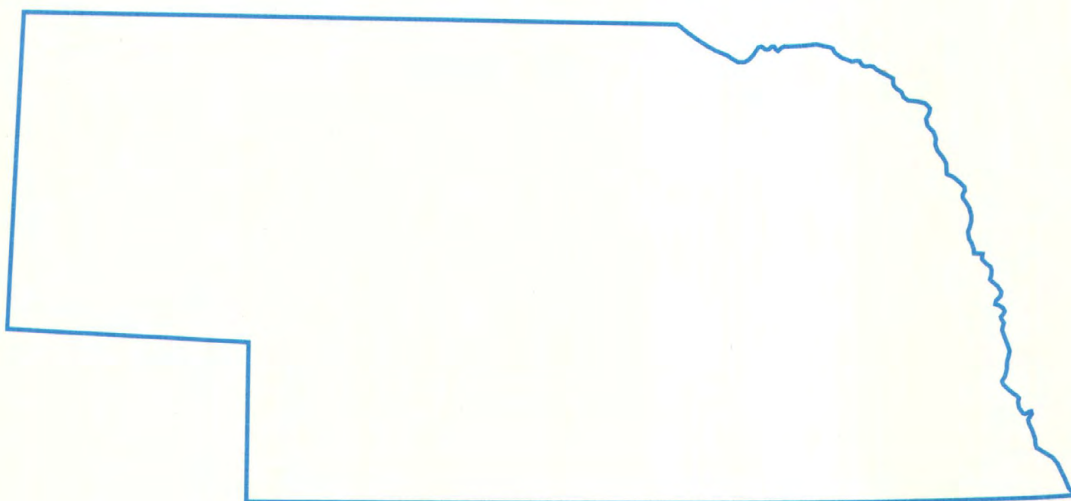
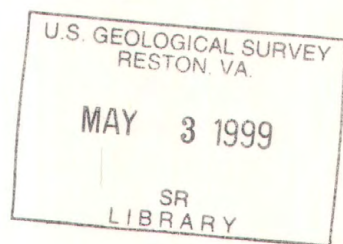


Water Resources Data Nebraska Water Year 1998

Water-Data Report NE-98-1



CALENDAR FOR WATER YEAR 1998

1997

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1998

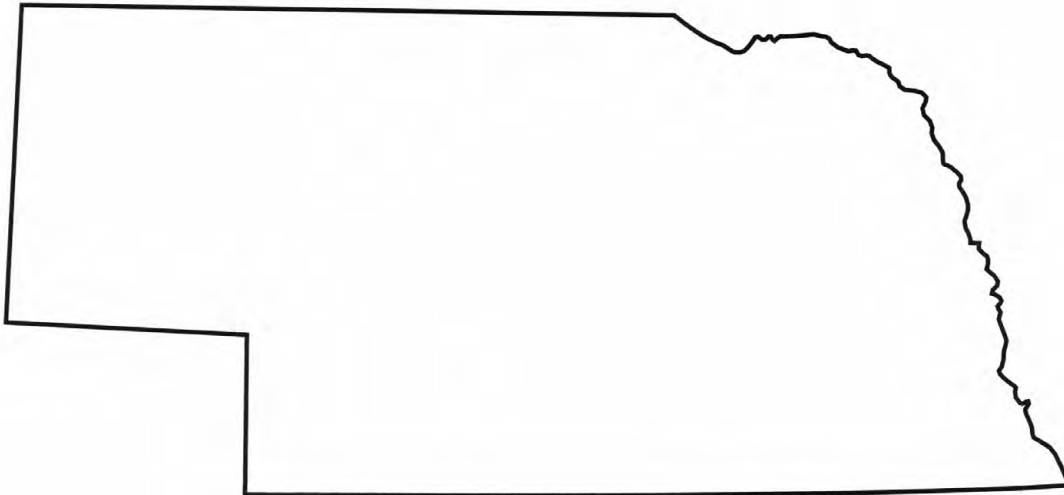
JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28
25	26	27	28	29	30	31								29	30	31				

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Water Resources Data Nebraska Water Year 1998

By Judith A. Boohar

Water-Data Report NE-98-1



Prepared in cooperation with the Nebraska Department of Water Resources,
the Conservation and Survey Division of the University of Nebraska, the Nebraska
Natural Resources Commission, the Nebraska Department of Environmental Quality,
and other Federal, State, and local agencies



UNITED STATES DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary
GEOLOGICAL SURVEY
Charles G. Groat, Director

For information on the water programs in Nebraska, write to:

**District Chief
U.S. Geological Survey
406 Federal Building
100 Centennial Mall, North
Lincoln, Nebraska 68508**

PREFACE

This annual hydrologic data report of Nebraska is one of a series of annual reports that documents hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, quality of water, and ground-water levels provide the hydrologic information needed by Federal, State, and local agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who edited and assembled the report.

In addition to the author, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

G.B. Engel, N.R. Harmon, V.C. Walczyk, J.S. Stanton, P.A. Bartz, and M.J. Griffin of the District office.

M.V. Kubicek, S.H. Hull, and D.M. Schwartz, and T.P. Boyle (student assistant) of the Lincoln field office.

R.A. Drudik, and V.A. John of the Ord field office.

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This report was prepared in cooperation with the State of Nebraska and with other agencies under the general supervision of M.E. Slifer, District Chief, Nebraska.

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13. ABSTRACT (Maximum 200 words) Water resources data for the 1998 water year for Nebraska consists of water-quality records for records of stage, discharge, and water quality of stream; stage and contents in lakes and reservoirs; and water levels and water quality in wells. This report contains discharge records for 97 streamflow-gaging stations, 12 partial-record or miscellaneous stream-flow stations, and 5 crest-stage, partial-record streamflow stations; stage and contents record for 7 lakes and reservoirs; water-quality records for 10 streamflow-gaging stations, for 3 ungaged streamsites, and for 67 wells; and water levels for 54 observation wells. These data represent that part of the National Water-Data System operated by the U. S. Geological Survey and cooperating Federal, State, and local agencies in Nebraska.				
14. SUBJECT TERMS Hydrologic data, Surface water, Ground water, Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses			15. NUMBER OF PAGES 438	
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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[Letter after station name designates type of data: (d) discharge, (e) elevation and/or contents, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, and (s) sediment.] Each station has been assigned an 8-digit station number. For ease in reading the station number, the 06 preceeding the number has been left off as well as the 00 following a 4-digit number.

	<i>Station number</i>	<i>Page</i>
MISSOURI RIVER BASIN		
<u>PONCA CREEK BASIN</u>		
Ponca Creek at Verdel (d)-----	4536	41
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Long Pine Creek near Riverview (dc) -----	4635	49
Keya Paha River at Wewela, SD (d)-----	4645	52
Niobrara River near Spencer (d)-----	4650	54
Niobrara River near Verdel (d) -----	4655	56
MISSOURI RIVER:		
Lewis and Clark Lake Yankton, SD (e) -----	4670	58
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Missouri River at Decatur (d) -----	6012	63
Missouri River at Omaha (d)-----	6100	65
<u>PLATTE RIVER BASIN</u>		
North Platte River (head of Platte River) at Wyoming-Nebraska State line (dc) -----	6745	67
Lake McConaughy near Keystone (e) -----	6900	70
South Platte River:		
South Platte River at Julesburg, CO (d) -----	7640	71
South Platte River at Roscoe (d) -----	764880	73
Platte River:		
Plum Creek near Smithfield (dct)-----	7675	75
Platte River near Overton (cts)-----	7680	80
Spring Creek near Overton (dct) -----	768020	86
Buffalo Creek near Overton (dct)-----	7690	91
Elm Creek near Elm Creek (dct)-----	769525	96
Whisky Slough 1 mi E of Phelps-Kearney County Line (dct) -----	770175	101
North Dry Creek 2 mi SW of Platte River Bridge S of Kearney (dct)-----	770195	106
Platte River near Kearney (d) -----	7702	111
Fort Kearney Slough near Newark (dct) -----	770240	113
Downstream Drain near Newark (dct)-----	770255	118
Platte River near Grand Island (dct) -----	7705	123
Wood River near Alda (ct) -----	7720	128
Warm Slough near Central City (dct) -----	772775	131
Silver Creek at Mile 4 near Silver Creek (dct) -----	772898	136
Prairie Creek near Ovina (d) -----	773050	141
Prairie Creek near Silver Creek (dct)-----	7735	143
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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North Loup River at Taylor (d) -----	7860	167
Calamus Reservoir near Burwell (e) -----	7873	169
North Loup River near St. Paul (dc) -----	7905	170
Loup River:		
Loup River Power Canal near Genoa (d) -----	7925	174
Loup River near Genoa (d) -----	7930	176
Beaver Creek at Genoa (d) -----	7940	178
Clear Creek 1.75 mi W of Polk County Line (dct) -----	794650	180
Shell Creek near Columbus (d) -----	7955	185
Platte River at North Bend (d) -----	7960	187
Platte River near Leshara (d) -----	7965	189
Elkhorn River at Ewing (d) -----	7975	191
Elkhorn River at Norfolk (d) -----	7990	193
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North Fork Elkhorn River near Pierce (d) -----	7991	195
Elkhorn River at West Point (d) -----	799350	197
Logan Creek near Uehling (d) -----	7995	199
Maple Creek near Nickerson (dcts) -----	8000	201
Elkhorn River at Waterloo (d) -----	8005	207
Platte River near Ashland (d) -----	8010	209
Olive Branch (head of Salt Creek) near Hallam (dct) -----	801180	211
Salt Creek at Roca (d) -----	8030	217
Salt Creek at Pioneers Boulevard at Lincoln (d) -----	803080	219
Haines Branch at SW 56th St. at Lincoln (d) -----	803093	221
Middle Creek at SW 40th St at Lincoln (d) -----	803170	223
Salt Creek at Lincoln (d) -----	8035	225
Little Salt Creek near Lincoln (d) -----	803510	227
Salt Creek at 70th St. at Lincoln (d) -----	803513	229
Stevens Creek near Lincoln (d) -----	803520	231
Salt Creek below Stevens Creek near Waverly (cm) -----	803525	233
Rock Creek near Ceresco (d) -----	803530	235
Salt Creek at Greenwood (d) -----	803555	237
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
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MISSOURI RIVER BASIN--Continued

Station number Page

BIG NEMAHA RIVER BASIN

Big Nemaha River:

Turkey Creek near Seneca, KS (d) -----	8140	265
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KANSAS RIVER BASIN

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Rock Creek at Parks (d) -----	8240	275
South Fork Republican River near Benkelman (d) -----	8275	277
Republican River at Stratton (d) -----	8285	279
Enders Reservoir near Enders (e) -----	8320	281
Frenchman Creek at Palisade (d) -----	8340	282
Frenchman Creek at Culbertson (d) -----	8355	284
Driftwood Creek near McCook (d) -----	8365	286
Republican River at McCook (d) -----	8370	288
Red Willow Creek near Red Willow (d) -----	8380	290
Republican River at Cambridge (d) -----	8435	292
Republican River near Orleans (dc) -----	8445	294
Sappa Creek:		
Beaver Creek at Cedar Bluffs, KS (d) -----	8465	297
Sappa Creek near Stamford (d) -----	8475	299
Prairie Dog Creek near Woodruff, KS (d) -----	8485	301
Republican River below Harlan County Dam (d) -----	8495	303
Courtland Canal at Nebraska-Kansas State line (d) -----	8525	305
Republican River at Guide Rock (d) -----	853020	307
Republican River near Hardy (d) -----	8535	309
Kansas River (continuation of Republican River):		
Big Blue River:		
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Big Blue River near Crete (d) -----	8810	313
Big Blue River at Barneston (d) -----	8820	315
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Little Blue River at Hollenberg, KS (d) -----	884025	321

GROUND-WATER WELLS, BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Page**ADAMS COUNTY**

Well 403403098244001	Local number	7N 10W 23AB -----	327
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BLAINE COUNTY

Well 414958100061501	Local number	22N 24W 33CA -----	327
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BOONE COUNTY

Well 413323098074501	Local number	18N 7W 4CA -----	328
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BOX BUTTE COUNTY

Well 420945102551501	Local number	25N 48W 4DDD -----	328
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BUFFALO COUNTY

Well 404618098504401	Local number	9N 14W 1DC -----	329
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Well 404345098560001	Local number	9N 14W 19DD -----	329
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BUTLER COUNTY

Well 411420097173002	Local number	15N 1E 27DD2 -----	330
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CHASE COUNTY

Well 403220101384001	Local number	7N 38W 28CC -----	331
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Well 403235101395501	Local number	7N 38W 29CBB -----	331
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CHERRY COUNTY

Well 423205100321501	Local number	30N 28W 36AAA -----	332
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COLFAX COUNTY

Well 412810097054501	Local number	17N 3E 4CC -----	332
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DAWES COUNTY

Well 424100103243501	Local number	31N 52W 3DC -----	333
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DAWSON COUNTY

Well 404949099445701	Local number	10N 21W 18DDD -----	333
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DUNDY COUNTY

Well 400155101521302	Local number	1N 40W 29BB2 -----	334
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FILLMORE COUNTY

Well 402504097432201	Local number	5N 4W 12BDC -----	334
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Well 403800097300701	Local number	8N 2W 26AD -----	335
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GARFIELD COUNTY

Well 414718099083201	Local number	21N 16W 14CB -----	335
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GOSPER COUNTY

Well 403626099451401	Local number	7N 21W 6BC -----	336
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HALL COUNTY

Well 405315098304302	Local number	11N 11W 25CC2 -----	336
----------------------	--------------	---------------------	-----

HAMILTON COUNTY

Well 404836097584101	Local number	10N 6W 27ACAA -----	337
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Well 405514097573901	Local number	11N 6W 13CB -----	337
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GROUND-WATER WELLS, BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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					<i>Page</i>
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Well	400920099215501	Local number	2N	18W 9BCC-----	338
HOLT COUNTY					
Well	421605098203001	Local number	27N	9W 34DA-----	338
Well	423148098300601	Local number	30N	10W 32DAA-----	339
Well	423730098560001	Local number	31N	14W 27DDD-----	339
KEARNEY COUNTY					
Well	402625098594501	Local number	6N	15W 34DC-----	340
Well	403354098553702	Local number	7N	14W 20BA2-----	340
KIMBALL COUNTY					
Well	411416103361101	Local number	15N	55W 26CCC-----	341
LANCASTER COUNTY					
Well	403929096401001	Local number	8N	7E 18DDB-----	341
Well	403833096385501	Local number	8N	7E 20DDA-----	342
Well	404706096413001	Local number	10N	6E 36CDD-----	342
MORRILL COUNTY					
Well	414058103054001	Local number	20N	50W 28BBC-----	343
NUCKOLLS COUNTY					
Well	400240098111301	Local number	1N	8W 23AB-----	343
PHELPS COUNTY					
Well	403123099261501	Local number	6N	19W 2AA-----	344
PLATTE COUNTY					
Well	412955097192001	Local number	18N	1E 28CD-----	344
SALINE COUNTY					
Well	403855097072501	Local number	8N	3E 19ADA-----	345
SARPY COUNTY					
Well	410308096190701	Local number	13N	10E 32DBBA-----	345
SAUNDERS COUNTY					
Well	410558096210601	Local number	13N	9E 13ADBA-----	346
Well	410428096211001	Local number	13N	9E 24DDCC-----	347
Well	410334096211601	Local number	13N	9E 36ABAA-----	348
Well	410527096203201	Local number	13N	10E 18CDBD-----	349
Well	410427096202501	Local number	13N	10E 19CDDD-----	350
Well	410340096202201	Local number	13N	10E 30CDDA-----	351
Well	410401096195201	Local number	13N	10E 30DAAB-----	352
Well	410314096201101	Local number	13N	10E 31ACDB-----	353
Well	410303096192901	Local number	13N	10E 32CABC-----	354
Well	410307096193801	Local number	13N	10E 32CBAB-----	355
Well	411005096281502	Local number	14N	8E 24ACD2-----	356

GROUND-WATER WELLS, BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME**Page****SCOTTS BLUFF COUNTY**

Well 415325103392801	Local number	22N 55W 11DDC -----	357
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SEWARD COUNTY

Well 405406097115001	Local number	11N 2E 21DD -----	358
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VALLEY COUNTY

Well 412955099123201	Local number	18N 16W 30CC -----	358
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WEBSTER COUNTY

Well 400423098314001	Local number	1N 11W 11AB -----	359
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YORK COUNTY

Well 404618097482201	Local number	9N 4W 5CCC -----	359
Well 405305097351503	Local number	11N 2W 31BA3 -----	360

DISCONTINUED SURFACE-WATER GAGING STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Nebraska have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Each station has been assigned an 8-digit station number. For ease in reading the station number, the 06 preceeding the number has been left off as well as the 00 following 4-digit number.

Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only),
(--) not available

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
WHITE RIVER BASIN			
White River near Crawford (d)	4435	1,163	* 1897
White River at Crawford (d)	4440	313	1931-43, 1948-91
White River below Crawford (d)	4445	350	* 1931
White River below Cottonwood Creek near Whitney (d)	4450	676	1949-61
White River near Chadron (d)	4455	750	1931-43
Big Bordeaux Creek near Chadron (d)	445590	9.42	1968-79
PONCA CREEK BASIN			
Ponca Creek near Naper (d)	4534	373	1961-74
Ponca Creek at Anoka (d)	4535	504	1949-94
Ponca Creek at Lynch (d)	453550	--	1961-64
NIOBRARA RIVER BASIN			
Niobrara River at WYO-NE State Line (d)	4540	455	1956-94
Niobrara River at Agate (d)	4541	840	1957-91
Niobrara River above Box Butte Reservoir (d)	4545	1,400	1947-94
Niobrara River below Box Butte Reservoir (d)	4555	1,460	1947-91
Niobrara River near Dunlap (d)	4559	1,580	1931-42, 1962-71
Niobrara River near Hay Springs (d)	4565	1,790	1950-64
Niobrara River near Colclessner (d)	4570	2,220	1948
Niobrara River near Gordon (d)	4575	4,290	1929-32, 1946-91
Antelope Creek near Gordon (d)	4580	160	* 1948
Bear Creek near Eli (d)	4585	360	1948-53
Niobrara River at Cody (d)	4590	5,570	1948-57
Snake River at Doughboy (d)	459175	405	1982-93
Snake River above Merritt Res. (d)	4592	440	1963-81
Snake River near Burge (d)	4595	646	1947-94
Gordon Creek near Simeon (d)	4600	--	* 1948

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
NIOBRARA RIVER BASIN-CONTINUED			
Niobrara River near Valentine (d)	4605	6,160	1901-06, 1928-32
Minnechaduza Creek near Kilgore (d)	4609	85.0	1958-74
Minnechaduza Creek at Valentine (d)	4610	390	1948-93
Niobrara River near Norden (d)	4620	8,390	1953-83, 1986
Plum Creek at Meadville (d)	4625	536	1948-75, 1977-94
Niobrara River at Meadville (d)	4630	--	1951-52
Long Pine Creek near Long Pine (d)	463080	246	1980-91
Niobrara River at Mariaville (d)	463720	9,810	1986-91
Keya Paha River near Naper	4649	1,690	1958-94
Eagle Creek near Redbird (d)	465310	206	1979-91
Redbird Creek at Redbird(d)	465440	157	1981-94
North. Banch Verdigre Creek near Verdigre (d)	465680	137	1980-92
Niobrara River at Niobrara (d)	4660	--	1954-58
BAZILLE CREEK BASIN			
Bazille Creek near Niobrara (d)	4665	440	1952-95
BOW CREEK BASIN			
Bow Creek near St. James (d)	478518	304	1979-93
BLACKBIRD CREEK BASIN			
Blackbird Creek near Macy (d)	6011	102	1979-80
TEKAMAH CREEK BASIN			
Tekamah Creek at Tekamah (d)	6080	23.0	1949-81
NEW YORK CREEK BASIN			
New York Creek at Herman (d)	6090	29.7	1946-69
PLATTE RIVER BASIN			
Mitchell Canal at WY-NE State Line (d)	6740	--	1938-41
North Platte River at Henry (d)	6750	--	1912-18
Horse Creek at WY-NE State Line (d)	6771	--	1969-70
Horse Creek near Lyman (d)	6775	1,707	1931-94
Sheep Creek near Morrill (d)	6780	362	1932-91

DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
North Platte River at Morrill (d)	6785	--	1917-23
Dutch Flats Drain near Mitchell (d)	6788	--	1961-65
Dry Spotted Tail Creek at Mitchell (d)	6790	77.2	1949-79
North Platte River at Mitchell (d)	6795	24,300	1920-94
Tub Springs near Scottsbluff (d)	6800	--	1949-79
North Platte River at Scottsbluff (d)	6805	24,500	1887-1900, 1912, 1917-18
Winter Creek at Tri-State Canal, near Scottsbluff (d)	6807	--	1961-65
Winter Creek near Scottsbluff (d)	6810	--	1932-79
Gering Drain near Gering (d)	6815	79.8	1932-45, 1949-91
North Platte River near Minatare (d)	6820	24,700	1924-91
Alliance Drain near Minatare (d)	6822	--	1961-65
Ninemile Drain near Minatare (d)	6823	--	1961-65
Ninemile Drain near McGrew (d)	6825	--	1932-79
Bayard Sugar Factory Drain near Bayard (d)	6830	--	1932-79
Red Willow Creek near Bridgeport (d)	6835	83.0	* 1931
Red Willow Creek near Bayard (d)	6840	162	1932-79
North Platte River at Bridgeport (d)	6845	25,300	1917-91
Pumpkin Creek near Bridgeport (d)	6850	1,020	1932-91
North Platte River at Broadwater (d)	6855	--	1917-23
North Platte River at Lisco (d)	6860	26,700	1932-94
North Platte River at Oshkosh (d)	6865	31,300	1916-17, 1928-60
Blue Creek near Lewellen (d)	6870	1,190	1931-91
North Platte River at Lewellen (d)	6875	28,600	1941-91
North Platte River at Belmar (d)	6880	29,100	1917-26
Otter Creek near Lemoyne (d)	6885	13.9	1932-37
North Platte River at Lemoyne (d)	6890	--	1926-27
North Platte River at Martin (d)	6895	--	1934-38
North Platte River near Keystone (d)	6905	29,400	1942-94
North Platte River near Sutherland (d)	6910	29,800	1937-91
Birdwood Creek near Sutherland (d)	6915	250	1913-15
Birdwood Creek near Hershey (d)	6920	940	1932-91
Lincoln County Drain No. 1 near North Platte (d)	6925		1931, 1955-79
North Platte River at North Platte (d)	6930	30,900	1895-1994
Lodgepole Creek at Bushnell (upper station)(d)	7620	1,090	1931-32
Lodgepole Creek at Bushnell (d)	7625	1,350	1932-91

