	.007	.012	.007	.003			6
7				0 E	.006	-.003	.007	0 A	.006	.003			7
8				0 E	.007	-.015	.010	.007 T	.006	0			8
9				0 E	.007	-.010	.005	.005	.005	0			9
10				0 E	.007	.001	.006	.007	.008	.001			10
11				0 E	.005	.005	.008	.007	-.002	-.004			11
12				0 E	.012	.007	.008	.009	.003	0 F			12
13				0 E	.009	.008	.007	.011	.006	.004 T			13
14				0 E	.006	.008	.008	.001	.005	0			14
15				0 E	.009	.006	.009	0 A	.002	.004			15
16				.006	.008	.007	.009	0 A	.003	.002			16
17				.006	.007	.007	-.008	0 A	.005	.003			17
18				.005	.002	.007	.009	-.001 T	.004	0 F			18
19				0	.005	.007	.007	.005	.002	0 F			19
20				0 F	.009	.002	.007	.005	.007	.005 T			20
21				0 F	.005	.004	.010	.004	.007	.002			21
22				.012	.002	.006	.012	.007	.005	.001			22
23				0	-.010	.011	.010	.011	.011	0 F			23
24				.005	-.024	.005	.010	.002	.007	0 F			24
25				.005	-.007	.008	0 A	.006	.009	0 F			25
26				.005	.005	.010	0 A	.006	.009 E	-.003 T			26
27				.007	.006	.009	.001 T	.007	.009 E	.001			27
28				.006	.006	.009	.004	.005	.009 E	.002			28
29				.001	.007	-.004	.010	.007	.006	.001			29
30				.004	.007	.001	.010	.007	.011	.002			30
31					.009		.009	.007		.002			31
TOTAL				.062	.138	.103	.198	.177	.192	.063			TOTAL
MEAN				.002	.004	.003	.006	.006	.006	.002			MEAN
MAX				.012	.012	.011	.012	.012	.012	.009			MAX
MIN				0	-.024	-.039	-.008	-.001	-.002	-.004			MIN

SUMMARY FOR THE MONTHS APR TO OCT
MAXIMUM DAILY EVAPORATION, .012 M3/S ON APR 22
MINIMUM DAILY EVAPORATION, -.039 M3/S ON JUN 6

E- ESTIMATED
F- ICE ON PAN
A- OBSERVER ABSENT
T- ACCUMULATED TOTAL

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

STORAGE FACTORS AND EVAPORATION LOSSES
1997

HUFF LAKE 11AC063

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	813.857	0.000	0	813.624	814.089	827	1298	471
2	814.899	0.000	0	814.089	815.709	1298	4282	2 984
3	815.735	0.000	0	815.709	815.761	4282	4408	126
4	815.762	0.051	86	815.761	815.762	4408	4410	2
5	815.700	0.088	148	815.762	815.638	4410	4112	- 298
6	815.332	0.038	60	815.638	815.025	4112	2765	-1 347
7	815.395	0.015	24	815.025	815.764	2765	4415	1 650
8	815.747	0.105	177	815.764	815.730	4415	4333	- 82
9	815.762	0.080	135	815.730	815.794	4333	4487	154
10	815.446	0.095	154	815.794	815.098	4487	2906	-1 581
11	814.582	0.116	129	815.098	814.065	2906	1270	-1 636
12	814.177	0.069	62	814.065	814.289	1270	1555	285
13	814.326	0.096	93	814.289	814.363	1555	1658	103
14	814.373	0.091	90	814.363	814.382	1658	1685	27
15	814.435	0.063	65	814.382	814.487	1685	1839	154
16	814.551	0.021	23	814.487	814.615	1839	2039	200
17	814.669	0.005	6	814.615	814.722	2039	2216	177

