

Water-Data Report 2009

05074500 RED LAKE RIVER NEAR RED LAKE, MN

Lower Red Basin
Red Lakes Subbasin

LOCATION.--Lat 47°57'27", long 95°16'35" referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.28, T.152 N., R.36 W., Clearwater County, MN, Hydrologic Unit 09020302, on Red Lake Indian Reservation, on left bank 50 ft downstream from dam outlet at outlet of Lower Red Lake, and 13 mi northwest of city of Red Lake.

DRAINAGE AREA.--1,950 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1933 to September 1994 (monthly discharge only for May 1933, published in WSP 1308), October 1999 to current year.

REVISED RECORDS.--1935(M), 1970-80(M).

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above sea level, adjustment of 1912 (levels by U.S. Army Corps of Engineers). Prior to Sept. 7, 1934, nonrecording gage at site 50 ft upstream at datum 69.00 ft higher. Sept. 7, 1934 to Nov. 26, 1951, water-stage recorder at present site at datum 69.00 ft higher. Nov. 27, 1951 to Sept. 30, 1986, water-stage recorder at present site at datum 67.00 ft higher.

REMARKS.--Records fair except for periods of estimated discharge, which are poor. Flow completely regulated by outlet dam on Lower Red Lake.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	81	99	e142	e163	e175	e586	160	159	455	355	579	542
2	79	100	e144	e164	e175	e583	162	161	456	352	566	537
3	77	100	e145	e165	e175	e579	157	160	444	352	574	534
4	75	103	e146	e166	e175	e575	156	153	434	356	575	538
5	71	103	e147	e166	e176	e568	162	153	434	361	573	534
6	71	105	e148	e166	e177	e555	168	156	421	364	567	533
7	77	113	e148	e166	e178	e545	167	161	410	365	572	530
8	80	117	e149	e167	e179	e533	174	158	413	366	585	531
9	82	112	e149	e167	e179	e516	173	160	410	365	594	557
10	76	107	e150	e168	e179	e500	171	160	404	370	592	549
11	78	104	e151	e168	e179	e484	168	156	398	366	589	549
12	82	103	e152	e169	e356	e473	166	158	380	359	586	546
13	96	e102	e153	e169	e566	e461	166	176	363	359	585	546
14	94	e104	e153	e170	e594	e447	162	204	352	370	590	540
15	100	e108	e153	e170	e606	e434	159	262	362	395	642	538
16	94	e111	e154	e171	e611	e416	158	276	371	426	652	537
17	91	e115	e154	e171	e616	e405	163	264	379	473	642	531
18	89	e117	e155	e172	e622	e391	160	273	377	483	638	528
19	91	e119	e156	e172	e627	e368	157	273	378	484	630	524
20	91	e121	e157	e172	e626	e230	165	307	376	489	642	518
21	87	e122	e157	e172	e623	e74	160	388	356	503	636	517
22	89	e124	e158	e173	e622	e72	149	391	356	507	620	527
23	92	e126	e158	e173	e617	e95	148	396	357	513	604	524
24	94	e128	e159	e173	e613	e121	154	401	354	528	590	522
25	100	e131	e159	e173	e605	e172	152	417	353	534	590	520
26	114	e132	e160	e173	e604	e239	149	462	350	533	581	519
27	106	e134	e160	e173	e598	e193	158	469	372	543	572	533
28	99	e136	e161	e173	e592	e174	150	e480	374	546	579	531
29	97	e139	e161	e173	---	161	147	488	364	541	572	516
30	100	e141	e162	e174	---	154	159	478	360	549	563	501
31	99	---	e162	e174	---	148	---	459	---	554	554	---
Total	2,752	3,476	4,763	5,266	12,045	11,252	4,800	8,759	11,613	13,661	18,434	15,952
Mean	88.8	116	154	170	430	363	160	283	387	441	595	532
Max	114	141	162	174	627	586	174	488	456	554	652	557
Min	71	99	142	163	175	72	147	153	350	352	554	501
Ac-ft	5,460	6,890	9,450	10,450	23,890	22,320	9,520	17,370	23,030	27,100	36,560	31,640
Cfs/m	0.05	0.06	0.08	0.09	0.22	0.19	0.08	0.14	0.20	0.23	0.30	0.27
In.	0.05	0.07	0.09	0.10	0.23	0.21	0.09	0.17	0.22	0.26	0.35	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	473	481	464	468	468	436	352	485	549	528	471	461
Max	2,071	1,765	1,498	1,418	1,342	1,396	1,357	1,624	2,025	1,840	1,464	1,712
(WY)	(1951)	(2000)	(1951)	(1951)	(1951)	(1951)	(2000)	(1950)	(1950)	(1950)	(1975)	(1950)
Min	5.10	3.57	0.95	0.35	0.40	0.60	4.00	0.60	2.15	4.63	2.73	1.61
(WY)	(1934)	(1934)	(1934)	(1934)	(1934)	(1936)	(1936)	(1933)	(1933)	(1934)	(1936)	(1934)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1933 - 2009	
Annual total	62,790		112,773			
Annual mean	172		309		473	
Highest annual mean					1,292	1951
Lowest annual mean					5.55	1936
Highest daily mean	263	Jun 6	652	Aug 16	2,240	Oct 6, 1950
Lowest daily mean	71	Oct 5	71	Oct 5	^a 0.00	Sep 19, 1933
Annual seven-day minimum	76	Oct 2	76	Oct 2	0.00	Sep 1, 1934
Maximum peak flow			^b 741	Aug 15	3,600	Jun 25, 1950
Maximum peak stage			^c 72.35	Mar 11	78.19	Jun 25, 1950
Annual runoff (ac-ft)	124,500		223,700		342,500	
Annual runoff (cfsm)	0.088		0.158		0.242	
Annual runoff (inches)	1.20		2.15		3.29	
10 percent exceeds	242		580		1,000	
50 percent exceeds	184		179		397	
90 percent exceeds	98		103		47	

^a Many days in 1933, 34, and 36.

^b Gage-height, 71.91 ft.

^c Backwater from ice.