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
Lodgepole Creek at Sidney (d)	7630	2,190	1931-32
Lodgepole Creek at Ralton (d)	7635	3,307	1931, 1951-79
South Platte River at Big Springs (d)	7645	23,200	* 1903
South Platte River at Paxton (d)	7650	24,000	1923-24, 1931-33, 1937-70
South Platte River at North Platte (d)	7655	24,300	1917-94
Fremont Slough near North Platte (d)	765710		1983-85
Platte River at Brady (d)	7660	56,200	1939-91
Platte River near Cozad (d)	7665	56,500	1938-91
Platte River near Lexington (d)	7670	57,300	1902-06, 1916-24
Plum Creek near Smithfield (d)	7675	229	1946-53, 1969-75
Platte River near Overton (d)	7680	56,300	1915-94
Buffalo Creek near Darr (d)	7685	63.0	1947-69
Elm Creek near Overton (d)	7695	31.0	1947-58
Platte River near Odessa (d)	7700	58,100	1938-91
North Dry Creek near Kearney (d)	770190	--	1969-71
Platte River near Grand Island (South Channel) (d)	770478	--	1984-87
Wood River near Riverdale (d)	7710	379	1946-73
Wood River near Gibbon (d)	7715	526	1949-76, **1991-95
Wood River near Alda (d)	7720	599	1954-94
Dry Creek near Cairo (d)	7730	25	1949-53
Silver Creek at Ovina (d)	773150	67.6	** 1991-95
Middle Loup River near Mullen (d)	7745	1,120	1947-48
Middle Loup River near Seneca (d)	7750	1,140	1948-53
Dismal River near Gem (d)	7760	1,360	1947-53
Dismal River at Dunning (d)	7765	2,040	* 1932, 1946-95
Middle Loup River near Milburn (d)	7770	3,690	1952-56, 1958 1960-64
Middle Loup River at Walworth (d)	7775	4,650	1941-60
Middle Loup River at Sargent (d)	7780	4,480	1937-38, 1953-70
Middle Loup River near Comstock (d)	7785	4,960	* 1937
Middle Loup River at Arcadia (d)	7790	5,040	1937-93
Middle Loup River at Loup City (d)	7795	4,860	1936-38, 1949-56
Middle Loup River at Rockville (d)	7800	5,310	1956-64, 1968-75
Boelus Power Canal near Boelus (d)	7805	--	1952-63
Middle Loup River at Boelus (d)	7810	--	1952-55
Middle Loup River at Boelus (combined flow)(d)	7815	--	1937-38
South Loup River near Cumro (d)	7820	1,340	1946-53
South Loup River at Ravenna (d)	7825	1,660	1941-58, 1968-75
Mud Creek near Broken Bow (d)	7830	440	1949-53
Mud Creek near Sweetwater (d)	7835	707	1946-94

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
Oak Creek near Loup City (d)	7843	41.9	1952-60, 1961-64
Oak Creek near Dannebrog (d)	7845	122	1949-57
Turkey Creek near Dannebrog (d)	7848	66.2	1966-93
North Loup River at Brewster (d)	7855	1,890	1945-51
North Loup River at Burwell (d)	7865	2,510	1953-60
Calamus River near Harrop (d)	7870	693	1979-97
Calamus River near Burwell (d)	7875	994	1941-95
North Loup River near Burwell (d)	7880	--	1937-38, 1952-60
North Loup River at Ord (d)	7885	3,760	1952-94
Mira Creek near North Loup (d)	788988	65.8	1980-93
North Loup River at Scotia (d)	7890	3,960	1937-70
Davis Creek near Cotesfield (d)	7895	94.0	1949-58
North Loup River near Cotesfield (d)	7900	--	1950-56
Spring Creek at Cushing (d)	7910	164	1949-53
Cedar River near Spalding (d)	7915	752	1945-53, 1958-94
Spalding Power Canal at Spalding (d)	7917	--	1960-64
Cedar River at Primrose (d)	791750	870	1960-64
Cedar River at Belgrade (d)	7918	1,060	1960-65
Cedar River near Fullerton (d)	7920	1,220	1931-32, 1941-95
Fullerton Power Canal at Fullerton (d)	7921	--	1960-64
Beaver Creek at Loretto (d)	7935	311	1945-53, 1980-91
Loup River at Columbus (d)	7945	15,200	1895-1915, 1931, 1934-78
Shell Creek at Newman Grove (d)	7950	122	1949-67
Platte River near Fremont (d)	7965	--	1911-15
Elkhorn River near Atkinson (d)	796973	586	1983-91
Holt Creek near Emmet (d)	796978	--	1979-89
Elkhorn River at Emmet (d)	796985	--	1980-82
Elkhorn River at O'Neill (d)	7970	651	1931-32
South Fork Elkhorn River near Ewing (d)	7980	314	1948-53, 1961-72, 1978-91
Clearwater Creek near Clearwater (d)	7983	210	1962-64, 1978-91
Elkhorn River at Neligh (d)	7985	2,200	1931-93
Elkhorn River at Meadow Grove (d)	7988	2,500	1960-65
Willow Creek near Foster (d)	799080	137	1976-93
Union Creek at Madison (d)	799230	174	1979-93
Pebble Creek at Scribner (d)	799385	204	1979-93
Logan Creek at Pender (d)	799450	731	1966-93
Salt Creek subwatershed No. 3 near Sprague(d)	8013	4.20	1955-59
Salt Creek subwatershed No. 1 near Roca (d)	8014	1.46	1955-61
Salt Creek subwatershed No. 12 near Roca (d)	8015	1.12	1954-61
Salt Creek subwatershed No. 34 near Roca (d)	8025	5.72	1954-61

WATER RESOURCES DATA - NEBRASKA, 1998

DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
Antelope Creek at 17th St., at Lincoln (d)	8034	12.1	1958-62
Oak Creek near Raymond (d)	803450	88.7	1963-67
Dee Creek at Greenwood (d)	803550	14.3	* 1960
Cottonwood Creek above Czechland near Rescue	803920	--	1994-96
Cottonwood Creek tributary above Dam 6B near Prague	803935	--	1994-96
Silver Creek at Ithaca (d)	8045	80.0	1950-58
Salt Creek near Ashland (d)	8050	1,640	1948-67
LITTLE NEMAHA RIVER BASIN			
Little Nemaha River near Syracuse (d)	8105	218	1951-69
Brownell Creek subwatershed No. 1A near Syracuse (d)	8109	.19	1955-69
Brownell Creek subwatershed No. 1 near Syracuse (d)	8110	.77	1955-69
BIG NEMAHA RIVER BASIN			
North Fork Big Nemaha River at Humboldt (d)	8145	548	1953-96
Muddy Creek at Verdon (d)	8155	186	1953-72
KANSAS RIVER BASIN			
Pioneer Canal at CO-NE State Line (d)	8225	--	1950-51
Republican River at Benkelman (d)	8245	4,880	1947-94
Republican River at Max (d)	8280	7,740	1928-45
Muddy Creek at Stratton (d)	828490	157	1978
Swanson Lake near Trenton (e)	8290	8,620	1953-94
Republican River at Trenton (d)	8295	8,340	1947-93
Republican River at Culbertson (d)	8300	8,450	1931-50
Frenchman Creek near Champion (d)	8305	700	1932-40
Frenchman Creek below Champion (d)	8310	721	1935-56
Frenchman Creek near Imperial (d)	8315	1,050	1941-94
Frenchman Creek near Enders (d)	8325	1,140	1947-93
Frenchman Creek near Hamlet (d)	8335	1,270	1929-56
Stinking Water Creek near Wauneta (d)	8345	1,330	1941-50
Stinking Water Creek near Palisade (d)	8350	1,500	1950-94

DISCONTINUED SURFACE-WATER GAGING STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
KANSAS RIVER BASIN--CONTINUED			
Blackwood Creek near Culbertson (d)	8360	320	1946-86
Red Willow Creek above Hugh Butler Lake (d)	8373	582	1961-94
Hugh Butler Lake near McCook (e)	837390	730	1961-94
Red Willow Creek near McCook (d)	8375	740	1941-47, 1961-93
Dry Creek near Bartley (d)	8385	5.24	1955-57
Medicine Creek at Maywood (d)	8390	231	1951-58
Brushy Creek near Maywood (d)	8395	95.3	1951-58
Fox Creek at Curtis(d)	8400	74.3	1952-58, 1978-91
Dry Creek near Curtis (d)	8405	20	1951-58
Medicine Creek above Harry Strunk Lake (d)	8410	770	1950-94
Mitchell Creek above Harry Strunk Lake (d)	8415	52.0	1950-74
Harry Strunk Lake near Cambridge (e)	8420	880	1949-94
Medicine Creek below Harry Strunk Lake (d)	8425	900	1950-94
Medicine Creek at Cambridge (d)	8430	909	1936-57
Muddy Creek at Arapahoe (d)	8440	246	1951-72, 1978-93
Turkey Creek at Edison (d)	844210	74.9	1978-93
Sappa Creek near Beaver City (d)	8452	1,480	1937-72
Beaver Creek near Beaver City (d)	8470	2,080	1937-94
Harlan County Lake near Republican City (e)	8490	20,750	1953-94
Turkey Creek at Naponee (d)	8500	129	1948-53
Cottonwood Creek near Bloomington (d)	8502	15.6	1948-56
Republican River near Bloomington (d)	8505	21,020	1929-57
Center Creek at Franklin (d)	8510	177	1948-56, 1978-93
Thompson Creek at Riverton (d)	8515	290	1948-56, 1969-75
Elm Creek at Amboy (d)	8520	39.2	1978-94
			1948-54, 1978-93
Republican River near Guide Rock (d)	8530	22,040	1951-84
Beaver Creek near Rosemont (d)	8531	.75	1968-70
Big Blue River at Surprise (d)	8799	345	1964-93
Lincoln Creek near Seward (d)	8800	438	1954-73, 1974-94
Big Blue River at Seward (d)	8805	1,107	1954-94
Turkey Creek near Wilber (d)	8812	461	1960-94
Big Blue River at Beatrice (d)	8815	3,900	1911-15, 1975-94
Little Blue River below Pawnee Creek, near Pauline (d)	8829	929	1963-68
Little Blue River at Angus (d)	8835	--	1950-53
Little Blue River near Alexandria (d)	883570	1,557	1960-72, 1975-92
Big Sandy Creek at Alexandria (d)	883940	607	1980-93

* Partial year only

** Irrigation season only.

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS

The following surface-water crest stage stations in Nebraska have been discontinued. The years given in the period of record represent water years for which the annual maximum has been determined for each station. Each station has been assigned an 8-digit station number. For ease in reading the station number, the preceeding the number has been left off as well as the 00 following a 4-digit number. The asterik (*) denotes a current continuous-record streamflow station.

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
CHEYENNE RIVER BASIN			
Warbonnet Creek near Harrison	396490	24.5	1969-78
WHITE RIVER BASIN			
White River tributary near Glen	4432	7.97	1953-70
Deep Creek near Glen	4433	10.9	1953-78
Soldiers Creek near Crawford	4437	52.6	1955-78
White River tributary No. 2 near Crawford	4439	5.45	1953-70
Chadron Creek tributary at Chadron State Park near Chadron	445530	.59	1953-78
Chadron Creek at Chadron State Park near Chadron	445560	15.4	1953-78
NIOBRARA RIVER BASIN			
Niobrara River tributary near Belmont	4544	6.71	1971-78
Pebble Creek near Esther	4562	3.07	1953-78
Pebble Creek near Dunlap	4563	23.5	1953-70
Cottonwood Creek near Dunlap	4564	82.2	1953-78
Point of Rocks Creek near Marsland	4571	7.10	1970-78
Berea Creek near Alliance	4572	34.0	1953-78
Antelope Creek at Gordon	4577	61.1	1953-70
Antelope Creek tributary near Gordon	4578	26.6	1953-78
Big Beaver Creek near Valentine	4613	24.9	1971-79
Bone Creek tributary near Ainsworth	4631	.39	1956-68
Bone Creek tributary No. 2 near Ainsworth	4632	2.18	1958-68
Sand Draw tributary near Ainsworth	4633	1.07	1956-74
Honey Creek near O'Neill	4652	2.54	1958-68
Camp Creek near O'Neill	4653	1.65	1958-78
Blackbird Creek tributary near O'Neill	4654	.60	1958-68
Bingham Creek near Niobrara	465850	6.5	1968-79
WEIGAND CREEK BASIN			
Weigand Creek near Crofton	466950	3.5	1968-78

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
BOW CREEK BASIN			
West Bow Creek near Fordyce	478520	52.8	1964-65, 1968-78
OMAHA CREEK BASIN			
South Omaha Creek tributary near Walthill	6006	2.64	1951-67
South Omaha Creek near Walthill	6007	15.1	1951-67
South Omaha Creek tributary No. 2 near Walthill	6008	1.51	1950-78
South Omaha Creek at Walthill	6009	51.0	1951-78
TEKAMAH CREEK BASIN			
South Branch Tekamah Creek near Craig	6077	2.54	1950-67
South Branch Tekamah Creek tributary near Tekamah	6078	4.08	1951-78
South Branch Tekamah Creek near Tekamah	6079	9.73	1951-67
Tekamah Creek at Tekamah	6080	23.0	1982-89
NEW YORK CREEK BASIN			
New York Creek near Spiker	6086	1.75	1952-67
New York Creek tributary near Spiker	6087	1.55	1951-78
New York Creek north of Spiker	6088	6.50	1951-75
New York Creek east of Spiker	6089	13.9	1950-78
PAPILLION CREEK BASIN			
Big Papillion Creek near Orum	6107	8.52	1968-78
PLATTE RIVER BASIN			
Dry Spottedtail Creek tributary near Mitchell	678750	15.0	1971-78
Hackberry Creek near Redington	6849	16.6	1970-78
Ash Hollow near Oshkosh	6876	54.9	1971-78
Lodgepole Creek tributary near Kimball	762650	8.68	1970-78
Lodgepole Creek tributary near Sumol	7632	15.6	1968-78
South Fork Plum Creek tributary near Farnam	7671	9.81	1951-70
North Fork Plum Creek tributary near Farnam	7672	1.83	1952-78
Plum Creek tributary at Farnam	7673	19.8	1947-48, 1952-70
North Plum Creek near Farnam	7674	38.3	1952-70
Plum Creek near Farnam	767410	79.8	1947, 1951-78

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
Plum Creek near Smithfield	7675	229	1955-68, 1978
Buffalo Creek tributary No. 1 near Buffalo	768050	2.08	1965-78
East Buffalo Creek near Buffalo	7681	5.21	1951-78
Buffalo Creek at Buffalo	7682	33.5	1951-67
Buffalo Creek tributary No. 2 near Buffalo	7683	1.93	1952-65
West Buffalo Creek near Buffalo	7684	17.1	1951-78
Elm Creek tributary near Overton	7691	.58	1951-78
Elm Creek near Sumner	7692	14.9	1951-78
Elm Creek tributary No. 2 near Overton	7693	5.62	1951-78
Wood River tributary near Lodi	7706	2.02	1952-78
Wood River near Lodi	7707	12.9	1952-78
Wood River near Oconto	7708	26.4	1950, 1952-78
Wood River at Oconto	7709	44.8	1950, 1952-78
Wood River near Lomax	770910	79.6	1952-78
Wood River near Riverdale	7710	379	1974-80
North Fork Dismal River near Mullen	7757	670	1971-78
Lillian Creek tributary near Broken Bow	7776	2.02	1952-78
Lillian Creek near Broken Bow	7777	4.77	1947, 1951-78
Lillian Creek tributary near Walworth	7778	2.04	1951-78
South Branch Mud Creek tributary near Broken Bow	7826	.43	1951-78
South Branch Mud Creek near Broken Bow	782620	79.4	1976-78
South Branch Mud Creek at Broken Bow	7827	400	1945, 1951-75
North Branch Mud Creek at Broken Bow	7828	15.5	1952-67
Mud Creek tributary near Broken Bow	7829	5.98	1945, 1951-78
Turkey Creek near Farwell	7847	27.2	1950, 1953-78
Davis Creek tributary near North Loup	7891	2.29	1952-67
Davis Creek tributary No. 2 near North Loup	7892	6.79	1952-70
Davis Creek near North Loup	7893	21.1	1952-67
Davis Creek southwest of North Loup	7894	41.6	1951-78
East Branch Spring Creek tributary near Wolbach	7906	1.52	1952-78
West Branch Spring Creek at Brayton	7907	19.5	1945, 1952-78
West Branch Spring Creek near Wolbach	7908	36.9	1952-67
Mary's Creek at Wolbach	7909	7.63	1952-67
Spring Creek near Cushing	7911	184	1948, 1953-78
Skeedee Creek tributary near Genoa	793995	.59	1968-78

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
PLATTE RIVER BASIN--CONTINUED			
Bone Creek near David City	794710	8.75	1968-78
Shell Creek at Newman Grove	7950	122	1961
South Fork Union Creek tributary near Cornlea	799190	6.54	1968-78
North Logan Creek near Laurel	799423	25.3	1965, 1968-78
Pond Creek near Schuyler	799850	.54	1968-78
Elkhorn River tributary near Nickerson	800350	6.53	1968-78
Olive Branch above Sprague	8012	43	1956-61
Olive Branch below Sprague	801320	81	1956-58
Hickman Branch above Hickman	801340	14.7	1956-61
Hickman Branch at Hickman	801360	42.8	1956-61
Antelope Creek at 48th Street, Lincoln	8032	6.82	1951, 1958-78
Antelope Creek at 27th Street, Lincoln	8033	10.4	1957-78
Antelope Creek at 17th Street, Lincoln	8034	12.5	1963-78
Dee Creek near Alvo	803540	8.06	1962-78
Dunlap Creek tributary near Weston	803570	.31	1950-78
North Fork Wahoo Creek near Prague	8036	15.2	1951-78
Dunlap Creek near Weston	8037	8.90	1951-67
North Fork Wahoo Creek at Weston	8039	43.7	1951-78
Silver Creek near Cedar Bluffs	8041	10.9	1950-78
Silver Creek near Colon	8042	29.9	1950-78
Silver Creek tributary near Colon	8043	14.3	1951-78
Silver Creek tributary at Colon	8044	22.4	1951-78
Silver Creek at Ithaca	8045	72.0	1959-78
Buffalo Creek near Gretna	805510	4.29	1968-78

WEeping WATER CREEK BASIN

Weeping Water Creek at Elmwood	8064	20.8	1951-67
Stove Creek near Elmwood	806420	5.23	1951-67
Stove Creek at Elmwood	806440	10.0	1950-78
Weeping Water Creek at Weeping Water	806460	75.5	1947, 1950-78
Weeping Water Creek tributary near Weeping Water	806470	.87	1950-78

HONEY CREEK BASIN

Honey Creek near Peru	810060	3.40	1968-78
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WATER RESOURCES DATA - NEBRASKA, 1998

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
LITTLE NEMAHA RIVER BASIN			
Hooper Creek tributary near Palmyra	8101	7.81	1950-78
Hooper Creek near Palmyra	8102	57.5	1951-67
Wolf Creek near Syracuse	8103	25.5	1951-67
Little Nemaha River tributary near Syracuse	8104	.76	1950-78
BIG NEMAHA RIVER BASIN			
Muddy Creek at Verdon	8155	186	1973
Temple Creek near Falls City	815510	3.02	1968-78
KANSAS RIVER BASIN			
North Branch Indian Creek near Max	8281	4.76	1962, 1970-78
Thompson Canyon near Trenton	8297	10	1966-78
Spring Creek tributary near Grant	8341	17.9	1970-78
Bobtail Creek near Palisade	8351	41	1966-78
Ash Creek near Red Willow	8371	22	1966-78
Medicine Creek at Maywood	8390	231	1960-78
Elkhorn Canyon near Maywood	8392	6.74	1952-78
Elkhorn Canyon southwest of Maywood	8394	13.2	1952-70
Brushy Creek near Maywood	8395	130	1947, 1960-76
Frazier Creek near Maywood	8396	11.3	1952-70
Frazier Creek tributary near Maywood	8397	.72	1952-78
Fox Creek (Site No. 1) near Curtis	8398	6.97	1952-70
Fox Creek north of Curtis	839850	13.8	1952-70
Fox Creek above Cut Canyon near Curtis	8399	31.8	1951-78
Cut Canyon near Curtis	839950	25.6	1951-78
Fox Creek at Curtis	8400	72.6	1947, 1960-70
Dry Creek near Curtis	8405	20	1947, 1960-70
Turkey Creek near Holdrege	8496	27.8	1941, 1960, 1968-78
Cottonwood Creek near Bloomington	8502	15.6	1957-78
Republican River near Bloomington	8505	20800	1970-78
Center Creek at Franklin	8510	146	1961-68
Republican River at Riverton	851090	-	1970-78
West Branch Thompson Creek at Hildreth	8511	65.2	1953-70
West Branch Thompson Creek near Hildreth	8512	110	1953-70
West Branch Thompson Creek tributary near Hildreth	8513	11.6	1953-78
West Branch Thompson Creek near Upland	8514	90.8	1953-78
Thompson Creek at Riverton	8515	223	1961-68
Elm Creek at Amboy	8520	39.2	1954-78
Beaver Creek near Rosemont	8531	.752	1971-78

DISCONTINUED SURFACE-WATER CREST STAGE STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Drainage area (mi²)</i>	<i>Period of record (water years)</i>
KANSAS RIVER BASIN--CONTINUED			
Republican River at Superior	8534	22300	1971-75, 1977
Big Blue River tributary near Hordville	879850	4.07	1968-78
Plum Creek near Seward	880508	85.5	1968-78
North Branch West Fork Big Blue River tributary at Giltner	880590	7.52	1968-78
School Creek tributary near Harvard	880710	13.1	1953-70
School Creek near Harvard	880720	55.1	1953-78
School Creek tributary No. 2 near Harvard	880730	14.0	1953-78
School Creek near Saronville	880740	89.4	1953-70
Beaver Creek tributary near Henderson	880775	1.16	1968-78
West Fork Big Blue River at Beaver Crossing	880790	1153	1967-68
South Fork Swan Creek tributary near Western	881250	1.00	1968-78
Indian Creek at Beatrice	881450	74.7	1961-93
Big Blue River at Beatrice	8815	3900	1969-74
Bear Creek near Adams	881510	2.85	1968-70
Big Blue River tributary near Beatrice	881530	1.86	1971-78
Little Blue River below Pawnee Creek near Pauline	8829	929	1969
Little Blue River near Angus	8831	1038	1958-68
Spring Creek tributary near Ruskin	883540	2.11	1968-78
South Fork Big Sandy Creek near Edgar	8836	15.2	1953-70
South Fork Big Sandy Creek near Davenport	8837	32.0	1950, 1952-78
South Fork Big Sandy Creek near Carleton	8838	50.4	1953-70
South Fork Big Sandy Creek near Hebron	8839	90.3	1953-70
Little Sandy Creek near Ohioa	883955	11.6	1968-78
Dry Branch tributary near Fairbury	884005	4.51	1968-78

WATER RESOURCES DATA - NEBRASKA, 1998 DISCONTINUED SURFACE-WATER QUALITY STATIONS

The following surface-water quality stations in Nebraska have been discontinued or converted to partial-record stations. Water quality data (daily or periodic samples with collection frequency not less than quarterly) were collected and published for the period of record shown for each station. Each station has been assigned an 8-digit station number. For ease in reading the station number, the 06 preceding the number has been left off as well as the 00 following a 4-digit number.