EVAPORATION STATION IS VAL MARIE

STORAGE FACTORS AND EVAPORATION LOSSES
1997

NEWTON LAKE 11AC056

PERIOD	MEAN ELEVATION (m)	EVAPORATION Pan (m)	EVAPORATION Reservoir (dam3)	ELEVATION AT Beginning of Period (m)	ELEVATION AT End of Period (m)	STORAGE AT Beginning of Period (dam3)	STORAGE AT End of Period (dam3)	CHANGE IN STORAGE (dam3)
1	802.897	0.000	0	802.895	802.899	10191	10211	20
2	803.040	0.000	0	802.899	803.180	10211	11707	1 496
3	803.428	0.000	0	803.180	803.675	11707	14763	3 056
4	803.665	0.051	240	803.675	803.654	14763	14622	- 141
5	803.639	0.088	411	803.654	803.624	14622	14422	- 200
6	803.440	0.038	165	803.624	803.256	14422	12139	-2 283
7	803.354	0.015	63	803.256	803.451	12139	13309	1 170
8	803.385	0.105	447	803.451	803.319	13309	12506	- 803
9	803.319	0.080	331	803.319	803.319	12506	12506	0
10	802.961	0.095	344	803.319	802.602	12506	8775	-3 731
11	802.573	0.116	373	802.602	802.544	8775	8511	- 264
12	802.532	0.069	219	802.544	802.519	8511	8397	- 114
13	802.480	0.096	301	802.519	802.440	8397	8044	- 353
14	802.397	0.091	278	802.440	802.353	8044	7664	- 380
15	802.322	0.063	189	802.353	802.290	7664	7394	- 270
16	802.275	0.021	62	802.290	802.260	7394	7268	- 126
17	802.208	0.005	15	802.260	802.155	7268	6832	- 436

EVAPORATION STATION IS VAL MARIE

WATER SURVEY OF CANADA HUFF LAKE GRAVITY CANAL STATION NO. 11AC065

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	.687	0	1.37	0	0			1
2			0	0	0	.401	0	1.34	0	0			2
3			0	0	0	.147	0	1.30	0	0			3
4			0	0	0	0	0	1.05	0	0			4
5			0	0	0	0	0	.549	0	0			5
6			0	0	0	0	0	.607	0	0			6
7			0	0	0	0	0	.720	0	0			7
8			0	0	0	0	0	.589	0	0			8
9			0	0	0	0	0	.613	0	0			9
10			0	0	0	0	0	.604	0	0			10
11			0	0	0	0	0	.598	0	0			11
12			0	0	0	0	0	.366	0	0			12
13			0	0	0	0	0	.116	0	0			13
14			0	0	0	0	0	0	0	0			14
15			0	0	.148	0	0	0	0	0			15
16			0	0	.609	0	0	0	0	0			16
17			0	0	.694	0	0	0	0	0			17
18			0	0	.690	0	0	0	0	0			18
19			0	0	.840	0	.207	0	0	0			19
20			0	0	1.03	0	.046	0	0	0			20
21			0	0	1.13	0	.059	0	0	0			21
22			0	0	1.16	0	.426	0	0	0			22
23			0	0	1.19	0	1.10	0	0	0			23
24			0	0	1.17	0	1.28	0	0	0			24
25			0	0	.991	0	1.34	0	0	0			25
26		0	0	0	.770	0	1.31	0	0	0			26
27		0	0	0	.813	0	1.26	0	0	0			27
28		0	0	0	.849	0	1.14	0	0	0			28
29			0	0	1.01	0	.997	0	0	0			29
30			0	0	.879	0	1.05	0	0	0			30
31			0		.819		1.31	0		0			31
TOTAL			0	0	14.792	1.235	11.525	9.822	0	0			TOTAL
MEAN			0	0	.477	.041	.372	.317	0	0			MEAN
DAM3			0	0	1280	107	996	849	0	0			DAM3
MAX			0	0	1.19	.687	1.34	1.37	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .153 M3/S
TOTAL DISCHARGE, 3230 DAM3
MAXIMUM DAILY DISCHARGE, 1.37 M3/S ON AUG 1
MINIMUM DAILY DISCHARGE, 0 M3/S ON SEVERAL DAYS