Type of record:

c chemical
m microbiological
s sediment
t temperature

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
WHITE RIVER BASIN			
White River at Crawford	4440	* 1957	c
White River near Whitney	4450	1969-72	c m t
White River at Slim Butte, SD	4457	* 1964, 1965-67	c
		1964-67	s
		1965-67	t
PONCA CREEK BASIN			
Ponca Creek at Anoka	4535	1949-53, 1964, 1967	c
		1949-52, 1967	s
** Ponca Creek at Verdel	4536	* 1930, *1949, *1971	c
		1975-80	c m t
NIOBRARA RIVER BASIN			
Niobrara River at Agate	4541	* 1952	c
Niobrara River above Box Butte Reservoir	4545	* 1952	c
Niobrara River near Verdel	4655	1976-80	c
		1972-81	s
		1959-84	t
		1958-65, 1967-94	m
Niobrara River near Dunlap	4559	1969-73	c m t
Niobrara River near Hay Springs	4565	1949-53, *1961, 1964	c
		1950-57	s
		1951-55	t
Niobrara River near Colclessner	4570	1969-73	c m t
Niobrara River near Gordon	4575	1947-55	c s
		* 1964	c s t
Antelope Creek near Gordon	4577	* 1948-49	c
Bear Creek near Eli	4585	* 1947	c m t
Niobrara River near Cody	4590	1948-56	c s t
Snake River above Merritt Reservoir	4592	1964-75	t
		1976	c t
Ainsworth Canal near Johnstown	459350	1978-84	c t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
NIOBRARA RIVER BASIN--CONTINUED			
Snake River near Burge	4595	1947-52 1949-53	c s
Gordon Creek near Simeon	4600	* 1948	c
Niobrara River at Valentine	4605	* 1948	c
Minnechaduza Creek at Valentine	4610	* 1948-49	c
** Niobrara River near Sparks	4615	1982-93	c t
Niobrara River near Norden	4620	* 1953, *1961, 1964-67	c s t
Plum Creek at Johnstown	462450	1969-75, 1978-84	c m t
Plum Creek near Johnstown	462470	1969-75, 1978-84	c m t
Plum Creek near Meadville	4625	1948-49 1977-84	c *s c t
Niobrara River at Meadville	4630	1950-52	c s t
Long Pine Creek at Long Pine	463050	1978-84	c t
Bone Creek at Ainsworth	463090	* 1969-75, 1978-84	c t
Sand Draw near Johnstown	463290	1978-84	c t
Sand Draw near Meadville	463310	1978-84	c t
Bone Creek near Long Pine	463350	* 1969-75, 1978-84	c t
Niobrara River near Mariaville	463720	1985-89	c m s
Keya Paha River at Wewela, SD	4645	1947-49	c
** Niobrara River near Spencer	4650	* 1946-48 1976	c t
Eagle Creek near Midway	465050	* 1957-66, 1976-90	c t
East Branch Eagle Creek near Midway	4651	* 1957-66 1976-90 1974-83	c t
Honey Creek near Midway	465202	* 1957-66	c
Eagle Creek near Redbird	465310	1986-90	c
Redbird Creek near Meek	465398	* 1957-66 1976-90	c t
Blackbird Creek near Meek	465420	* 1957-66 1976-90	c t
** Niobrara River near Verdel	4655	1958-65, 1967-94, 1958-65, 1967-84 1972-81	c t s
South Branch Verdigre Creek near Royal	465650	* 1967	c
Verdigre River near Verdigre	4657	1948-49 1948-50	c s

BAZILLE CREEK BASIN

Bazile Creek near Creighton	4662	* 1967	c
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WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
MISSOURI RIVER			
Missouri River at Yankton, SD	4675	1951, 1957-59	c t
Missouri River at Decatur	6012	1969-73	c m t
Missouri River at Omaha	6100	1969-72	c m t
Missouri River at Bellevue	6106	1969-70, 1971-73	c m t
Missouri River near Mormon Bridge at Omaha	6098	1974-75	c m t
PLATTE RIVER BASIN			
Ft. Laramie Canal at WY-NE State Line near Lyman	6562	* 1964	c
Interstate Canal at WY-NE State Line near Henry	6566	* 1964	c
High Line Canal near Bayard	6568	* 1964	c
Low Line Canal near Bayard	656955	* 1964	c
North Platte River at WY-NE State Line at Henry	6745	* 1946, 1964	c
North Platte River S of Henry	6750	* 1938	c
South Horse Creek lateral at WY-NE State Line near Lyman	6771	* 1964	c
Kiowa Creek near Gering	677208	* 1964	c
Kiowa Creek above Ft. Laramie Canal near Lyman	677210	* 1963-64	c
Kiowa Creek above Horse Creek lateral near Lyman	677220	* 1963-64	c
Unnamed tributary to Kiowa Creek near Lyman	677221	* 1963-64	c
Owl Creek above Ft. Laramie Canal near Lyman	677234	* 1963-64	c
Owl Creek below Ft. Laramie Canal near Lyman	677235	* 1963-64	c
Owl Creek near Lyman	677240	* 1963-64	c
Unnamed eastern tributary to Kiowa Creek near Lyman	677245	* 1963-64	c
Kiowa Creek above Dry Creek Drain near Lyman	677250	* 1963-64	c
Dry Creek Drain below Ft. Laramie Canal near Lyman	677251	* 1963-64	c
Western tributary to Dry Creek Drain above Horse Creek lateral	677270	* 1963-64	c
Dry Creek Drain below Horse Creek lateral near Lyman	677274	* 1963-64	c

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>	
PLATTE RIVER BASIN--CONTINUED				
Western tributary to Dry Creek Drain near Lyman	677280	* 1963-64	c	
Dry Creek Drain near Lyman	677290	* 1963-64	c	s
Kiowa Creek near Lyman	6773	1961-65	c	s
Horse Creek near Lyman	6775	* 1949, *1964 1970-73	c	t
Lane Drain near Lyman	677550	* 1964	c	
Sheep Creek near Morrill	6780	* 1964	c	
Morrill Drain near Morrill	678580	* 1964	c	
Akers Draw near Morrill	678610	* 1949-64	c	
Brown Canyon Drain near Mitchell	6787	1961-65	c	s
Dutch Flats Drain near Mitchell	6788	1961-65	c	s
Dry Spottedtail Creek at Mitchell	6790	* 1964	c	
Bald Drain near Mitchell	6794	* 1964 1970-73	c	t
North Platte River at Mitchell	6795	* 1964	c	
Wet Spottedtail Creek near Mitchell	679950	* 1964	c	
Tub Springs near Scottsbluff	6800	* 1964	c	
Gering Canal at siphon under Gering Drain near Gering	680450	* 1964	c	
Winter Creek at Tri-State Canal near Scottsbluff	6807	1961-65	c	s
Hale Drain near Scottsbluff	6808	1961-65	c	s
Scottsbluff Drain No.1 near Scottsbluff	680950	* 1964	c	
Winter Creek near Scottsbluff	6810	* 1964	c	
Gering Drain tributary near Gering	681290	* 1963-64	c	
Gering Drain at Mitchell-Gering Canal near Gering	6813	1961-65	c	s
Gering Drain near Gering	6815	* 1964	c	s
Scottsbluff Drain No. 2 near Minatare	681950	* 1964	c	
North Platte River near Minatare	6820	* 1938, *1964	c	
Fairfield Seep near Minatare	682010	* 1964	c	
Alliance Drain near Minatare	6822	1961-65	c	*s
Ninemile Drain above Tri-State Canal near Minatare	682280	* 1963-64	c	
East Ninemile Drain near Minatare	682290	* 1963-64	c	
Ninemile Drain near Minatare	6823	1961-65	c	s
Ninemile Drain near McGrew	6825	* 1964	c	
North Platte River at McGrew	682505	1973-89	c	m
Bayard Sugar Factory Drain near Bayard	6830	* 1964	c	
Cleveland Drain near McGrew	683050	* 1964	c	
West Wildhorse Drain near Bayard	6832	1961-62	c	s

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Wildhorse Drain near Bayard	6833	1961-62	c s
Red Willow Creek near Bayard	6840	* 1964	c
DeGraw Drain near Bridgeport	684250	* 1964	c
Indian Creek near Bridgeport	684350	* 1964	c
Upper Dugout Creek near Bridgeport	684450	* 1964	c
North Platte River at Bridgeport	6845	* 1964	c
		1971-74	c t
		1970-73	c t
Pumpkin Creek near Bridgeport	6850	* 1949	c
North Platte River at Lisco	6860	1970-94	c m s
		1971-81	c
		1971-81	t
North Platte River at Oshkosh	6865	1951	c
Kingsley Reservoir (McConaughy Lake)	6900	1947-50	c
Sutherland Canal below diversion from North Platte River near Keystone	6903	* 1968	c
North Platte River near Keystone	6905	* 1945	c
		1973-74	c t
North Platte River at North Platte	6930	* 1950, *1958-59,	
		* 1965	c
Lodgepole Creek at Kimball	762550	1973-74	c m t
South Platte River at Julesburg, CO	764001	1946-69	c
South Platte River near Julesburg, CO	764201	1969-71	c
** South Platte River at Roscoe	764880	1975-83	c m t
Sutherland Canal below diversion from South Platte River near Paxton	7649	* 1968	c
South Platte River at Paxton	7650	* 1965	c
Supply Canal (Tri-County diversion) near Maxwell	7657	1951-72	c t
Platte River at Brady	7660	1950-72	c
		1951-72	t
South Platte River at North Platte	7655	1993-95	c s t
Tri-County Canal (1.25 mi below diversion) near North Platte	765698	1993-95	c s t
Platte River near Cozad	7665	* 1947-49, *1965,	
Platte River near Lexington	7670	1951	c
Johnson Reservoir below Power Plant No. 2 near Lexington	767040	1950-52, 1957-70	c
Larson Drain 2 miles SW of Platte River bridge S of Overton	767996	* 1968	c
Spring Creek below Lexington	768015	1973-74	c m t
Buffalo Creek near Darr	7685	* 1948	c
Unnamed Drain 2.2 miles SW of Platte River bridge S of Elm Creek	769950	* 1968	c

WATER RESOURCES DATA - NEBRASKA, 1998

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DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Unnamed Drain 8.2 miles N of Holdrege	769994	* 1968	c
Unnamed Drain 5.2 miles SE of Platte River bridge S of Elm Creek	769996	* 1968	c
Platte River near Odessa	7700	* 1947-49, 1950-52, * 1965	c
Unnamed Drain 2.3 miles SE of Platte River bridge S of Odessa	770002	* 1968	c
North Dry Creek near Kearney	770190	1969-71	c m t
Whiskey Slough 3.2 miles SW of Platte River bridge S of Kearney	770198	* 1968	c
** Platte River near Kearney	7702	* 1947, *1959	c
Platte River (North Channel) near Kearney	770205	1973-74	c m t
Crooked Creek Drain 0.8 mile NW of Newark	770250	* 1968	c
Lost Creek 7.7 miles NE of Axtell	770340	* 1968	c
Wood River near Riverdale	7710	* 1947-49, *1965-66, 1974 1947-52	c s
Wood River near Gibbon	7715	* 1966, 1974, 1976	c
Wood River near Alda	7720	* 1966, 1974	c m t
Wood River near Grand Island	7722	* 1965-66, 1973-74	c m t
Wood River near Chapman	7725	* 1958-59, 1962-80	c m t
Warm Slough near Chapman	772750	* 1965-66	c
Silver Creek near Silver Creek	7729	* 1951, *1965-66	c
Prairie Creek near Cairo	772950	* 1965	c
Silver Creek at Ovina	773150	* 1966	c
Prairie Creek near Central City	7734	* 1965-66	c
Prairie Creek near Fullerton	773410	* 1951	c
Middle Loup River near Seneca	7750	* 1949-51	s
** Middle Loup River at Dunning	7755	* 1947-66 1950-52, 1954, *1977 1950-56, 1966-89	c s t
Dismal River near Gem	7760	1949-51	s
Dismal River at Dunning	7765	* 1952 1948-53, 1956-57 1956, *1977	c s s
Middle Loup River near Milburn	7770	1949-55 1970-74	s c t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Middle Loup River at Walworth	7775	* 1949	s
Lillian Creek near Walworth	7779	1951	s
Detention structure near Sargent	7781	1960-62	s
Middle Loup River near Comstock	7785	1969-74	c t
Farwell Canal at Highway 58 above Sherman Reservoir	778860	1977-83	c t
Middle Loup River at Arcadia	7790	* 1949 1948-57 1977-83	c s
Middle Loup River at Loup City	7795	1949-52	s
Deer Creek near Boleus	781530	1977-83	c t
South Loup River near Cumro	7820	* 1948 1948-51	c s
Mud Creek near Broken Bow	7830	1973-74	c m t
Mud Creek near Sweetwater	7835	* 1977 1978-89	s c m
** South Loup River at St. Michael	7840	1946-53	s
Oak Creek near Loup City	7843	1951-58	s
Oak Creek near Farwell	7844	1977-83	c t
Oak Creek near Dannebrog	7845	1977-83	c t
Dry Creek near Dannebrog	784505	1977-83	c t
Turkey Creek near Nysted	784750	1977-83	c t
Turkey Creek northeast of Dannebrog	784810	1977-83	c t
Turkey Creek tributary near St. Paul	784820	1977-83	c t
Unnamed Creek at St. Paul	785020	1977-83	c t
North Loup River at Brewster	7855	* 1950 1948-51	c s
** North Loup River at Taylor	7860	* 1956 * 1949, *1977 1974-81	c s t
North Loup River near Burwell	7865	* 1944, 1952 1949-57	c s
Calamus River near Burwell	7875	* 1944, *1952-56 * 1949-55 1972-81	c s t
North Loup River at Ord	7885	* 1944 1949-55	c s
North Loup River at Scotia	7890	* 1944 * 1949	s
Davis Creek near Cotesfield	7895	* 1950-53, 1956	s
North Loup River near Cotesfield	7900	* 1950, 1951-54	s
Auger Creek at Elba	790245	1977-83	c t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Unnamed Creek south of Elba	790255	1977-83	c t
Loup River near Palmer	791150	1993-95	c s t
Cedar River near Spalding	7915	* 1947-49, *1959-60	c
		1946-47	s
		1957-63	c s
Cedar River at Belgrade	7918	* 1959	c
		1958-63	s
Loup River Power Canal at Diversion near Genoa	792499	1973-86	c m s t
Cedar River near Fullerton	7920	1958-59, 1974-96	c
		1974-83	t
** Loup River Power Canal near Genoa	7925	1950-53	s
** Loup River near Genoa	7930	1976, 1979-86	c s t
Beaver Creek at Loretto	7935	1947-49	c
		1946-51	s
Beaver Creek near Albion	7936	1973-78	c m t
** Beaver Creek at Genoa	7940	* 1977	s
		1978-89	c m
Loup River at Columbus	7945	* 1946	c
Platte River near Schuyler	7947	1966-68	c s
** Shell Creek near Columbus	7955	* 1948-49, *1968	c
		1948-49	s
** Platte River at North Bend	7960	* 1966-69	s
		1973-77	t
		1973-89	c m
Elkhorn River near Stuart	796950	* 1966, *1968-69	c
Elkhorn River near Atkinson	796973	1983-89	c m
Holt Creek near Emmet	796980	* 1966, *1968-69	c
Dry Creek near O'Neill	7972	* 1966, *1968-69	c
Elkhorn River near Inman	7974	* 1966, *1968-69	c
		1965-70	s
** Elkhorn River at Ewing	7975	* 1948-49, 1960-66,	
		1968-69, 1976	c
		1948-52, 1961	s
South Fork Elkhorn River at Ewing	7980	* 1948, 1960-66	c
		1961, 1963-67	s
Cache Creek near Ewing	798150	* 1967-68	c

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Clearwater Creek at Clearwater	798302	* 1964, *1967-69 1962-64	c s
Antelope Creek near Neligh	798450	* 1967-68	c
Elkhorn River at Neligh	7985	* 1947, *1967-68, 1974-81 1948-51 1962-64	c t s s
Cedar Creek at Oakdale	798550	* 1967-69	s
Elkhorn River at Meadow Grove	7988	* 1943, *1964, *1967-69 1963-65	c s
Elkhorn River near Battle Creek	7989	* 1968-69	c
Battle Creek at Battle Creek	798920	* 1968-69	c
** Elkhorn River near Norfolk	7990	* 1976-77 1960-69, 1974-89	s t c m
North Fork Elkhorn River above Pierce	799020	* 1968-69	c
Dry Creek near Pierce	799030	* 1968-69	c
North Fork Elkhorn River below Dry Creek	799031	* 1968	c
Yankton Slough near Pierce	799040	* 1968	c
Willow Creek near Pierce	799050	* 1968-69	c
** North Fork Elkhorn River near Pierce	7991	* 1944, 1959-64, * 1968-69 * 1961, 1963-64	c s
North Fork Elkhorn River at Hadar	799110	* 1968-69	c
North Fork Elkhorn River at Norfolk	799130	* 1965, 1968-69 1965-68	c s
Union Creek near Stanton	799290	* 1964, *1968-69 1962-65	c s
Elkhorn River at Stanton	7993	* 1943, *1968-69	c
Humbug Creek near Pilger	799310	* 1968-69	c
Rock Creek near Beemer	799325	* 1968-69	c
Plum Creek near Beemer	799345	* 1968-69	c
** Elkhorn River at West Point	799350	1968-69, 1981-89	c m
Cuming Creek near Scribner	799365	* 1968-69	c
Pebble Creek at Scribner	799385	* 1968-69	c
Elkhorn River near Hooper	7994	* 1968-69	c
Middle Logan Creek at Laurel	799410	* 1968-69	c
Logan Creek at Wakefield	799445	* 1963	c
Logan Creek at Pender	799450	1964-68, 1973-89	c m
** Logan Creek near Uehling	7995	1968-71, 1974-81	t
Middle Fork Maple Creek near Schuyler	7999	* 1968	c
Bell Creek at Arlington	800250	* 1968-69	c
Elkhorn River at Waterloo	8005	1966-95	c m s t
** Platte River near Ashland	8010	* 1946, 1950-53, *1969	c

WATER RESOURCES DATA - NEBRASKA, 1998

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DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
East inlet to Olive Creek Lake near Kramer	801148	* 1967	c
Olive Creek near Kramer	801150	* 1967	c
West tributary to Bluestem Lake near Sprague	801264	* 1967	c
Bluestem Lake near Sprague	801266	* 1968	c
Salt Creek near Roca	801330	1971-80	c m
Tributary to Wagon Train Lake near Hickman	801345	* 1967	c
Wagon Train Lake near Hickman	801346	* 1967	c
West tributary to Stagecoach Lake near Hickman	801364	* 1967	c
South inlet to Stagecoach Lake near Hickman	801365	* 1967	c
Stagecoach Lake near Hickman	801366	* 1968	c
Hickman Branch near Roca	801370	1971	c m t
Hickman Branch at Roca	8026	* 1972	c m t
Salt Creek at Saltillo Siding	803010	* 1972	c
Cardwell Branch near Denton	803068	* 1968	c
South tributary to Yankee Hill Reservoir near Denton	803069	* 1968	c
Yankee Hill Reservoir at dam near Denton	803070	* 1968	c
Holmes Creek near Denton	803073	* 1968	c
Conestoga Lake near Denton	803075	* 1968	c
Salt Creek above Beal Slough at Lincoln	803080	1971-83	c m t
Beal Slough at Lincoln	803085	* 1971-72	c m t
Haines Branch at Lincoln	803098	* 1971-72	c m t
Salt Creek at A Street at Lincoln	8031	* 1950	c
West tributary to Twin Lakes Reservoir near Pleasant Dale	803113	* 1968	c
North tributary to Twin Lakes Reservoir near Pleasant Dale	803114	* 1968	c
Twin Lakes Reservoir near Pleasant Dale	803115	* 1968	c
Middle Creek near Malcolm	803128	* 1968	c
Pawnee Lake near Emerald	803130	* 1968	c
Middle Creek at Lincoln	803180	1971-72	c m t
Salt Creek at 14th Street at Lincoln	803190	1971-80	c m t
Antelope Creek above Antelope Lake at Lincoln	803196	* 1968	c
Antelope Lake at Lincoln	803198	* 1968	c
Antelope Creek at 52nd Street at Lincoln	803199	1983	c t
Antelope Creek at 27th Street at Lincoln	8033	1971-72, 1983	c m t
Antelope Creek at Lincoln	8034	* 1963	c
Antelope Creek at Court Street at Lincoln	803405	1971-83	c m t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
PLATTE RIVER BASIN--CONTINUED			
Oak Creek at Agnew	803442	* 1968	c
Middle Oak Creek near Garland	803445	* 1968	c
Branched Oak Reservoir near Raymond	803448	* 1968	c
North Oak Creek near Valparaiso	803470	* 1971-72	c m t
Oak Creek above Air Base near Lincoln	803480	1971-72	c m t
Elk Creek near Lincoln	803485	* 1971-72	c m t
Oak Creek at 1st Street at Lincoln	803490	1968-69	c
Oak Creek at 14th Street at Lincoln	803493	1971-80	c m t
** Salt Creek at Lincoln	8035	1950-60, 1968-80	c m t
		1951-54	s
Dead Man's Run at 66th Street at Lincoln	803501	1983	c t
Dead Man's Run at Highway 6 at Lincoln	803503	1971-72, 1983	c m t
Little Salt Creek near Davey	803507	* 1952, *1969	c
** Little Salt Creek near Lincoln	803510	* 1952, *1969	c
		1971-72, 1974-77	c m t
Stevens Creek near Walton	803515	* 1971-72	c m t
** Stevens Creek near Lincoln	803520	* 1969, 1979-80	c
Salt Creek below Stevens Creek near Waverly	803525	1971-93	c m
Stevens Creek at Highway 6 near Lincoln	803523	1971-72, 1974-78	c m t
** Rock Creek near Ceresco	803530	1970-81	c m s t
Rock Creek near Greenwood	803534	* 1971-72, 1977	c m t
Camp Creek near Greenwood	803537	* 1971-72	c m t
Dee Creek at Greenwood	803550	* 1971-72	c m t
** Salt Creek at Greenwood	803555	1971-89	c m
		1971-72, 1981-84	t
		1972-76	s
Greenwood Creek near Greenwood	803558	* 1971-72	c m t
Callahan Creek near Greenwood	803563	* 1971-72	c m t
Salt Creek above Ashland	803565	1971-74	c m t
Salt Creek at Ashland	803567	* 1972	c
** Wahoo Creek at Ithaca	8040	1967-68	c
Silver Creek near Wahoo	804495	1974-78	c m t
Salt Creek near Ashland	8050	* 1950	c
Salt Creek at mouth near Ashland	805005	* 1971	c
Platte River near South Bend	805010	* 1960-65	c
		1960, 1965, 1970	s
Mill Creek at Louisville	805499	1973-81	c m s t
Cedar Creek near Manley	805520	* 1968	c
Cedar Creek near Louisville	805525	1973-81	c m s t
		* 1971	cmt
Platte River near Plattsmouth	805550	1969-72	c m t
Fourmile Creek near Plattsmouth	805565	1974-81	c m s t
Platte River at La Platte	805570	1974	c m t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
WEEPING WATER CREEK BASIN			
Weeping Water Creek at Weeping Water	806460	1973-81	c m s t
S Br Weeping Water Creek near Union	806495	1973-81	c m s t
** Weeping Water Creek at Union	8065	* 1977	s
Weeping Water Creek near Union	806501	1973-81	c m s t
		* 1971	c m t
		* 1977	s
MISSOURI RIVER			
Missouri River at Nebraska City	8070	1951-73	c t
LITTLE NEMAHA RIVER BASIN			
Brownell Creek SWS No. 1A near Syracuse	8109	1955-69	s
Brownell Creek SWS No. 1 near Syracuse	8110	1955-69	s
** Little Nemaha River at Auburn	8115	* 1977	s
		1973-89	c m
BIG NEMAHA RIVER BASIN			
** Big Nemaha River at Falls City	8150	1951, 1973-89	c m
KANSAS RIVER BASIN			
** Arikaree River at Haigler	8215	1947-49	c
		1947-51	s
		1950-51	t
** North Fork Republican River at CO-NE State Line	8230	1947-49	c s
** Rock Creek at Parks	8240	* 1952-53	c
Republican River at Benkelman	8245	* 1950	s
		1969-73, 1980-89	c m
** South Fork Republican River near Benkelman	8275	1950	
Republican River near Max	8280	1946-47	c t
** Republican River at Stratton	8285	1951, 1953-54	s t
Swanson Lake near Trenton	8290	* 1957	c
Republican River at Trenton	8295	1947-49	c
		1947-49, 1953	t
		1947-51, 1953	s
		* 1975-76	c t
**** Enders Reservoir	8320	1952-57	c
Frenchman Creek near Enders	8325	1947-49	c
		1946-47, 1962, 1964	s
Frenchman Creek 2.6 miles E of Enders Dam near Wauneta	8327	1962	s
Frenchman Creek 5.6 miles E of Enders Dam near Wauneta	8329	1962, 1964-67	s
Frenchman Creek at Wauneta	8331	1962	s

DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
KANSAS RIVER BASIN--CONTINUED			
Frenchman Creek above Sand Canyon near Hamlet	8333	1962	s
Frenchman Creek near Hamlet	8335	1962	s
** Frenchman Creek at Palisade	8340	1964-65, *1975-76 1971-76	c t s
** Frenchman Creek at Culbertson	8355	1970-87	c
** Republican River at McCook	8370	1957 1967-88 1956-57	c t s
Red Willow Creek at Red Willow Diversion Dam near McCook	8379	1970-74	c t
** Red Willow Creek near Red Willow	8380	1950-53 1950-54	c t s
Republican River above Medicine Creek at Cambridge	8387	1951-58 1951	c s
Medicine Creek at Maywood	8390	1951-58	s t
Brushy Creek near Maywood	8395	1951-58	s t
Fox Creek at Curtis	8400	* 1956 1951-58	c s t
** North Fork Republican River at CO-NE State Line	8230	1947-49	c s
** Rock Creek at Parks	8240	* 1952-53	c
Republican River at Benkelman	8245	* 1950 1969-73, 1980-89	s c m
**South Fork Republican River near Benkelman	8275	1950	s
Dry Creek near Curtis	8405	* 1953-56 1951-58	c s
Medicine Creek above Harry Strunk Lk	8410	* 1951-56 1953-58 1951-58 1951-57 1946-49, 1951-57	c t s t s
** Republican River at Cambridge	8435	1947-53 1951-53	c s
Turkey Creek near Edison	8442	* 1968	c
** Republican River near Orleans	8445	1969-94	c t
Sappa Creek near Oberlin, KS	8450	1952-53, 1963-64 1963 1950, 1963	c t s
Sappa Creek near Beaver City	8452	1947-51 1949-52 1947-52	c t s

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
KANSAS RIVER BASIN--CONTINUED			
Beaver Creek at Cedar Bluffs, KS	8465	1962-63	c s t
Mitchell Creek above Harry Strunk Lk	8415	* 1951-56	c
		1951-57	s
Harry Strunk Lake	8420	1952-56	c
Medicine Creek below Harry Strunk Lk	8425	1951-52, 1954, 1956-57	s
		1970-74	c t
Medicine Creek at Cambridge	843010	* 1947-53	c
Beaver Creek near Beaver City	8470	1950-53	c t
		1948-50, 1951-53	s
** Sappa Creek near Stamford	8475	* 1948-49, 1953	c
		1950-53	t
		1947-53	s
Harlan County Reservoir	8490	1956-58	c
** Republican River below Harlan County Dam	8495	1969-74	c t
		1956-57	t
Republican River near Bloomington	8505	1947-49	c
Thompson Creek at Riverton	8515	1950-52	c
Republican River near Guide Rock	8530	1962-85	c m t
** Republican River at Guide Rock	853020	1986-89	c m
Republican River at Superior	8534	1969-73	c
** Big Blue River at Surprise	8799	1965-70, 1974-81	c t
		1965-72	s
Kezan Creek near Garrison	879945	* 1968-69	c
Lincoln Creek near Utica	879995	* 1968-69	c
Lincoln Creek near Seward	8800	1963-70, 1973-89	c m
		1964-71	s
Big Blue River at Seward	8805	1978-89	c m
Plum Creek at Seward	880510	* 1968-69	c
Big Blue River near Milford	880550	* 1968-69	c
West Fork Big Blue River below Hastings	880556	* 1968-69	c
		1973-78	c m t
Flessner Creek near Stockham	8806	* 1968	c
School Creek near Grafton	880750	* 1968-69	c
Beaver Creek near Beaver Crossing	880785	* 1968-69	c
** West Fork Big Blue River near Dorchester	8808	1963-70, 1973-91	c
		1988-93	s
Big Blue River at Crete	880950	* 1951, *1963	c s
** Big Blue River near Crete	8810	1961-62, *1964, 1968-84	c m
		1960-62, *1964	s
		1962 , 1968-84	t

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

<i>Station name</i>	<i>Station number</i>	<i>Period of record (water years)</i>	<i>Type of record</i>
KANSAS RIVER BASIN--CONTINUED			
Squaw Creek near Crete	881010	* 1968	c
Big Blue River at Wilber	881050	* 1964, *1969	c
Big Blue River near Wilber	881052	* 1964	c
Big Blue River at DeWitt	8811	* 1964	c
Clatonia Creek near DeWitt	881105	* 1968	c
Turkey Creek near Milligan	881110	1968-69	c
Turkey Creek above Brush Creek near Wilber	881150	* 1964	c
Turkey Creek near Wilber	8812	1965-72, 1966-70, 1973-89	s c m
Turkey Creek 2 miles SW of Wilber	881210	* 1964	c
Turkey Creek above Swan Creek near DeWitt	881220	* 1964	c
North Fork Swan Creek near Swanton	881353	* 1964	c
Swan Creek at Swanton	881356	* 1964	c
Swan Creek near DeWitt	881357	* 1968-69	c
Turkey Creek near DeWitt	881358	* 1964	c
Big Blue River near DeWitt	881420	* 1968-69	c
Cub Creek near Beatrice	881430	* 1968-69	c
Indian Creek at Beatrice	881450	* 1968-69	c
Big Blue River at Beatrice	8815	* 1960-69 * 1960-61, *1963 1978-83	c s c m t
Bear Creek near Beatrice	881520	* 1968-69	c
Cedar Creek near Holmesville	881530	* 1968	c
Mud Creek near Holmesville	881650	* 1968-69	c
Big Indian Creek at Wymore	881750	* 1968-69	c
Wildcat Creek near Barneston	881950	* 1968	c
** Big Blue River at Barneston	8820	1967-68 1981-93	c m t
Plum Creek at Barneston	882050	* 1968-69	c
Big Blue Creek near Oketo, KS	8824	1961-64	c
Sand Creek near Holstein	882550	* 1969	c
Cottonwood Creek near Roseland	882650	* 1968-69	c
Little Blue River below Pawnee Creek near Pauline	8829	* 1965, *1968	c
Pawnee Creek at Spring Ranch	882950	* 1968-69	c
** Little Blue River near Deweese	8830	1959-70, 1975-89 1979-81 1953, 1955-61	c m t s

WATER RESOURCES DATA - NEBRASKA, 1998
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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<i>Station name</i>	<i>Station number</i>	<i>Period of record(water years)</i>	<i>Type of record</i>
KANSAS RIVER BASIN--CONTINUED			
Little Blue River above Oxbow Creek near Angus	8833	* 1968	c
Little Blue River at Angus	8835	1951-53	s
Elk Creek near Oak	883510	* 1968-69	c
Spring Creek at Hebron	883553	* 1968-69	c
Dry Creek near Hebron	883563	* 1968-69	c
Little Blue River near Alexandria (Gilead)	883570	* 1968	c
Big Sandy Creek near Davenport	883585	* 1968-69	c
Big Sandy Creek near Powell	883950	* 1968-69	c
Little Sandy Creek near Powell	883960	* 1968-69	c
Little Blue River at Fairbury	883995	* 1968-69	c
** Little Blue River near Fairbury	8840	1951-53, 1955-57 1952-63, *1960-61, * 1968	s c
Rose Creek near Endicott	884010	* 1968	c
Little Blue River at Steele City	884020	* 1968	c
*** Little Blue River at Hollenberg, KS	884025	1972-90	c s t

* Less than 10 samples.

** Current continuous-record surface-water gaging station.

*** Station operated by Nebraska USGS.

**** Current reservoir stations.

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Nebraska each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Nebraska."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 97 streamflow-gaging stations, for 12 partial-record or miscellaneous streamflow stations, and for 5 crest-stage, partial-record streamflow stations; (2) stage and contents for 7 lakes and reservoirs; (3) water-quality records for 10 streamflow-gaging stations, for 3 ungaged streamsites, and for 67 wells; and (4) water-level records for 54 observation wells. Records included for stream stages and for ground-water levels are only a small fraction of those obtained during the water year. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Nebraska.

This series of annual reports for Nebraska began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Nebraska were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage,

through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Information Services, Federal Center, MS 517, Box 25046, Denver, CO 80225.

Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (402) 437-5082.

COOPERATION

The U.S. Geological Survey and agencies of the State of Nebraska have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are: Nebraska Department of Water Resources; Conservation and Survey Division; University of Nebraska-Lincoln; Nebraska Natural Resources Commission; Big Blue River Compact Administration; Loup River Public Power District; Nebraska Public Power District; City of Lincoln; City of Grand Island; Lancaster County; and many of the Natural Resources Districts.

Assistance with funds or services was given by the U.S. Army Corps of Engineers in collecting records for 23 streamflow-gaging stations and 4 crest-stage gages, and by the U.S. Bureau of Reclamation in collecting records for 1 lake station, and in providing elevations or capacity tables for 5 reservoir stations.

The following organizations aided in collecting records: Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, and Loup River Public Power District.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow, chemical quality of streamflow, and ground-water levels are related to precipitation. The relation of these hydrologic characteristics to precipitation during water year 1998 at selected locations is discussed in this summary section.

Precipitation

Precipitation data from published reports of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, for the eight National Weather Service divisions in Nebraska are shown in figure 1 and listed in table 1. Precipitation and departures from normal precipitation (1961-90) are shown for each quarter of the year to emphasize temporal as well as spatial variations of precipitation during water year 1998.

The precipitation totals for each division in Nebraska during water years 1996, 1997, 1998, and normal precipitation are shown in figure 2. All divisions, except for the Southwest division, received greater-than-normal precipitation for water year 1998.

Precipitation totals for each division for each month of water year 1998 and normal precipitation are shown in figure 3. Precipitation totals for each division by quarters are listed in table 1. Only the Northeast division received less-than-normal precipitation during the first quarter and only the Southwest division received less-than-normal precipitation during the the second quarter. Three divisions (Panhandle, Southwest, and South Central) received less-than-normal precipitation during the third quarter, and four divisions (North Central, Central, East Central, and Southeast) received less-than-normal precipitation during the fourth quarter.

Table 1. -- Precipitation and departures from normal, water year 1998

[All values are in inches. Period of record for normal, 1961-90. Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service published reports]

National Weather Service division	Precipitation											
	First quarter (October-December)			Second quarter (January-March)			Third quarter (April-June)			Fourth quarter (July-September)		
	Normal	Water year 1998	Departure	Normal	Water year 1998	Departure	Normal	Water year 1998	Departure	Normal	Water year 1998	Departure
Panhandle	1.80	2.46	0.66	1.77	2.10	0.33	7.80	6.03	-1.77	5.39	6.31	0.92
North Central	2.59	3.37	.78	2.34	2.35	.01	9.03	11.17	2.14	7.68	7.40	-.28
Northeast	3.60	3.27	-.33	3.10	3.89	.79	10.48	13.86	3.38	8.66	9.08	.42
Central	3.05	4.14	1.09	2.77	3.22	.45	10.12	10.54	0.42	8.48	6.98	-1.50
East Central	4.40	5.71	1.31	3.46	4.60	1.14	11.20	15.22	4.02	10.11	9.02	-1.09
Southwest	2.17	3.97	1.80	2.11	1.42	-.69	8.58	6.56	-2.02	6.72	6.80	.08
South Central	2.93	6.54	3.61	2.70	3.28	.58	9.86	7.03	-2.83	8.85	9.54	.69
Southeast	4.62	7.39	2.77	3.68	6.30	2.62	11.02	11.08	.06	11.02	10.87	-.15

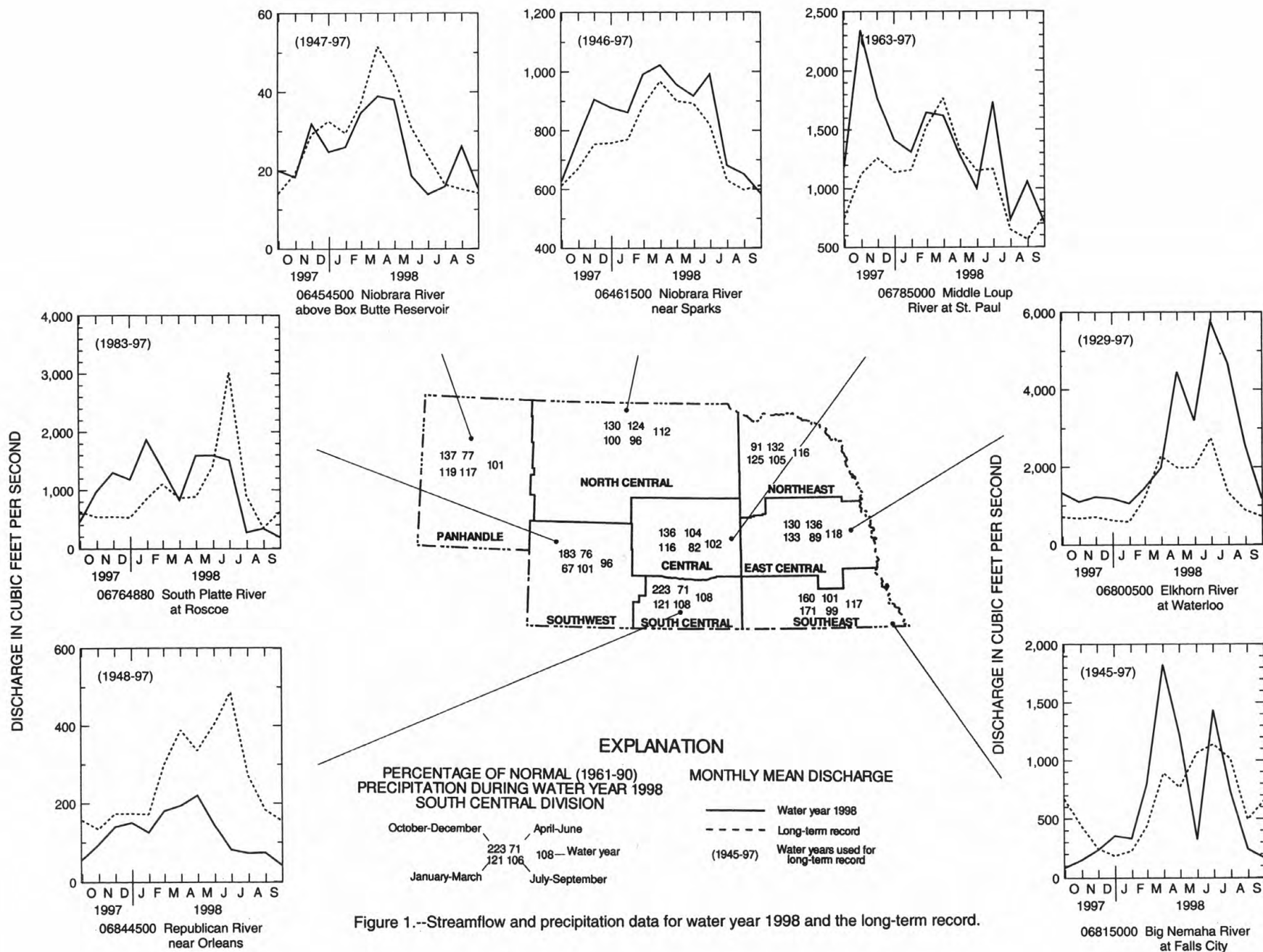


Figure 1.--Streamflow and precipitation data for water year 1998 and the long-term record.