MAXIMUM INSTANTANEOUS DISCHARGE NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVE OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA HUFF LAKE PUMPING CANAL STATION NO. 11AC066

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	0	0	.610	0	0			1
2			0	0	0	0	0	.390	0	0			2
3			0	0	0	0	0	.372	0	0			3
4			0	0	0	0	0	.523	0	0			4
5			0	0	0	0	0	.576	0	0			5
6			0	0	0	0	0	.505	0	0			6
7			0	0	0	0	0	.533	0	0			7
8			0	0	0	0	0	.493	0	0			8
9			0	0	0	0	0	.454	0	0			9
10			0	0	0	0	0	.416	0	0			10
11			0	0	0	0	0	.378	0	0			11
12			0	0	.358	0	0	.340	0	0			12
13			0	0	.714	0	0	.303	0	0			13
14			0	0	.772	0	0	.270	0	0			14
15			0	0	.768	0	0	.235	0	0			15
16			0	0	.763	0	0	.100	0	0			16
17			0	0	.758	0	0	0	0	0			17
18			0	0	.753	0	0	0	0	0			18
19			0	0	.750	0	.579	0	0	0			19
20			0	0	.746	0	.770	0	0	0			20
21			0	0	.742	0	.767	0	0	0			21
22			0	0	.723	0	.764	0	0	0			22
23			0	0	.733	0	.752	0	0	0			23
24			0	0	.730	0	.767	0	0	0			24
25			0	0	.728	0	.775	0	0	0			25
26		0	0	0	.614	0	.775	0	0	0			26
27		0	0	0	.335	0	.791	0	0	0			27
28		0	0	0	.337	0	.799	0	0	0			28
29			0	0	.337	0	.655	0	0	0			29
30			0	0	.204	0	.718	0	0	0			30
31			0		0		.790	0		0			31
TOTAL			0	0	11.865	0	9.702	6.498	0	0			TOTAL
MEAN			0	0	.383	0	.313	.210	0	0			MEAN
DAM3			0	0	1030	0	838	561	0	0			DAM3
MAX			0	0	.772	0	.799	.610	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:
MEAN DISCHARGE, .115 M3/S
TOTAL DISCHARGE, 2430 DAM3
MAXIMUM DAILY DISCHARGE, .799 M3/S ON JUL 28
MINIMUM DAILY DISCHARGE, 0 M3/S ON SEVERAL DAYS

MAXIMUM INSTANTANEOUS DISCHARGE NOT DETERMINED

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

WATER SURVEY OF CANADA NEWTON LAKE MAIN CANAL STATION NO. 11AC054

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0	0	0	.586	0	1.66	0	0			1
2			0	0	0	.340	0	1.19	0	0			2
3			0	0	0	0	0	.787	0	0			3
4			0	0	0	0	0	.282	0	0			4
5			0	0	0	0	0	0	0	0			5
6			0	0	0	0	0	0	0	0			6
7			0	0	0	0	0	0	0	0			7
8			0	0	0	0	0	0	0	0			8
9			0	0	0	0	0	0	0	0			9
10			0	0	0	0	0	0	0	0			10
11			0	0	0	0	0	0	0	0			11
12			0	0	0	0	0	0	0	0			12
13			0	0	0	0	.017	0	0	0			13
14			0	0	1.41	0	2.05	0	0	0			14
15			0	0	1.67	0	2.67	0	0	0			15
16			0	0	2.27	0	2.95	0	0	0			16
17			0	0	2.68	0	3.17	0	0	0			17
18			0	0	2.67	0	3.15	0	0	0			18
19			0	0	2.81	0	3.11	0	0	0			19
20			0	0	2.90	0	2.89	0	0	0			20
21			0	0	3.31	0	2.57	0	0	0			21
22			0	0	3.66	0	2.54	0	0	0			22
23			0	0	3.70	0	2.92	0	0	0			23
24			0	0	3.30	0	2.99	0	0	0			24
25			0	0	2.92	0	3.07	0	0	0			25
26		0	0	0	2.25	0	2.89	0	0	0			26
27		0	0	0	2.04	0	2.72	0	0	0			27
28		0	0	0	1.82	0	2.33	0	0	0			28
29			0	0	1.95	0	1.81	0	0	0			29
30			0	0	1.24	0	2.18	0	0	0			30
31			0		.696		2.06	0		0			31
TOTAL			0	0	43.296	.926	48.087	3.919	0	0			TOTAL
MEAN			0	0	1.40	.031	1.55	.126	0	0			MEAN
DAM3			0	0	3740	80.0	4150	339	0	0			DAM3
MAX			0	0	3.70	.586	3.17	1.66	0	0			MAX
MIN			0	0	0	0	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .393 M3/S
TOTAL DISCHARGE, 8310 DAM3
MAXIMUM DAILY DISCHARGE, 3.70 M3/S ON MAY 23
MINIMUM DAILY DISCHARGE, 0 M3/S ON SEVERAL DAYS

MAXIMUM INSTANTANEOUS DISCHARGE NOT DETERMINED

APPROVED BY THE FIELD REPRESENTAIVES OF CANADA AND THE UNITED STATES

FRENCHMAN RIVER BASIN - SASKATCHEWAN
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	Total
55						27.3	9.1	25.0	11.4				72.8
60													
65					73.0	77.9	41.1	41.1					233.1
70				33.7									33.7
74			20.6	20.6									41.2
80	20.6												20.6
93					1.8	29.2	18.3						49.3
118						15.2							15.2
121				10.7	26.7	28.4							65.8
122					17.6	15.3	28.8						61.7
123					15.2								15.2
124					12.5	13.4	16.4						42.3
129			20.8	20.8									41.6
154			30.8	30.8									61.6
334					3.8	60.9	38.1						102.8
335					0.5	7.3	4.6						12.4
369				10.3	10.3								20.6
379		6.2	1.6										7.8
411					1.1	18.3	11.4						30.8
461		37.0				24.7	12.3						74.0
479			11.5										11.5
507			34.1										34.1
657						16.0	16.0						32.0
690													
943													
989		11.5	4.8										16.3
992													
1014		4.1	12.3										16.4
1289				8.0	8.0								16.0
1589				6.8	6.8								13.6
1603		11.9	11.9										23.8
1691													
1992													
2025													
2154													
2235					8.2								8.2
2236				0.7	2.2								2.9
2305		5.6	5.6	1.9									13.1
2851				1.5	7.5								9.0
2887													
3057													
3284				19.7									19.7
3635		6.7	2.8										9.5
3694			9.0										9.0
3929		12.3											12.3
3964													
4579		7.7	7.7	3.6									19.0
4665			20.6										20.6

continued ...

FRENCHMAN RIVER BASIN - SASKATCHEWAN (continued)
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	Total
4848						11.1							11.1
4865													
4912		4.1											4.1
4992		6.6	6.6										13.2
5002		9.9											9.9
5084		25.9	25.9										51.8
5085		4.9	4.9										9.8
5086		4.9	4.9										9.8
5235		27.7	15.1										42.8
5250					64.8	5.9							70.7
5278		1.6	1.6										3.2
5298		16.4											16.4
5493								41.2	11.2				52.4
5525		5.8											5.8
5871		22.2											22.2
6064		9.5	2.8										12.3
6339													
6432				7.8									7.8
7312				1.9	14.2	15.1	14.2	0.9					46.3
7331				6.6									6.6
7332													
7645													
7682						6.2	6.2						12.4
7754		20.6	8.2										28.8
7778		1.0	2.3										3.3
7935				6.6									6.6
8131													
8201		9.0											9.0
8322		7.0	2.8										9.8
8345		2.9	7.0										9.9
8632						14.2	14.2						28.4
8696													
8756		26.3											26.3
8855		7.8	7.8										15.6
8856		3.7	3.7										7.4
8901		17.4	7.3										24.7
9076													
9137		7.4											7.4
9138			3.1	3.1									6.2
9139			2.3	2.3									4.6
9140			11.3	11.3									22.6
9219		8.6	8.6										17.2
9254			25.5										25.5
9450													
9481						11.0							11.0
9490		31.9	13.3										45.2
9552		13.2	11.5										24.7
9571													

continued ...