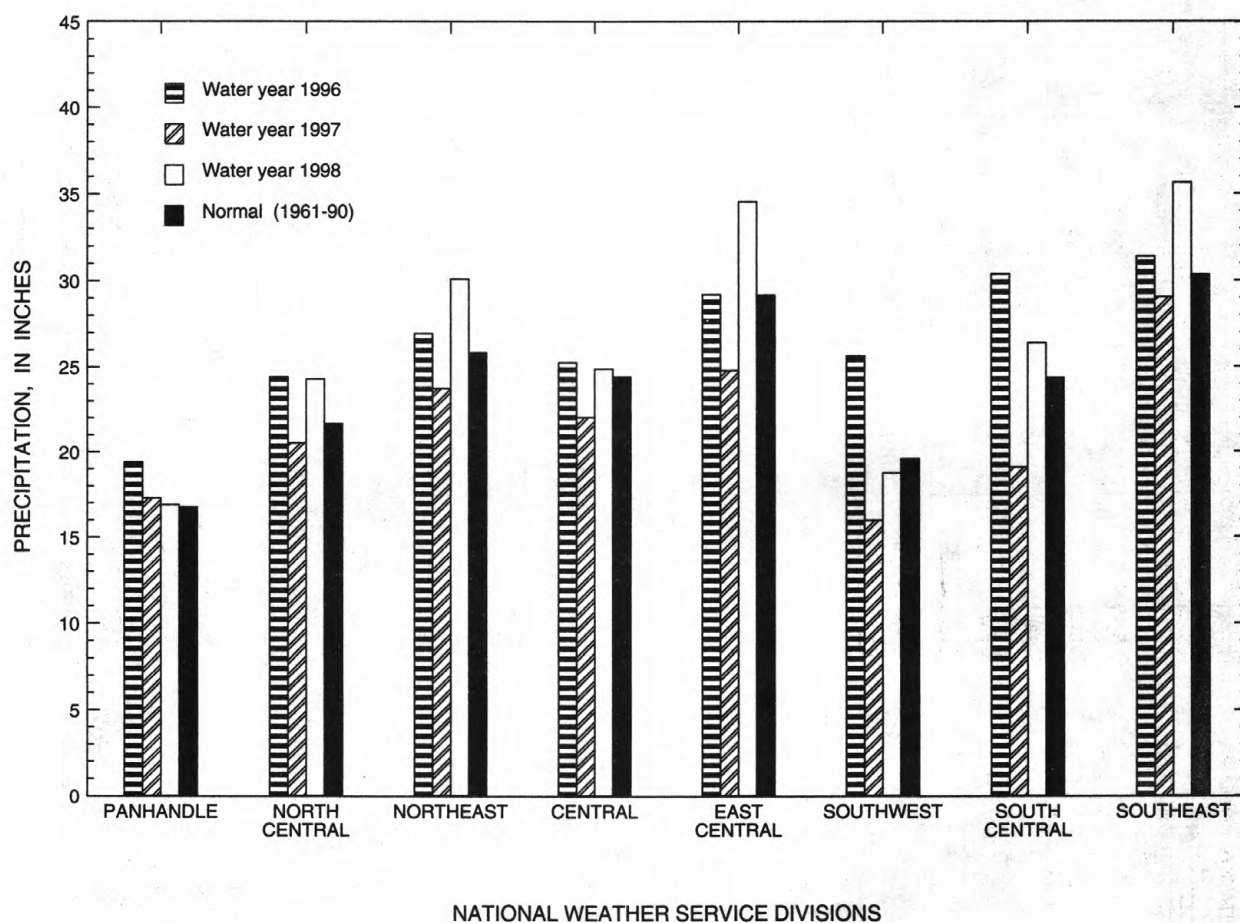


Figure 2.--Precipitation for water years 1996, 1997, 1998, and normal precipitation (1961-90) for the eight National Weather Service divisions in Nebraska.

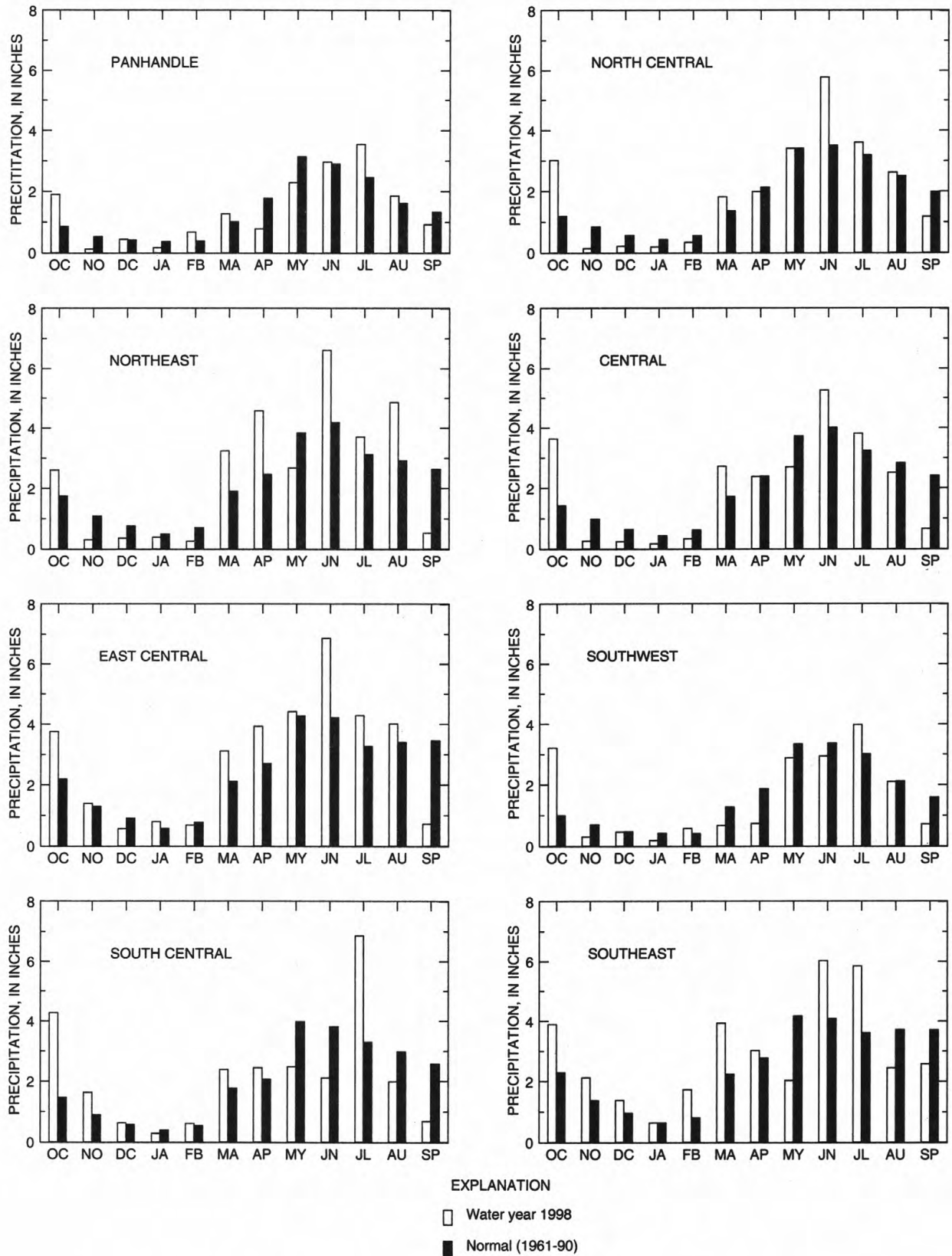


Figure 3.--Monthly precipitation for water year 1998 and normal precipitation (1961-90) for each National Weather Service division in Nebraska.

Streamflow

Streamflow during water year 1998 compared to long-term record at representative streamflow-gaging stations is shown in figure 1. The period of record used for the long-term mean at some stations is from the completion of the last known storage structure or from the latest change in streamflow regulation upstream from the gage. The individual graphs demonstrate the varied streamflow conditions in the State during water year 1998.

Flow at station 06844500, Republican River near Orleans, in the South Central division, was less than the long-term mean for the entire water year. Although the South Central division received greater-than-normal precipitation during the first, second, and fourth quarters of the water year, the rainfall was not sufficient to produce much runoff because of dry conditions caused by less-than-normal precipitation during the previous water year.

Except for March and the last four months of the water year, streamflow at station 06764880, South Platte River at Roscoe, in the Southwest division, was greater than the long-term mean. The flow at this station receives a good part of its flow from the South Platte River Basin in the Rocky Mountains. Greater-than-normal precipitation during August of the previous water year and October of this water year resulted in the greater-than-normal flow during the first part of the water year. Snowmelt from upstream contributed to the increase in flow when local precipitation was less-than-normal during April.

Data for station 06454500, Niobrara River above Box Butte Reservoir, in the Panhandle division, was supplied by the Nebraska Department of Water Resources office in Bridgeport. Flow was less than the long-term mean except for the second and last two months of the water year. The small increases in flow, though less than the long-term mean, during February, March, and April were caused by a combination of snowmelt and runoff from rainfall. Although precipitation was greater than normal during June and July, flow remained less than the long-term mean during those months. Flow became greater than the long-term mean during August because of continued greater-than-normal precipitation in August.

Flow for station 06461500, Niobrara River near Sparks, in the North Central division, was greater than the long-term mean during all months except September although precipitation was less than normal in some months. Although less-than-normal precipitation occurred from November to February, streamflow was greater than the long-term mean and more than twice the amount of precipitation normal during October. Ground water is the major contribution to streamflow so that flow reflects the higher ground-water table and remains relatively steady at this station.

Station 06785000, Middle Loup River at St. Paul, is near the eastern edge of the Sandhills region in the Central division of the State. Flow, generally, is more uniform and extremes in runoff are not as great as for other regions of the State, as most of the flow is derived from ground-water discharge. Flow was greater than normal during the first part of the water year, mainly because of greater-than-normal precipitation during the last two months of the previous water year and more than twice the normal amount during October. Flow started decreasing when the area received less-than-normal precipitation but increased again when the area received greater-than-normal precipitation during June and July.

Except for March, streamflow at station 06800500, Elkhorn River at Waterloo, in the East Central division of the State, was greater than the long-term mean throughout the water year. Although the quarterly precipitation totals for the East Central division indicated less-than-normal precipitation during the fourth quarter of water year 1998, the monthly precipitation totals indicate that July and August had greater-than-normal precipitation, whereas, September had almost five times less than the normal amount. This would account for the decrease in flow during September, though still greater than the long-term mean. Much of the drainage area of the Elkhorn River lies in the Northeast and North Central divisions, which received greater-than-normal precipitation during the same months as those indicated by the East Central division. The combined increase in precipitation was enough to produce flow that was greater than the long-term mean.

Greater-than-normal precipitation occurred in the Southeast division of the State during most months of the water year. This produced greater-than-normal runoff at station 06815000, Big Nemaha River at Falls City, during December through April and June, and especially during March, when the streamflow was greater than twice the long-term mean for that month. Precipitation was much less than normal in May, which resulted in a large decline in flow. Flow was again less than normal because of less rainfall.

Water Quality

Water samples were collected to determine the water quality at various surface-water stations around the State. Some of the parameters measured include specific conductance, pH, temperature (both water and air), barometric pressure, dissolved oxygen, sediment, bacteria, nutrients, and major ions.

Generally, the concentration of dissolved solids (which includes major ions) in streams is related inversely to streamflow. Large streamflows resulting from snowmelt and rainfall runoff have smaller dissolved-solids concentrations per unit volume, whereas small streamflows, composed largely of ground-water discharge to streams (base flow), have larger

dissolved-solids concentrations. This inverse relation between dissolved solids and streamflow is less pronounced at stations downstream from lakes and reservoirs, where two components of flow (runoff and base flow) can be retained and mixed.

The presence of nitrogen in surface water is recognized as a major factor in growth of aquatic plants. The contribution of nitrogen commonly resulting from application of agricultural fertilizers to surface water can result in biological enrichment of algae and other aquatic plant growth. Dissolved oxygen in streams is essential for the survival of most aquatic organisms and plays an important role in the decomposition of wastes. Suspended-sediment concentration is directly related to stream turbidity and generally increases with stream discharge as a result of eroded sediment transported by runoff.

Ground-Water Levels

Water-level changes during water year 1998 were determined from a statewide network of observation wells measured by 34 Federal, State, and local agencies. The network consists of over 4,000 wells measured annually, semiannually, or monthly and 102 wells equipped with continuous recorders. Because of the importance of ground water as a source for irrigation and municipal supplies, most observation wells in Nebraska are located in those areas where large quantities of ground water are withdrawn. Water-level fluctuations in selected observation wells are shown in figure 4.

Data from 54 observation wells are published in this report; twenty-four of these wells are equipped with continuous recorders. The water-level readings in these 54 wells increased an average of 0.71 foot from the end of water year 1997 to the end of water year 1998.

In areas of Nebraska where ground water is used only for domestic and stock supplies, most water-level fluctuations are caused by variations in natural recharge to and discharge from the aquifers. In these areas, water levels commonly rise during the fall and winter months, when recharge from precipitation exceeds discharge through seepage to streams and evapotranspiration. Water levels decline during the spring and summer months when discharge by seepage to streams and by evapotranspiration is greater than recharge from precipitation.

In water year 1998 precipitation was greater than normal during April in four divisions (Northeast, East Central, South Central, and Southeast), providing a greater chance for increased recharge to the aquifers.

Throughout much of the Central division of Nebraska, precipitation during the growing season was greater than normal in June and July but less than normal in May, August, and September. The hydrograph for the Buffalo County well (fig. 4) is generally representative of hydrographs for wells in this division and shows

increasing water levels through June when withdrawals of ground water for irrigation purposes lowered water levels. The water level in the Buffalo County well was 4.48 feet higher at the end of water year 1998 than at the end of water year 1997.

The hydrograph for the observation well in Seward County (fig. 4) is generally representative of water-level fluctuations that occurred in the East Central division of the State during water years 1997 and 1998. The water level in this well was 1.12 feet higher at the end of water year 1998 than at the end of water year 1997.

In the Southwest division of the State, precipitation during the water year was generally less than normal and the amount of precipitation available for recharge to ground water also was less. Water-level fluctuations shown for an observation well in Chase County (fig. 4) are representative of those that occurred in irrigated areas in the Southwest division of the State during water years 1997 and 1998. The water level in the Chase County well was 1.33 feet lower at the end of water year 1998 than at the end of water year 1997.

Precipitation during water year 1998 was greater than normal in the both the North Central and Northeast divisions. Water-level fluctuations for an observation well in Holt County (fig. 4) are generally representative of water-level fluctuations in wells in North Central Nebraska during water years 1997 and 1998. This hydrograph shows that water levels recovered from the end of water 1997 through June 1998, even though precipitation was less-than-normal from November through April (excluding March) in the North Central division. Water level in this well was 1.13 feet higher at the end of water year 1998 than at the end of water year 1997.

Ground-water levels typically reach the highest levels in early to late spring (March through June) (fig. 4) prior to withdrawals for ground-water irrigation. Exceptions to this can occur when leakage from surface-water irrigation canals, typically operating from May-June through September, recharge shallow aquifers (Scotts Bluff county well, fig. 4). The hydrograph for the observation well in Scotts Bluff County shows the influences of recharge from surface irrigation canals. At the end of surface-water irrigation, infiltration of surface water slows or stops, and by late spring, ground-water levels return to near-normal condition. The Panhandle division received slightly greater-than-normal precipitation during water year 1998. More than twice the normal amount of precipitation during October helped replenish the aquifer but since water levels in this well are affected by surface-water irrigation, annual comparisons are made from June to June (typically the lowest water levels during the year) rather than at the end of the water year. The water-level reading for this well was 0.21 foot higher at the end of June 1998 than at the end of June 1997.

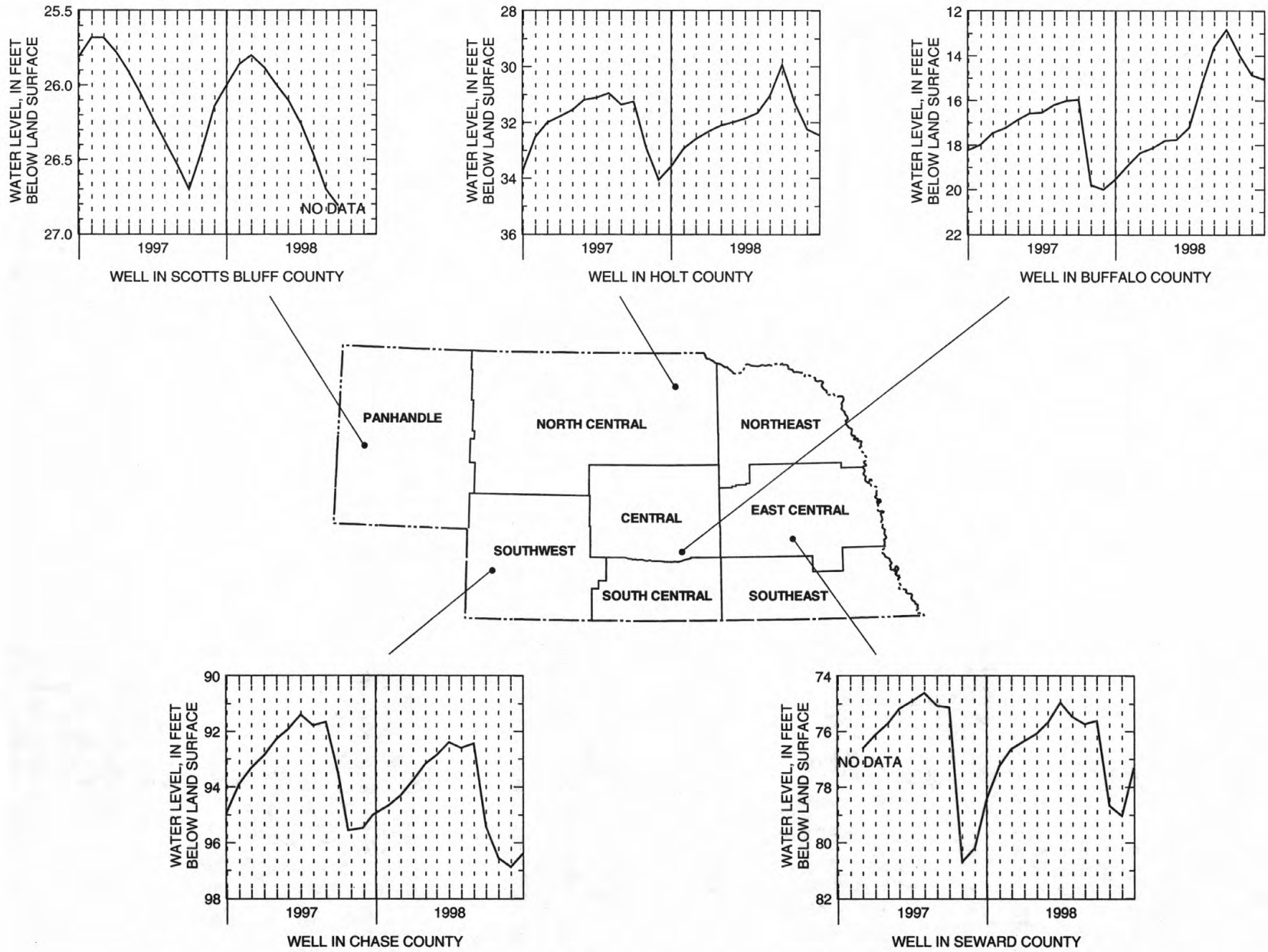


Figure 4.--Water levels in selected observation wells, water years 1997 and 1998.

WATER RESOURCES DATA - NEBRASKA, 1998

WATER USE

General water-use facts for the State of Nebraska for the year 1995 are listed below. Water-use information is collected and published every 5 years.

- Total water use in Nebraska was 25,241.59 million gallons per day (Mgal/d).
- Surface-water use was 19,040.61 Mgal/d, or 75.4 percent of total water use.
- Ground-water use was 6,200.98 Mgal/d, or 24.6 percent of total water use, of which 5,776.60 Mgal/d or 93.1 percent was used for irrigation.
- The largest use of water in Nebraska was for power generation, with 17,354.26 Mgal/d or 68.8 percent of all water use, of which greater than 99.9 percent was from surface water.
- Excluding power production, total water use was 7,887.33 Mgal/d, of which 6,196.12 Mgal/d or 78.6 percent was from ground water.
- Total population for 1995 was 1.64 million; total population for 1990 was 1.58 million, a 3.8 % increase since 1990.
- Total per capita use of all water was 15,419.42 GPD (gallons per day).
- Domestic water use was 197.25 Mgal/d, an average of 120 GPD per capita.
- Commercial water use was 78.98 Mgal/d, with 99.9 percent from public supply.
- Industrial water use was 56.61 Mgal/d, with 46.3 percent supplied from public supply.
- Irrigation water use was 6,996.38 Mgal/d, or 27.7 percent of all water use. This is 70.0 percent of all offstream water use.
- Livestock water use was 141.90 Mgal/d, or 1.4 percent of all offstream use.
- Total power generation was 24,451 Gwh (giga watt hours).

[From Zheng, S. and Frankforter, J.D., Estimated Water Use in Nebraska, 1995, Nebraska Natural Resources Commission, publication, No. 501-2.]