FRENCHMAN RIVER BASIN - SASKATCHEWAN (continued)
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	Total
9592						8.6	8.6						17.2
9596		5.8											5.8
9691			14.0										14.0
9951			6.2										6.2
9957		2.7	6.6	2.2									11.5
10035		9.9	9.9										19.8
10064		20.6	20.6										41.2
10156		3.7	11.1										14.8
10411		19.7											19.7
10659		10.7											10.7
10804		23.5	9.8										33.3
10805		2.0	0.8										2.8
10836													
10853		5.8	2.4										8.2
10864			3.3										3.3
10962		24.1	12.1										36.2
11142													
11237													
11372		4.6	0.4										5.0
11409			11.9										11.9
11431			5.3										5.3
11447		7.4	7.4										14.8
11448		9.9	9.9										19.8
11449		16.0	16.0										32.0
11450		9.0	9.0										18.0
11451		8.6	8.6										17.2
11452		7.4	7.4										14.8
11455			15.2										15.2
11608		4.1											4.1
11617		32.9											32.9
11618		40.3											40.3
11835													
11864			4.1										4.1
11974					3.0	48.7	30.5						82.2
11975					0.9	14.6	9.1						24.6
12082			4.1										4.1
12207			1.6										1.6
12213			4.1										4.1
12232			11.3	11.3									22.6
12253		6.2	6.2										12.4
12400						4.3							4.3
12545		8.2	8.2										16.4
12546		7.4	7.4										14.8
12547		12.3	12.3										24.6
12591		7.3	3.0										10.3
12599		7.8	7.8										15.6
12600		14.0	14.0										28.0
12647		39.9											39.9
12670		16.4	16.4										32.8

continued ...

FRENCHMAN RIVER BASIN - SASKATCHEWAN (continued)
SURFACE WATER USE (MINOR DIVERSIONS) FOR 1997
cubic decametres

file	March		April		May		June		July		August		
number	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	Total
13524					33.0	11.0		44.0					88.0
14420							36.3						36.3
15061		53.5											53.5
15341		6.8	6.8										13.6
15342		11.2	11.2										22.4
15343		27.8	27.8										55.6
15388													
15400		41.7	41.7										83.4
15402													
15406													
15408													
15413		5.0	5.0										10.0
15416													
15450		7.0	8.7	4.1									19.8
15453		8.2											8.2
15487		6.8	6.8										13.6
15535					9.7	6.4							16.1
15587													
15596													
15604		2.8	2.8										5.6
15639		34.4											34.4
15706													
15714						14.0	14.0						28.0
15760		0.6	1.9										2.5
16447					11.2	7.5				14.2			32.9
16545		12.6	6.3										18.9
V.M. Demo													
ValMarie													
Pump 1						196.0	14.1			138.0	88.7		436.8
Pump 2						30.0				33.0			63.0
Sub-Total	21	1006	778	226	332	739	343	152	23	185	89		3894
+45% for domestic use	9	453	350	102	149	333	154	68	10	83	40		1751
Total	30	1459	1128	328	481	1072	497	220	33	268	129		5645

Water Rights Data supplied by Saskatchewan Water Corporation.