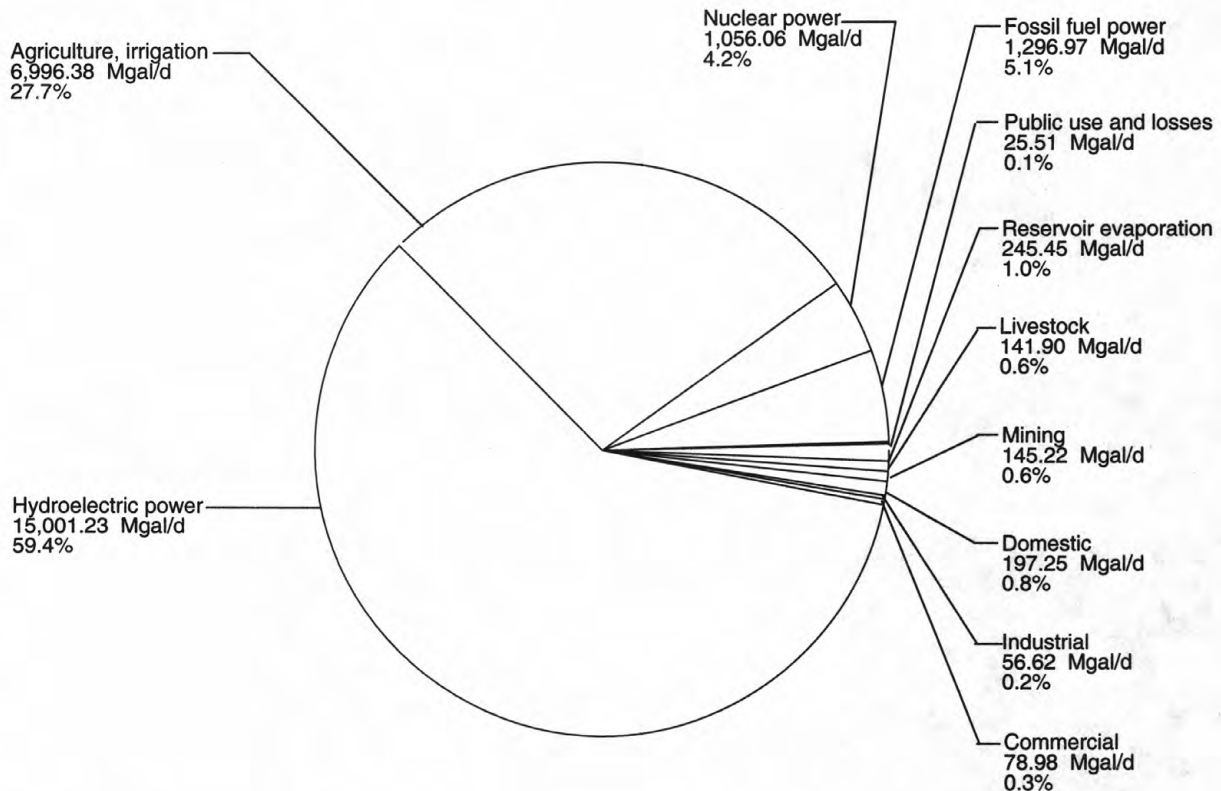


Figure 5.--(a) Estimated total water use in Nebraska, 1995.

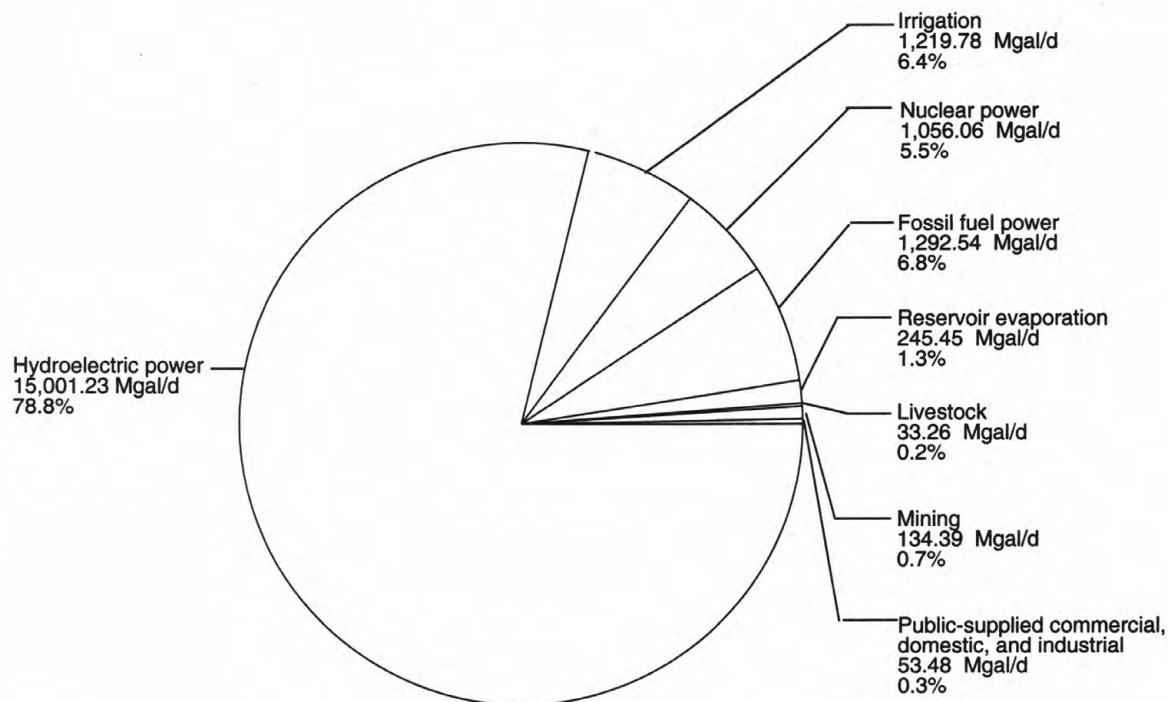


Figure 5.--(b) Estimated total surface-water use in Nebraska, 1995.

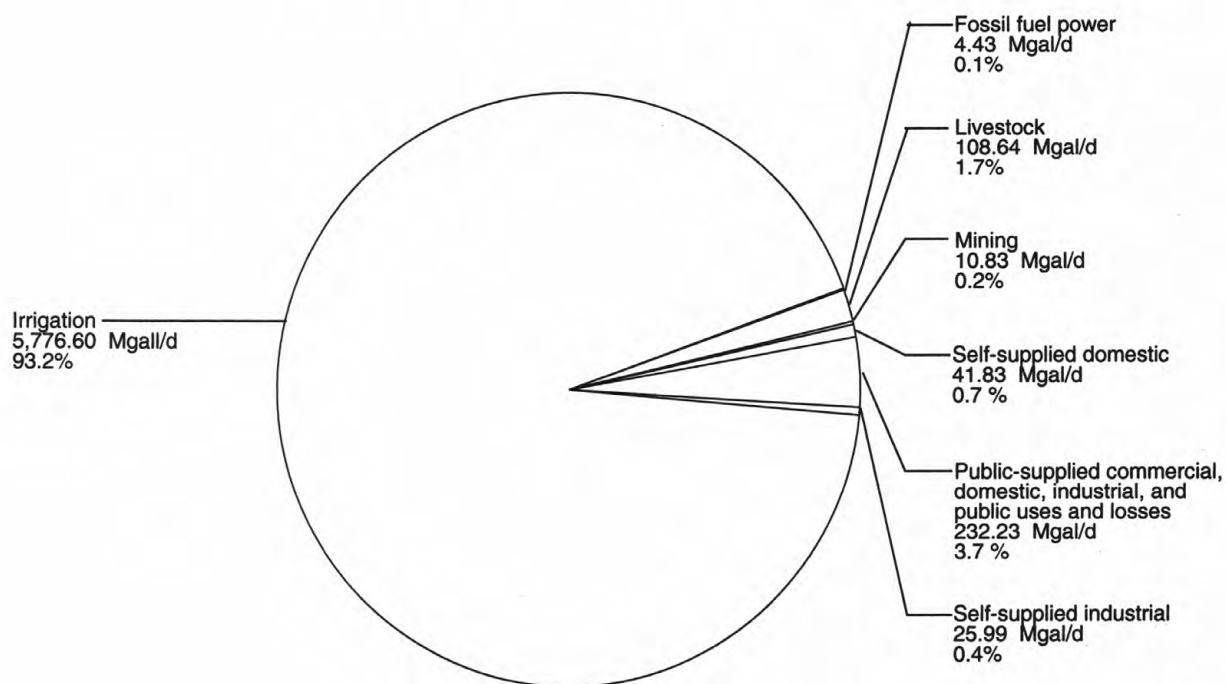


Figure 5.--(c) Estimated total ground-water use in Nebraska, 1995.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

The National Atmospheric Deposition Program/ National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

<http://nadp.nrel.colostate.edu/NADP>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide

an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1998 water year that began October 1, 1997, and ended September 30, 1998. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 6, 7, and 8. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06797000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "797000." The Part number designates the major river basin; for example, Part "06" is the Missouri River Basin.

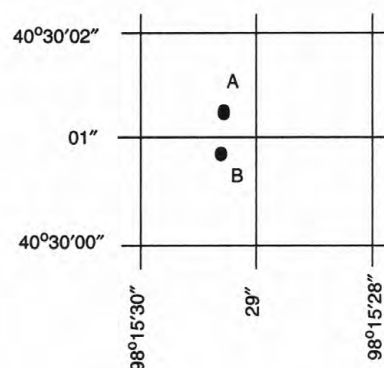
Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure).

COORDINATES:

Well A 403001098152901

Well B 403001098152902



System for numbering wells (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device, and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Discharge measurements at miscellaneous sites." Records of discharge measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately if made during the year. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figure 6.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

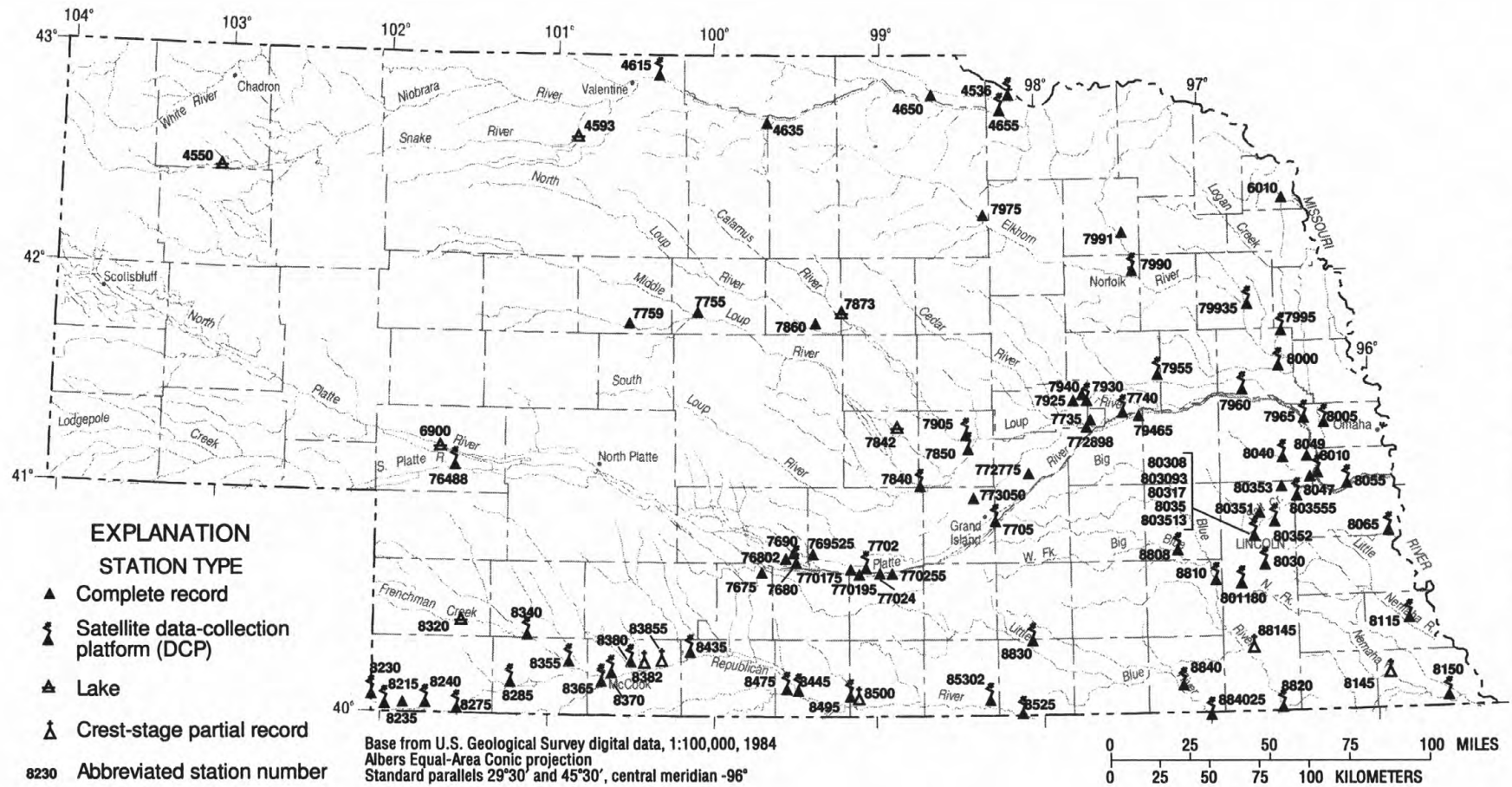
Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

In computing records of lake or reservoir contents, it is necessary to have available data from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following



Note: To change abbreviated station number to complete station number, prefix with "06" and add zero's required to give eight digits.

Figure 6. Location of active surface-water gaging stations.

record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station

is one that was in operation at a time that the present station was not and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, and EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharges for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CSFM"); or in inches (line headed "IN"); or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided

immediately below those figures. The designated period will be expressed as "FOR WATER YEARS BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS - , " will consist of all the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the column heading. When this occurs, it should be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published for the designated period.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated."

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Nebraska District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of daily diversions of water from streams by canals are collected by and published in Hydrographic Reports of the Nebraska Department of Water Resources. Included are discharge records for streams and storage records for reservoirs not published in reports of the Geological Survey. Copies of the Hydrographic Reports may be obtained from the Nebraska Department of Water Resources, 301 Centennial Mall, South, P.O. Box 94676, Lincoln, NE 68509 (telephone number: 402-471-2363).

Records of discharge, not published by the Geological Survey, are collected in Nebraska at several sites by the U.S. Army Corps of Engineers. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 20192, maintains an index of these sites as well as sites where other agencies have collected water data.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records," as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 7.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in

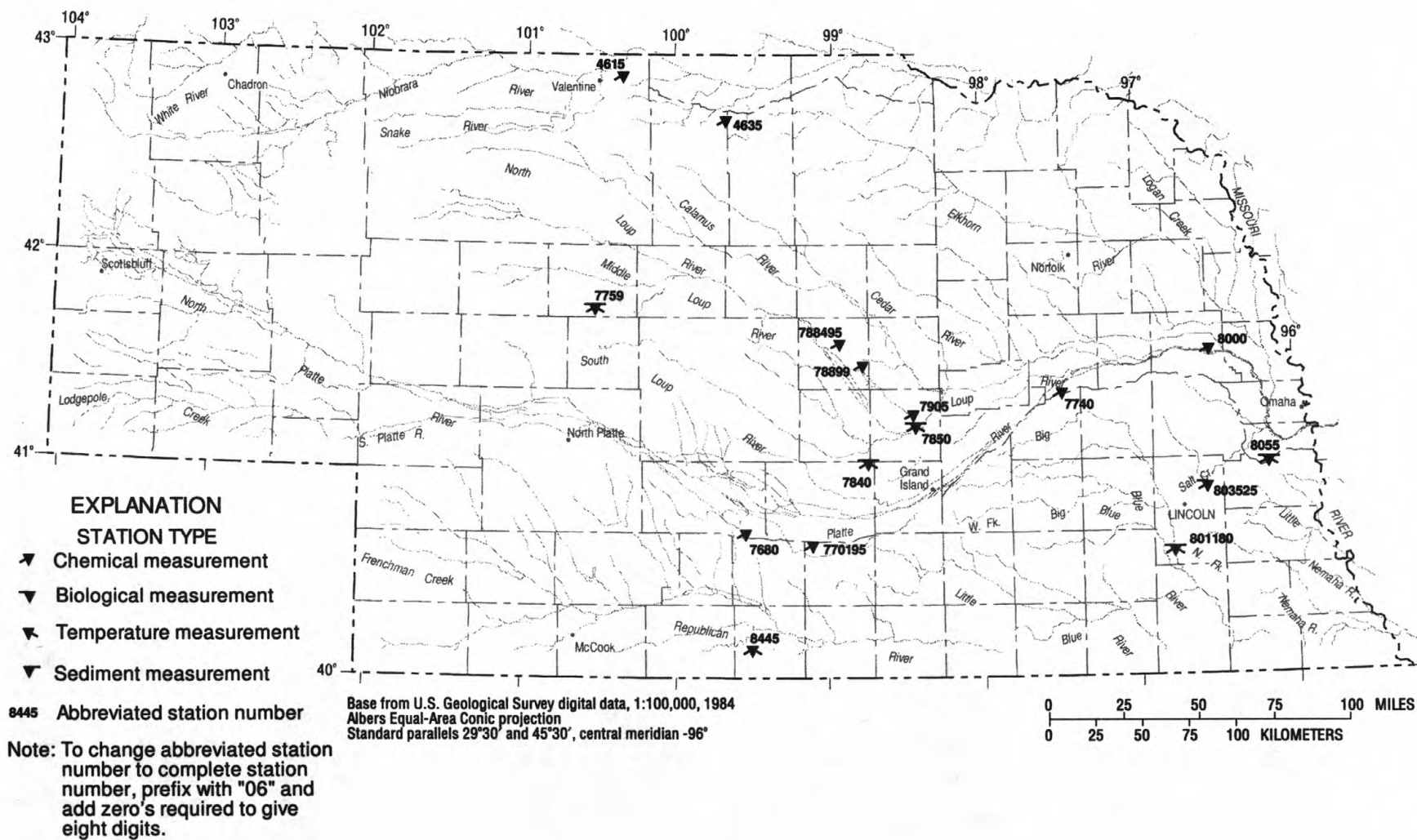


Figure 7.--Location of active surface-water quality stations.

quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are detailed in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Historical and current (1998) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-

discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Nebraska District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples are analyzed in Iowa City, Iowa; samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally; and all other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily, are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are

encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Records of Ground-Water Levels

Only water-level data from a network of selected observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Nebraska are shown in figure 8.

Although, in this report, records of water levels are presented for only selected wells, records are obtained through cooperative efforts of many Federal, State, and local agencies for several thousand observation wells throughout Nebraska and are placed in computer storage. Each spring, the Nebraska District and the Conservation and Survey Division of the University of Nebraska publish a report for the previous calendar year entitled "Groundwater Levels in Nebraska, 19__." This report contains hydrographs of recorder wells, detailed maps showing changes in water levels from the previous year, and other useful items. Information about the availability of the data in the water-level file may be obtained from the District Chief, Nebraska District. (see address on back of front page.)

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference



to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. Hydrographs also are presented for some wells. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should

identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey TWRI publications referred to in the "Onsite Measurements and Sample Collection" and the "Laboratory Measurements: sections in the data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow the ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed

to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

WATER RESOURCES DATA - NEBRASKA, 1998
ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://www.water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3 1/2 -inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices. For Nebraska, the address is:

District Chief
U.S. Geological Survey
Rm. 406, Federal Bldg.
100 Centennial Mall, North
Lincoln, Nebraska 68508

e-mail: info@ne20dnelnc.cr.usgs.gov (general information)
swinfo@ne20dnelnc.cr.usgs.gov (surface-water information)
gwinfo@ne20dnelnc.cr.usgs.gov (ground-water information)
wqinfo@ne20dnelnc.cr.usgs.gov (water-quality information)

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed in milligrams dry weight of algae produced per liter of sample.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or

facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35° C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35° C plus or minus 1.0° C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5° C plus or minus 0.2° C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35° C plus or minus 1.0° C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria which produce pink to red colonies with black or reddish-brown precipitate after incubation at 41° C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants.

Bedload is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic invertebrates are invertebrate animals inhabiting the bottom of lakes, streams, and other water bodies. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500° C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105° C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organism are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing-record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (FT^3/S , ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic-foot-per-second day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream bottom sediments. The ethyl acetate is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream bottom sediments.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide.

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by

the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Low tide is the minimum height reached by each rising tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter ($\mu\text{S/CM}$, $\mu\text{s/cm}$) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

Most probably number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. It is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates to know surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

National Water-Quality Assessment (NAWQA) Program of the Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and

provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.004 - .062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{12} of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic

environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg C}/\text{m}^3/\text{time}$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg O}/\text{m}^3/\text{time}$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

River mile used in this report, is the distance above the mouth of the river where the gaging station is located.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)-a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7 Q₁₀) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25° C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimeted. All areas shown are those for the stage when the planimeted map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45 μm filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common.

For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<u>Hexagenia</u>
Species:	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the

constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Volatile Organic Compounds (VOC's) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas

chromatography. Many VOC's are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1998, is called the "1998 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
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- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
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- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

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- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
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- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

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- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
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- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.

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- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1996. 125 pages.
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- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F. D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D. N. Myers and F. D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples*, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.
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WATER RESOURCES DATA - NEBRASKA, 1998
SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

Remark Codes

The following remark codes may appear with the water-quality data in this section:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blank.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's and 100's of nanograms per liter (ng/L). Data above the $\mu\text{g/L}$ levels should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

PONCA CREEK BASIN

41

06453600 PONCA CREEK AT VERDEL, NE

LOCATION.--Lat 42°48'40", long 98°10'35", in NE¹/₄ NE¹/₄ sec.30, T.33 N., R.7 W., Knox County, Hydrologic Unit 10150001, near right bank at right downstream end of bridge on State Highway 12, 0.6 mi east of Verdel and 3.8 mi upstream from mouth.

DRAINAGE AREA.--812 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2117: Drainage area. WDR NE-96-1 (M).