TABLE 16

MONTH-END CONTENTS OF MAJOR RESERVOIRS IN LODGE, BATTLE, AND FRENCHMAN BASINS

1997

QUANTITIES IN CUBIC DECAMETRES

	Altawan Reservoir	Cypress Lake	Eastend Reservoir	Huff Lake	Newton Lake	Combined Usable Storage	% of Live Storage
FEBRUARY	4 089	70 046	597	873	10 176	85 781	69
MARCH	7 496	94 058	2 177	3 874	14 843	122 448	99
APRIL	6 978	97 231	2 601	4 386	14 355	125 551	102
MAY	6 899	93 473	2 236	3 056	11 973	117 637	95
JUNE	6 719	91 804	2 430	4 480	12 476	117 909	95
JULY	5 465	88 578	880	2 368	8 429	105 720	86
AUGUST	4 806	86 226	645	1 542	8 328	101 547	82
SEPTEMBER	4 573	83 896	624	1 788	7 527	98 408	80
OCTOBER	4 477	82 511	634	2 101	6 807	96 530	78
Full Supply Level	6 710	128 100	2 090	4 470	12 270		
Dead storage	0	30 031	0	13	0		

Total storage at FSL = 153 640

Total dead storage = 30 044

Total available live storage = 153 640 - 30 044 = 123 596

WATER SURVEY OF CANADA LYONS CREEK AT INTERNATIONAL BOUNDARY STATION NO. 11AB075

DAILY DISCHARGE IN CUBIC METRES PER SECOND FOR 1997

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1			0 B	5.06	.060	.033	.006	0	0	0			1
2			0 B	2.85	.045	.021	.006	0	0	0			2
3			0 B	2.16	.033	.015	.004	0	0	0			3
4			0 B	1.50 B	.026	.011	.003	0	0	0			4
5			0 B	.707 B	.019	.007	.002	0	0	0			5
6			0 B	.662 B	.015	.010	.001	0	0	0			6
7			0 B	.505 B	.011	.014	.001	0	0	0			7
8			0 B	.377 B	.009	.018	0	0	0	0			8
9			0 B	.272 B	.008	.362	0	0	0	0			9
10			0 B	.189 B	.007	.668	0	0	0	0			10
11			0 B	.125 B	.005	.701	0	0	0	0			11
12			0 B	.077 B	.004	.454	0	0	0	0			12
13			0 B	.045 B	.003	.232	0	0	0	0			13
14			0 B	.030 B	.002	.146	0	0	0	0			14
15			0 B	.024	.001	.188	0	0	0	0			15
16			0 B	.020	0	.068	0	0	0	0			16
17			0 B	.016	0	.038	0	0	0	0			17
18			0 B	.013	0	.047	0	0	0	0			18
19			0 B	.012	0	.041	0	0	0	0			19
20			.100 B	.012	0	.035	0	0	0	0			20
21			2.34 B	.021	0	.026	0	0	0	0			21
22			1.91 B	.243	0	.022	0	0	0	0			22
23			2.24	.325	.001	.017	0	0	0	0			23
24			3.64	.259	.004	.014	0	0	0	0			24
25			5.61	.242	.009	.014	0	0	0	0			25
26			13.6	.236	.028	.010	0	0	0	0			26
27			17.0	.213	.182	.006	0	0	0	0			27
28			11.7	.173	.144	.003	0	0	0	0			28
29			10.7	.121	.080	.002	0	0	0	0			29
30			6.70	.079	.085	.006	0	0	0	0			30
31			6.03		.053		0	0		0			31
TOTAL			81.570	16.568	.834	3.229	.023	0	0	0			TOTAL
MEAN			2.63	.552	.027	.108	.001	0	0	0			MEAN
DAM3			7050	1430	72.1	279	1.99	0	0	0			DAM3
MAX			17.0	5.06	.182	.701	.006	0	0	0			MAX
MIN			0	.012	0	.002	0	0	0	0			MIN

SUMMARY FOR THE MONTHS MAR TO OCT:

MEAN DISCHARGE, .417 M3/S
TOTAL DISCHARGE, 8830 DAM3
MAXIMUM DAILY DISCHARGE,17.0 M3/S ON MAR 27
MINIMUM DAILY DISCHARGE, 0 M3/S ON MAR 1

B-ICE CONDITIONS

MAXIMUM INSTANTANEOUS DISCHARGE, 29.4 M3/S AT 23:45 CST ON MARCH 26, 1997

APPROVED BY THE FIELD REPRESENTATIVES OF CANADA AND THE UNITED STATES

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