GAGE.--Water-stage recorder and nonrecording gage read once daily. Datum of gage 1,232.9 ft above sea level (Nebraska Department of Roads reference marks). See WSP 1917 for history of changes prior to Nov. 15, 1962.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	70	71	68	e42	e96	291	132	78	420	66	50
2	35	65	70	76	e41	e96	291	118	73	291	103	43
3	33	58	68	67	e42	e90	487	109	69	229	179	37
4	32	54	69	e52	e46	e88	577	101	71	193	361	34
5	32	52	e64	e54	e45	e82	658	95	78	168	548	33
6	31	49	e66	e48	e54	e80	707	88	82	643	374	31
7	30	50	e66	e50	e64	e74	608	80	80	1950	265	29
8	31	50	e66	e48	e76	e60	781	77	122	584	200	27
9	30	51	e64	e40	82	e48	712	75	386	336	160	27
10	32	50	e64	e40	84	e40	471	73	568	278	135	26
11	35	52	e62	e41	87	e36	347	76	363	213	116	26
12	46	50	e64	e30	96	e44	272	119	266	163	130	24
13	85	51	e68	e31	108	e56	222	155	204	134	107	25
14	107	50	e72	e33	101	e60	181	118	201	115	91	29
15	105	e40	e74	e35	100	e74	327	105	249	100	79	36
16	90	e45	e71	e35	121	e86	538	112	320	88	72	31
17	79	e48	e72	e33	155	e94	330	116	264	80	67	29
18	72	e50	e76	e33	158	e100	234	117	295	73	62	27
19	69	e58	e80	e34	145	e116	194	110	293	69	61	26
20	70	e56	83	e31	131	129	177	128	289	66	62	24
21	68	e60	77	e30	124	146	181	126	270	62	60	25
22	66	e56	72	e31	126	151	166	123	282	59	57	26
23	65	e60	69	e30	131	169	141	124	369	54	52	27
24	61	e66	73	e32	129	180	130	122	322	60	48	29
25	64	e74	68	e34	124	197	250	118	309	58	44	29
26	65	81	73	e36	118	274	321	109	311	57	41	28
27	61	81	71	e38	115	334	341	101	305	57	40	27
28	60	83	58	e35	100	422	251	95	434	54	38	27
29	64	80	68	e36	---	407	180	89	495	51	36	29
30	72	80	71	e43	---	339	149	85	577	62	34	28
31	74	---	67	e43	---	323	---	81	---	62	44	---
TOTAL	1802	1770	2157	1267	2745	4491	10515	3277	8025	6829	3732	889
MEAN	58.1	59.0	69.6	40.9	98.0	145	351	106	268	220	120	29.6
MAX	107	83	83	76	158	422	781	155	577	1950	548	50
MIN	30	40	58	30	41	36	130	73	69	51	34	24
AC-FT	3570	3510	4280	2510	5440	8910	20860	6500	15920	13550	7400	1760

e Estimated

PONCA CREEK BASIN

06453600 PONCA CREEK AT VERDEL, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.9	27.0	19.3	16.7	53.7	231	195	181	153	88.8	42.3	31.6
MAX	229	172	105	94.0	239	1333	818	1405	1237	742	327	251
(WY)	1996	1996	1997	1997	1996	1960	1984	1995	1962	1993	1962	1996
MIN	.000	.000	.000	.000	.000	6.53	4.77	4.02	5.64	.006	.000	.000
(WY)	1959	1977	1971	1959	1969	1965	1981	1981	1976	1966	1968	1958

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

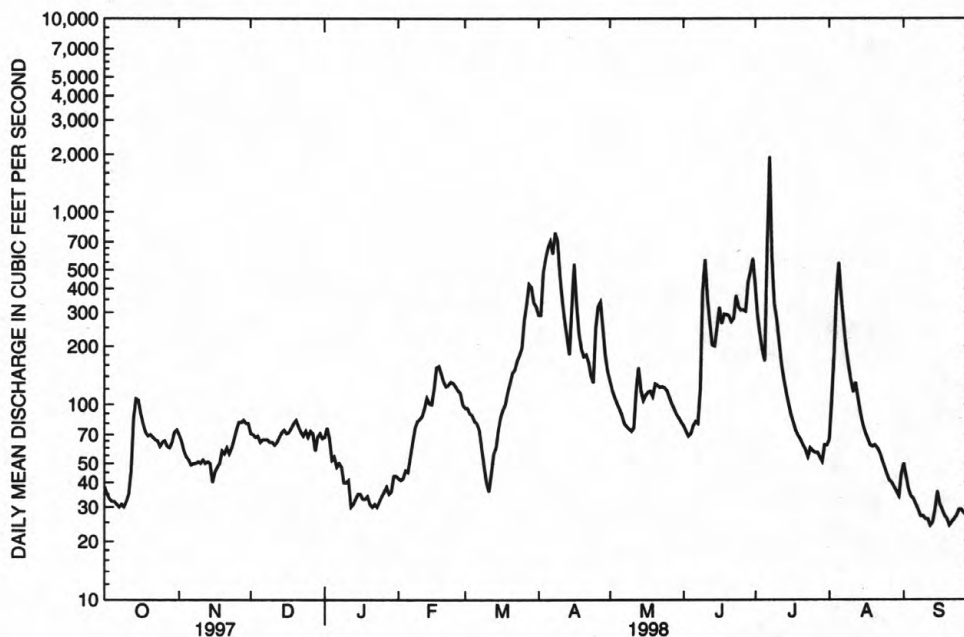
WATER YEARS 1958 - 1998

ANNUAL TOTAL	58993	47499	
ANNUAL MEAN	162	130	88.9
MEDIAN OF ANNUAL MEANS			65
HIGHEST ANNUAL MEAN			343
LOWEST ANNUAL MEAN			3.75
HIGHEST DAILY MEAN	962	May 3	1950
LOWEST DAILY MEAN	27	Aug 26	24
ANNUAL SEVEN-DAY MINIMUM	28	Aug 23	26
INSTANTANEOUS PEAK FLOW (STAGE)			3000
INSTANTANEOUS PEAK STAGE			10.61
ANNUAL RUNOFF (AC-FT)	117000	94210	64420
10 PERCENT EXCEEDS	405	315	196
50 PERCENT EXCEEDS	81	73	21
90 PERCENT EXCEEDS	37	32	.10

* No flow for many days in 1957-60, 1965-72, 1974-77, 1979-81, 1989, 1991.

** Site and datum then in use.

*** From floodmark, ice jam.



PONCA CREEK AT VERDEL

NIOBRARA RIVER BASIN

43

06455000 BOX BUTTE RESERVOIR NEAR HEMINGFORD, NE

LOCATION.--Lat 42°27'30", long 103°04'03", in sec. 28, T. 29 N., R. 49 W., Dawes County, Hydrologic Unit 10150002, in control tower on dam near left bank on Niobrara River, 9 mi north of Hemingford.

DRAINAGE AREA.--1,460 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Electric tape gage read three or more times a month. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam; outlet gate first closed Oct. 3, 1945. Usable capacity, 30,420 acre-ft between elevations 3,969.00 ft, sill of outlet gate, and 4,007.00 ft, crest of spillway. Dead storage, 640 acre-ft. Figures given herein represent total contents. Water is used for irrigation of Mirage Flats project of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft Mar. 26, 1948, elevation, 4,007.70 ft; minimum observed since operation of reservoir began, 640 acre-ft Aug. 26, 1985, elevation, 3,969.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 21,140 acre-ft May 22, elevation, 4,000.010 ft; minimum observed, 9,320 acre-ft Sept. 4, elevation, 3,988.89 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sep 30	3,989.68	9,990	--
Oct. 31	3,991.18	11,330	+1,340
Nov. 30	3,992.69	12,760	+1,430
Dec. 31	3,994.10	14,170	+1,410
CAL YR 1997	--	--	+830
Jan. 31	3,995.59	15,750	+1,580
Feb. 28	3,996.68	16,960	+1,210
Mar. 31	3,998.50	19,120	+2,160
Apr. 30	3,999.73	20,660	+1,540
May 31	3,999.99	21,000	+340
June 30	3,999.96	20,960	-40
July 31	3,994.30	14,380	-6,580
Aug. 31	3,990.24	10,480	-3,900
Sept. 30	3,989.50	9,840	-640
WTR YR 1998	--	--	-150

* Elevations read on or near last day of month.

NIOBRARA RIVER BASIN

06459300 MERRITT RESERVOIR NEAR BURGE, NE

LOCATION.--Lat 42°38'06", long 100°52'18", in SW¹/₄ NW¹/₄ sec. 29, T. 31 N., R. 30 W., Cherry County, Hydrologic Unit 10150005, in control house of outlet works of Merritt Dam, 8.1 mi southwest of Burge and 23 mi southwest of Valentine.

DRAINAGE AREA.--640 mi², approximately, of which about 44 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1964 to current year.

REVISED RECORDS.--WDR NE-67-1: Drainage area.

GAGE.--Direct reading, single vertical column, mercury-well type manometer read once daily. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 19, 1964. Usable capacity, 72,872 acre-ft between elevations 2,875.0 ft, sill of canal outlet works, and 2,946.0 ft, crest of spillway. Dead and inactive storage, 1,614 acre-ft below elevation 2,875.0 ft. Figures given herein represent total contents. Water is used for irrigation of Ainsworth Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,040 acre-ft May 21, 1982, elevation 2,947.2 ft; minimum since appreciable storage was attained, 20,060 acre-ft Oct. 1, 1968, elevation, 2,916.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed 75,080 acre-ft May 11, elevation, 2,946.2 ft; minimum observed 46,010 acre-ft Sept. 13, elevation, 2,934.4 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,940.2	58,920	--
Oct. 31.....	2,944.1	69,110	+10,190
Nov. 30.....	2,944.0	68,830	-280
Dec. 31.....	2,944.0	68,830	0
CAL YR 1997	--	--	-560
Jan. 31.....	2,944.1	69,110	+280
Feb. 28.....	2,944.0	68,830	-280
Mar. 31.....	2,944.0	68,830	0
Apr. 30.....	2,945.9	74,200	+5,370
May 31.....	2,946.0	74,490	+290
June 30.....	2,946.0	74,490	0
July 31.....	2,940.3	59,160	-15,330
Aug. 31.....	2,936.3	49,930	-9,230
Sept. 30.....	2,937.2	51,880	+1,950
WTR YR 1998	--	--	-7,040

* Elevations read on or near last day of month.

NIOBRARA RIVER BASIN

45

06461500 NIOBRARA RIVER NEAR SPARKS, NE

LOCATION.--Lat 42°54'10", long 100°21'40", in SE 1/4 sec.22, T.34 N., R.26 W., Cherry County, Hydrologic Unit 10150004, on left bank 18 ft downstream from highway bridge, 2.2 mi downstream from Big Beaver Creek, 5.5 mi downstream from Minnehaduzza Creek, 6.5 mi southwest of Sparks, and at mile 142.5 (corrected figure).

DRAINAGE AREA.--7150 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1209: 1947(M), 1948-50(P). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder and peak-stage indicator gage. Datum of gage is 2,287.57 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are fair. Natural flow of stream affected by irrigation and power developments, storage in Box Butte Reservoir (station 06455000), and since May 1964 by storage in Merritt Reservoir (station 06459300).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	609	942	980	903	970	934	1220	937	797	782	695	580
2	580	941	974	934	988	904	1180	897	677	1020	689	578
3	586	922	987	e940	990	871	1170	898	728	982	671	562
4	578	884	943	e900	969	895	1090	902	756	898	678	551
5	569	886	e900	e900	965	906	1030	826	766	831	686	544
6	577	897	e920	e920	955	899	993	799	743	813	669	534
7	583	899	e900	e930	967	932	959	790	743	781	658	547
8	589	896	909	e940	965	917	944	789	796	732	649	554
9	603	908	844	e880	977	921	906	928	855	726	645	559
10	603	899	860	e820	995	924	892	901	881	696	640	554
11	623	880	e820	e820	1010	878	864	911	884	673	662	554
12	910	900	e800	e760	977	902	859	1010	866	648	868	563
13	857	e880	e800	e800	957	902	842	1010	877	625	751	565
14	745	e840	799	e820	946	929	863	1010	1360	592	740	585
15	693	e820	810	e840	947	935	949	958	1170	583	722	583
16	678	e820	833	e840	971	972	894	915	1080	566	680	604
17	659	e840	837	e800	951	1020	866	900	1160	550	659	591
18	644	e880	826	e800	972	1090	895	885	1260	542	632	583
19	634	912	842	e800	1000	1110	907	861	1240	533	605	569
20	622	905	842	e780	993	1070	935	816	1160	517	599	563
21	620	917	807	e760	1030	1090	951	918	1150	527	604	599
22	713	917	796	e780	1030	1090	934	1060	1140	534	621	642
23	842	905	939	e780	1030	1130	963	1050	1190	560	606	623
24	866	899	919	e780	1040	1170	963	1020	1190	769	606	628
25	1000	940	898	818	1030	1150	960	1040	1310	658	617	628
26	885	965	889	847	1070	1150	955	988	1110	674	613	635
27	815	963	911	921	1030	1140	948	960	1050	672	613	642
28	890	970	904	985	1010	1130	928	920	1000	629	595	628
29	915	974	901	994	---	1190	931	880	923	607	587	611
30	942	985	884	967	---	1270	924	857	878	682	582	594
31	949	---	934	978	---	1270	---	834	---	702	576	---
TOTAL	22379	27186	27208	26737	27735	31691	28715	28470	29740	21104	20218	17553
MEAN	722	906	878	862	991	1022	957	918	991	681	652	585
MAX	1000	985	987	994	1070	1270	1220	1060	1360	1020	868	642
MIN	569	820	796	760	946	871	842	789	677	517	576	534
AC-FT	44390	53920	53970	53030	55010	62860	56960	56470	58990	41860	40100	34820

e Estimated

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

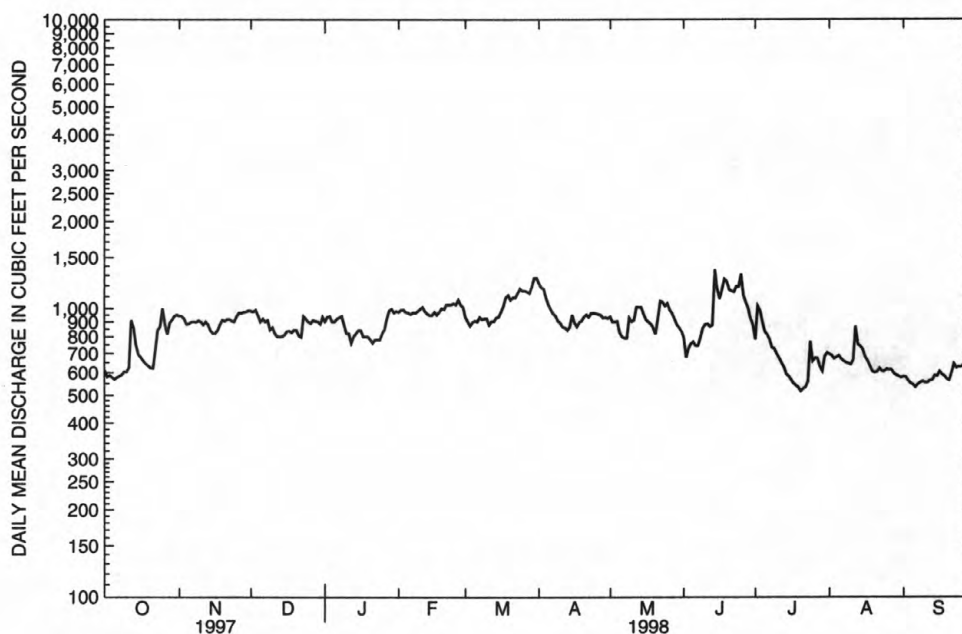
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	671	755	760	771	884	968	902	890	820	632	596	612
MAX	879	906	950	1208	1403	1464	1214	1385	1470	1122	858	993
(WY)	1966	1998	1986	1984	1984	1949	1958	1995	1967	1962	1951	1951
MIN	481	484	448	525	631	584	615	612	506	383	417	426
(WY)	1977	1977	1969	1969	1975	1976	1967	1969	1985	1974	1980	1980

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1946 - 1998	
ANNUAL TOTAL	317692		308736			
ANNUAL MEAN	870		846		771	
HIGHEST ANNUAL MEAN					911	1962
LOWEST ANNUAL MEAN					598	1976
HIGHEST DAILY MEAN	1400	Feb 20	1360	Jun 14	5000	Feb 5 1984
LOWEST DAILY MEAN	569	Jul 29	517	Jul 20	100	Jan 10 1957
ANNUAL SEVEN-DAY MINIMUM	580	Oct 2	538	Jul 17	327	Dec 8 1949
INSTANTANEOUS PEAK FLOW (STAGE)			1530	Jun 14	*10200 (6.73)	Mar 5 1949
INSTANTANEOUS PEAK STAGE			3.48	Jun 14	**10.06	Feb 7 1973
ANNUAL RUNOFF (AC-FT)	630100		612400		558400	
10 PERCENT EXCEEDS	1120		1040		1030	
50 PERCENT EXCEEDS	890		884		761	
90 PERCENT EXCEEDS	614		588		504	

* From rating curve extended above 3,800 cfs.

** Ice jam.



NIOBRARA RIVER NEAR SPARKS

NIOBRARA RIVER BASIN

47

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.-

SPECIFIC CONDUCTANCE: October 1982 to September 1993.

WATER TEMPERATURES: October 1982 to September 1993.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 354 microsiemens Dec. 3, 1983; minimum daily, 153 microsiemens Nov. 22, 26, 1988.

WATER TEMPERATURES: Maximum daily, 35.0°C July 1, 1990; minimum daily, 0.0°C on several days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE INST. (FT ³ /S) (00061)	SPECIFIC CON- DUCT- ANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (°C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)
DEC	02 1350	965	236	8.5	2.5	18	90	111	29	4.2	9.0
FEB	23 1400	1050	225	8.5	8.0	20	91	109	29	4.4	9.3
MAY	29 0830	874	241	8.5	19.5	21	91	120	29	4.5	10
JUL	08 0750	734	247	8.4	23.5	25	100	124	33	4.9	10
SEP	21 1430	604	219	8.4	13.5	22	87	107	28	4.0	8.6

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	SODIUM ADSORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO ₂) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
DEC 02	.4	6.4	6.1	1.7	.41	53	179	.24	467	--	<.010
FEB 23	.4	6.4	5.7	1.4	.38	51	176	.24	502	--	<.010
MAY 29	.5	7.0	5.3	1.3	.41	50	182	.25	429	.259	.025
JUL 08	.4	7.7	4.1	1.3	.42	54	190	.26	376	--	<.010
SEP 21	.4	5.8	5.6	1.4	.37	53	174	.24	283	--	<.010

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (µ G/L AS B) (01020)	IRON, DIS- SOLVED (µ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µ G/L AS MN) (01056)
DEC 02	.531	<.020	--	.22	.75	.067	.055	.052	31	14	<4.0
FEB 23	.408	<.020	--	.23	.64	.096	.051	.056	35	35	<4.0
MAY 29	.284	.081	.22	.30	.59	.191	.090	.087	27	13	<4.0
JUL 08	<.050	.032	.32	.35	--	.199	.032	.025	34	20	<4.0
SEP 21	.326	<.020	--	.19	.52	.111	.072	.083	34	12	<4.0

NIOBRARA RIVER BASIN

49

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE

LOCATION.--Lat 42°41'21", long 99°40'43", in SE¹/₄ NE¹/₄ sec.5, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on left bank 15 ft downstream from county road bridge, 1 mi downstream from Bone Creek, 5.5 mi southwest of Riverview, and at mile 6.2.

DRAINAGE AREA.--458 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1948 to January 1954, September 1954 to current year.

REVISED RECORDS.--WSP 1729: 1952(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,983.34 ft above sea level, (levels by Bureau of Reclamation). Prior to Dec. 7, 1962, at site 100 ft upstream at present datum.

REMARKS.--Records good, except for periods of estimated record, which are poor. Flow includes return water from Ainsworth Irrigation District since 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	233	188	189	207	165	192	176	197	191	201	208
2	178	214	190	195	205	165	396	175	188	206	427	199
3	176	200	187	195	197	164	514	176	182	216	507	197
4	173	196	183	183	189	163	339	177	177	209	454	207
5	173	189	170	189	182	164	269	174	196	206	363	220
6	173	188	176	186	180	160	242	177	201	207	299	209
7	179	188	177	177	180	168	216	189	203	255	260	200
8	183	184	180	177	185	163	206	197	258	223	237	209
9	178	186	182	163	193	159	198	221	398	203	226	218
10	180	180	181	154	202	167	194	235	429	209	235	219
11	184	181	179	173	207	159	192	249	394	207	247	220
12	227	180	177	159	209	167	190	281	314	209	277	211
13	277	183	181	164	216	177	186	263	271	193	260	221
14	275	179	181	178	205	185	199	250	370	190	241	270
15	247	177	184	174	211	203	348	241	531	178	223	281
16	224	171	192	182	230	235	441	240	490	174	228	248
17	212	179	193	177	248	268	329	231	377	177	221	224
18	201	181	196	176	251	266	266	221	361	179	202	215
19	190	190	199	175	235	237	237	207	327	165	215	207
20	181	197	197	181	225	223	225	229	286	173	223	205
21	181	198	195	178	218	259	214	239	250	160	204	185
22	180	203	195	179	219	281	208	289	252	150	211	198
23	184	203	186	177	215	272	202	318	483	171	225	187
24	182	206	185	178	210	256	194	312	565	214	225	179
25	187	214	184	181	211	254	195	299	465	189	225	178
26	177	211	181	180	199	240	194	264	368	190	219	183
27	182	208	180	182	185	234	189	230	297	179	231	171
28	208	200	184	188	176	235	183	210	249	174	223	170
29	250	195	181	192	---	226	182	196	228	166	220	168
30	262	191	183	198	---	219	180	204	213	180	209	165
31	253	---	183	206	---	232	---	193	---	194	209	---
TOTAL	6225	5805	5730	5586	5790	6466	7320	7063	9520	5937	7947	6172
MEAN	201	194	185	180	207	209	244	228	317	192	256	206
MAX	277	233	199	206	251	281	514	318	565	255	507	281
MIN	168	171	170	154	176	159	180	174	177	150	201	165
AC-FT	12350	11510	11370	11080	11480	12830	14520	14010	18880	11780	15760	12240

NIOBRARA RIVER BASIN

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	140	140	138	136	145	167	169	182	172	162	160	156
MAX	254	198	191	180	256	257	369	495	396	368	256	263
(WY)	1996	1996	1996	1995	1996	1987	1995	1995	1951	1962	1998	1986
MIN	100	101	102	103	96.5	106	114	103	105	99.0	92.9	88.1
(WY)	1949	1950	1969	1957	1951	1951	1950	1948	1948	1949	1948	1948

SUMMARY STATISTICS

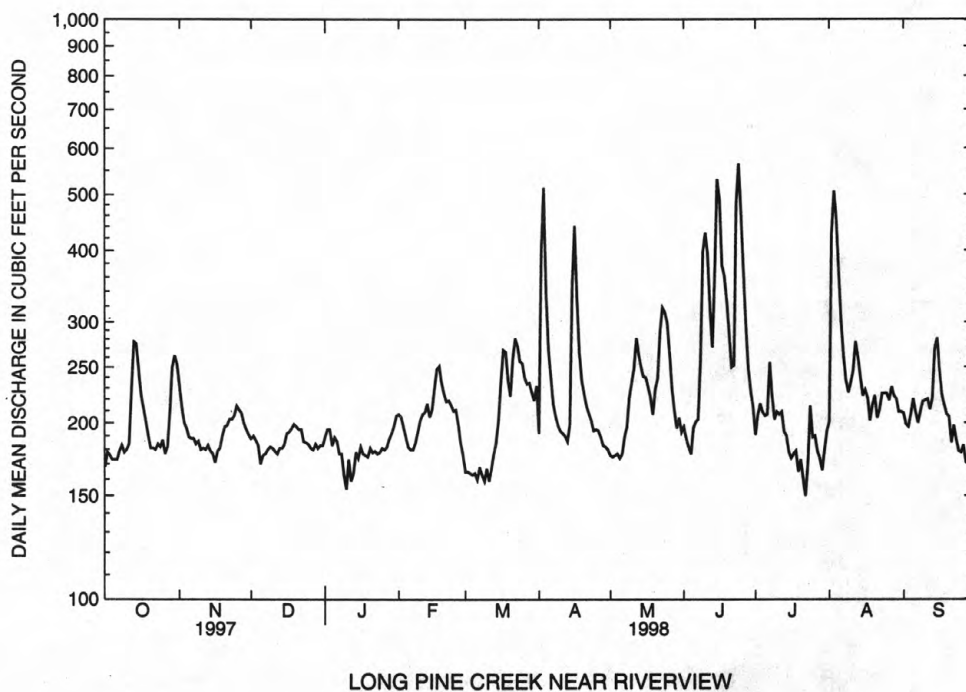
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1948 - 1998

ANNUAL TOTAL	80187	79561	
ANNUAL MEAN	220	218	156
HIGHEST ANNUAL MEAN			231
LOWEST ANNUAL MEAN			111
HIGHEST DAILY MEAN	931	Jul 1	565
LOWEST DAILY MEAN	136	Jan 10	150
ANNUAL SEVEN-DAY MINIMUM	149	Jan 10	163
INSTANTANEOUS PEAK FLOW			749
INSTANTANEOUS PEAK STAGE			3.49
ANNUAL RUNOFF (AC-FT)	159100	157800	113100
10 PERCENT EXCEEDS	282	276	200
50 PERCENT EXCEEDS	200	199	144
90 PERCENT EXCEEDS	175	174	110

* Backwater from fallen bridge



NIOBRARA RIVER BASIN

51

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE INST. (FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER	TEMPER- ATURE WATER (°C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE-	SODIUM,	
				WHOLE FIELD (STAND- ARD UNITS) (00400)				TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)		SIUM, DIS- SOLVED (MG/L AS MG) (00925)	DIS- SOLVED (MG/L AS NA) (00930)	
DEC	03	0900	185	213	8.3	4.5	10	78	88	25	3.7	8.0
FEB	24	0930	206	220	8.3	5.5	23	81	93	26	3.9	9.4
MAY	28	1420	204	204	8.4	22.0	27	75	92	24	3.5	8.1
MAY	28	1430	204	204	8.5	22.0	21	76	92	24	3.6	8.0
JUL	07	1115	253	197	8.2	21.0	50	76	86	24	3.7	7.7
SEP	22	1010	195	203	8.2	12.5	14	78	89	25	3.8	7.9

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
DEC 03	.4	5.7	4.9	2.5	.31	59	174	.24	87.0	--	<.010
FEB 24	.5	6.6	5.0	3.2	.26	53	172	.23	95.9	--	<.010
MAY 28	.4	5.3	4.2	1.9	.31	52	163	.22	89.8	1.67	.030
MAY 28	.4	5.3	4.1	1.7	.29	52	163	.22	89.7	1.71	.028
JUL 07	.4	7.3	4.2	2.8	.26	48	157	.21	107	1.41	.043
SEP 22	.4	6.0	5.1	2.4	.28	54	167	.23	88.1	2.09	.011

DATE	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)
DEC 03	2.50	<.020	--	.11	2.6	.161	.132	.168	29	14	<4.0
FEB 24	2.04	<.020	--	.33	2.4	.303	.245	.222	29	27	<4.0
MAY 28	1.70	.052	.21	.26	2.0	.252	.197	.152	26	20	5.6
MAY 28	1.73	.076	.21	.29	2.0	.222	.163	.156	19	22	<4.0
JUL 07	1.45	.037	.43	.47	1.9	.448	.272	.234	32	47	<4.0
SEP 22	2.10	<.020	--	.19	2.3	.207	.159	.179	32	26	<4.0

NIOBRARA RIVER BASIN

06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'44", long 99°46'49", in NW¹/₄ SW¹/₄ SE¹/₄ sec.24, T.95 N., R.76 W., Tripp County, Hydrologic Unit 10150006, on right bank at downstream side of bridge on U.S. Highway 183, 1.0 mi north of Wewela, 4.5 mi upstream from Holt Creek, and 11.5 mi downstream from Lost Creek.

DRAINAGE AREA.--1,070 mi², approximately.

PERIOD OF RECORD.--November 1937 to September 1940, October 1947 to current year. Monthly discharge only for October 1947, published in WSP 1309.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,049.78 ft above sea level. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum. Prior to Aug. 23, 1984, recording gage on left bank 13 ft downstream from bridge at same datum.

REMARKS.--Records good except those estimated daily discharges, which are poor. Satellite sata-collection platform at station.

COOPERATION.--Records provided by the Geological Survey, South Dakota District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	104	e52	e87	e121	e86	291	91	105	e233	716	57
2	53	101	e50	e87	e124	e90	323	87	97	e175	588	55
3	51	95	e49	e75	e124	e92	299	83	91	231	488	52
4	49	93	e49	e52	e121	e92	255	82	89	309	409	50
5	47	e88	e44	e67	e120	e95	219	79	94	263	342	48
6	46	e82	e84	e84	e120	e89	189	79	98	246	294	47
7	47	e80	e89	e92	e124	e109	170	75	101	215	249	53
8	52	e78	e102	e89	e129	e109	156	74	130	171	208	56
9	68	e74	e98	e85	e138	e105	147	83	195	149	175	48
10	61	e70	e97	e79	e142	e105	141	105	251	134	154	55
11	59	e66	e88	e76	e142	e100	137	130	303	123	139	45
12	104	e62	e77	e75	e134	e101	131	152	305	113	130	44
13	205	e60	e80	e59	e138	e100	121	144	235	103	121	49
14	233	e50	e83	e87	e140	e112	118	138	260	93	119	55
15	210	e51	e86	e86	e145	e121	163	145	473	83	118	66
16	164	e50	e94	e88	e150	e134	200	131	503	79	117	61
17	133	e64	e95	e93	153	e144	188	116	518	73	111	63
18	117	e78	e93	e95	154	e157	171	102	552	69	102	58
19	105	e85	e98	e96	151	e180	157	90	558	67	93	53
20	96	e81	e95	e97	147	e200	150	85	501	65	88	45
21	92	e80	e100	e95	145	232	146	90	421	61	82	47
22	89	e89	e93	e95	146	263	142	142	342	58	78	51
23	88	e96	e82	e97	145	268	134	189	317	59	76	55
24	88	e90	e91	e95	145	291	125	243	336	68	72	54
25	85	e97	e87	e98	143	342	118	268	789	68	80	52
26	82	e80	e85	e99	141	356	110	274	717	70	78	56
27	86	e68	e80	e100	133	336	106	223	574	86	64	53
28	93	e64	e87	e103	103	301	103	174	e452	108	60	55
29	98	e58	e85	e106	---	269	99	145	e358	354	59	52
30	105	e55	e86	e111	---	272	94	132	e293	563	58	50
31	107	---	e77	e117	---	301	---	117	---	650	57	---
TOTAL	2965	2289	2556	2765	3818	5552	4903	4068	10058	5139	5525	1585
MEAN	95.6	76.3	82.5	89.2	136	179	163	131	335	166	178	52.8
MAX	233	104	102	117	154	356	323	274	789	650	716	66
MIN	46	50	44	52	103	86	94	74	89	58	57	44
AC-FT	5880	4540	5070	5480	7570	11010	9730	8070	19950	10190	10960	3140

e Estimated

NIOBRARA RIVER BASIN

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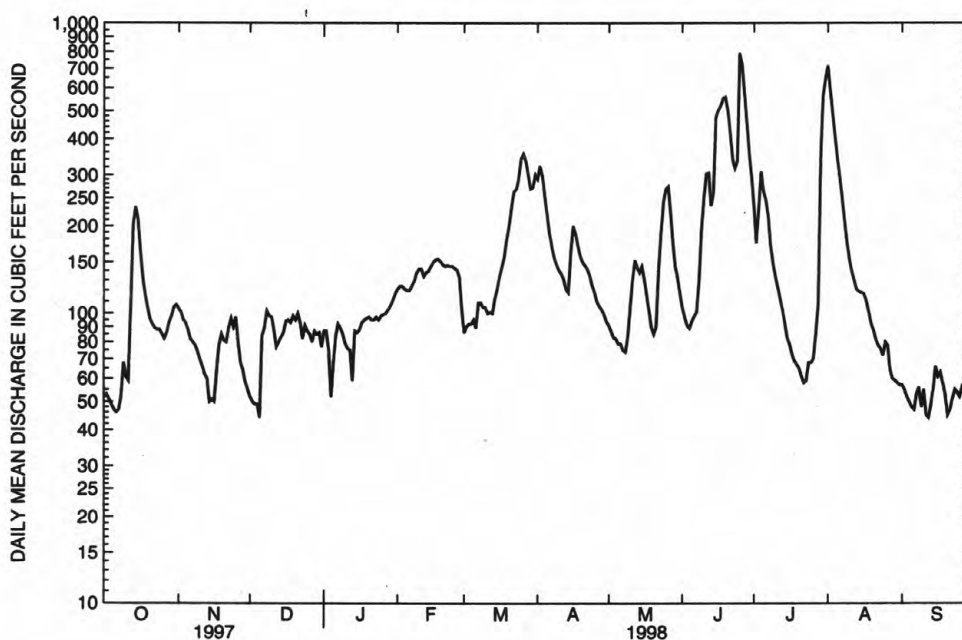
06464500 KEYA PAHA RIVER AT WEWELA, SD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	39.2	43.5	35.4	30.6	74.5	178	162	141	107	63.3	37.2	30.3
MAX	141	147	107	135	546	598	605	754	512	607	178	85.8
(WY)	1996	1996	1996	1997	1997	1960	1952	1995	1962	1962	1998	1996
MIN	8.49	12.0	8.74	1.61	5.07	33.5	31.3	27.4	12.2	3.55	.80	3.71
(WY)	1977	1977	1956	1949	1979	1975	1976	1981	1976	1940	1976	1976

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	67264		51223			
ANNUAL MEAN	184		140		^a 78.4	
HIGHEST ANNUAL MEAN					188	1997
LOWEST ANNUAL MEAN					19.5	1976
HIGHEST DAILY MEAN	2020	Feb 19	789	Jun 25	4930	Mar 30 1952
LOWEST DAILY MEAN	44	Dec 5	44	Dec 5	.00	^b Jan 10 1949
ANNUAL SEVEN-DAY MINIMUM	49	Oct 1	49	Oct 1	.00	Jan 10 1949
INSTANTANEOUS PEAK FLOW			935	Jun 25	^c 5430	Mar 31 1952
INSTANTANEOUS PEAK STAGE			^d 4.58	Jun 25	^f 13.50	Mar 25 1950
ANNUAL RUNOFF (AC-FT)	133400		101600		56830	
10 PERCENT EXCEEDS	385		291		159	
50 PERCENT EXCEEDS	106		98		41	
90 PERCENT EXCEEDS	55		55		15	

- a Median of annual mean discharges, 64 ft³/s.
b Also Jan. 11 to Feb. 15, 1949, and Aug. 19 to Sept. 14, 1976.
c Gage height, 13.08 ft.
d From floodmark.
f Backwater from ice.



KEYA PAHA RIVER AT WEWELA, SD

NIOBRARA RIVER BASIN

06465000 NIOBRARA RIVER NEAR SPENCER, NE

LOCATION.--Lat 42°48'33", long 98°39'22", in SE¹/₄ NW¹/₄ sec.30, T.33 N., R.11 W., Boyd County, Hydrologic Unit 10150007, at Spencer powerplant dam 5 mi southeast of Spencer.

DRAINAGE AREA.--11,070 mi².

PERIOD OF RECORD.--May to December 1908 (gage heights only); August 1913 to September 1914; October to December 1914, April to September 1915 (gage heights only); August 1927 to September 1936, June 1940 to current year. Published as "near Lynch" 1913-15. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder and hourly log and powerplant operation. Datum of gage is 1,473.67 ft above sea level. Elevation of taintor gate sill, 1,491.12 ft above sea level. Prior to December 1908, nonrecording gage on former highway bridge 275 ft downstream and Aug. 1, 1913, to Sept. 30, 1915, nonrecording gage at highway bridge 10 mi downstream at different datums. Aug. 1, 1927, to Sept. 30, 1936, and June 14, 1940, to Sept. 30, 1944, discharge computed as flow through powerhouse and over dam. Oct. 1, 1944, to Nov. 10, 1954, water-stage recorder at site 275 ft downstream at datum 4.98 ft higher, and Nov. 11, 1954, to Sept. 30, 1957, at site 0.3 mi downstream at datum 9.78 ft lower. Oct. 1, 1957 to Oct. 21, 1958, discharge computed as flow through powerhouse and over dam. Oct. 28, 1958, to Aug. 13, 1963, water-stage recorder at site 225 ft downstream at present datum. Aug. 14, 1963, gage moved to present site with discharge computed as flow through powerhouse and over dam.

REMARKS.--Records good except for estimated period, which is fair. Natural flow of stream affected by irrigation and power developments. Daily discharge determined from flow through turbines and taintor gates, computed from relation between head, and gage openings.

COOPERATION.--Powerplant log furnished by Nebraska Public Power District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	2240	1950	1960	2190	1210	2860	1420	1740	1840	2190	e1420
2	1450	2280	1910	2130	2120	1280	2890	1790	1620	1720	e3820	e1400
3	1450	2010	2180	1600	2010	1570	3250	1700	1690	1860	e3600	e1240
4	1490	1950	1820	816	1960	1590	2950	1620	1680	2020	e2930	e1220
5	1470	1940	1030	971	1950	1630	2530	1620	1800	1880	2390	1220
6	1460	1900	1150	1430	1980	1910	2730	1610	1690	1990	e1860	1230
7	1240	1920	1300	1560	2060	1700	3340	1590	1690	2680	e1770	1220
8	1240	1920	1640	1570	2140	1530	3780	1560	2160	1960	e1530	e1200
9	1610	1960	1800	1380	2300	1610	3480	1670	3120	1920	e1420	e1160
10	1460	1940	1860	933	2320	1320	2800	1840	2680	1600	e1330	e1150
11	1360	1980	1740	715	2280	982	2460	1980	2380	1580	e1280	e1130
12	1800	2010	1460	620	2230	743	2800	2130	2330	1500	e1650	1100
13	2680	1760	1560	539	2300	974	2710	1930	2120	1430	e1590	e1130
14	2480	1360	1690	745	2170	2750	1740	2000	2680	1380	e1580	e1140
15	2310	1110	1980	768	2280	2330	2710	2050	3290	1290	e1560	1240
16	1900	849	1890	920	2700	2180	2670	2290	3250	1200	e1480	e1200
17	1860	1030	1870	1470	2640	2360	2380	1950	2990	1170	e1440	e1180
18	1940	1960	2030	1860	2550	2420	2140	1790	2910	1110	e1370	e1160
19	1900	1740	1860	1990	2390	2600	2100	1730	2970	1130	1340	e1140
20	1810	2570	2160	1840	2290	2850	2080	1840	2730	1080	e1760	e1120
21	1740	2060	1740	1740	2150	3190	2020	1910	2320	1060	e1670	e1370
22	1570	1960	1840	1700	2170	3100	2010	2270	2150	1160	e1660	e1380
23	1550	1790	1620	1690	2190	2730	1990	2310	2320	e1150	e1630	e1380
24	1650	1890	1850	1740	2160	2640	1890	2500	3050	e1250	e1580	e1280
25	1630	1960	1840	1790	2070	2620	2070	2280	3560	e1400	e1550	e1270
26	2040	1850	1790	1770	2130	2560	2390	2210	3620	e1550	e1500	e1260
27	1920	1890	1640	1810	1730	2640	2120	2340	2830	e1400	e1490	e1260
28	1900	1910	1830	1930	1550	2520	1950	2050	2490	e1350	e1400	e1230
29	1980	1900	1800	2020	---	2410	1830	1930	2270	e1820	e1370	e1390
30	1890	1930	1980	2160	---	2450	2450	1850	2060	e2380	e1360	e1380
31	2070	---	1740	2210	---	2790	---	1960	---	e2200	1420	---
TOTAL	54220	55569	54550	46377	61010	65189	75120	59720	74190	49060	54520	37200
MEAN	1749	1852	1760	1496	2179	2103	2504	1926	2473	1583	1759	1240
MAX	2680	2570	2180	2210	2700	3190	3780	2500	3620	2680	3820	1420
MIN	1240	849	1030	539	1550	743	1740	1420	1620	1060	1280	1100
AC-FT	107500	110200	108200	91990	121000	129300	149000	118500	147200	97310	108100	73790

e Estimated

NIOBRARA RIVER BASIN

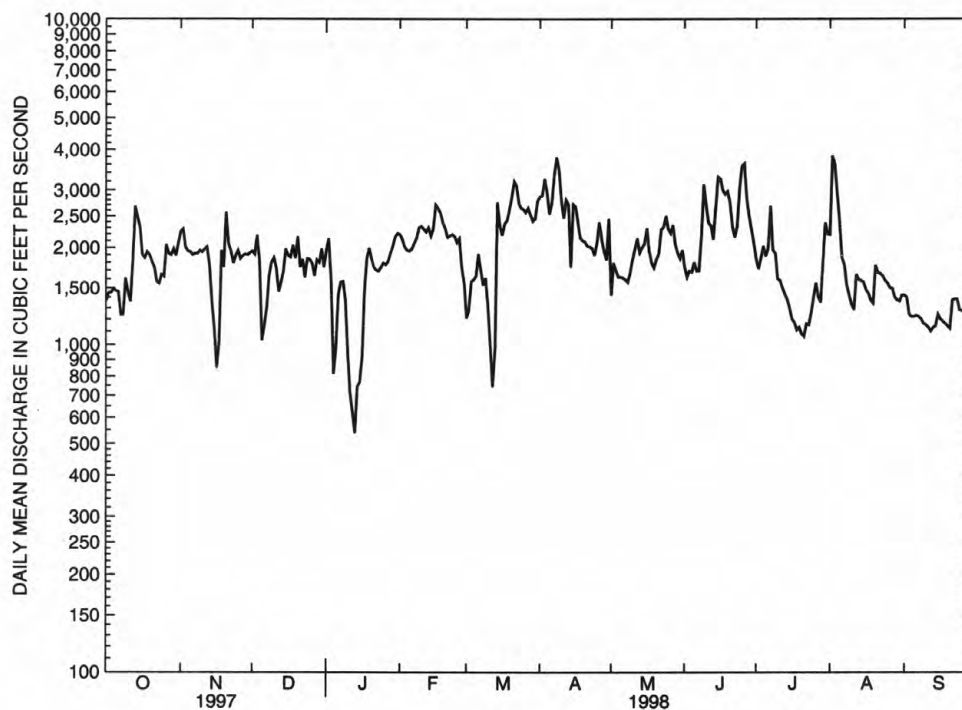
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06465000 NIOBRARA RIVER NEAR SPENCER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1272	1332	1173	1224	1628	2244	1947	1866	1649	1150	1046	1118
MAX	1965	1928	1881	1860	3014	3941	3972	4649	3972	4156	2167	2143
(WY)	1996	1996	1994	1997	1997	1950	1995	1995	1962	1962	1951	1951
MIN	936	899	601	645	839	1276	1179	1014	830	549	612	746
(WY)	1941	1977	1928	1929	1950	1976	1934	1934	1933	1936	1970	1970

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1927 - 1998
ANNUAL TOTAL	742759	686725	
ANNUAL MEAN	2035	1881	1471
HIGHEST ANNUAL MEAN			2066 1962
LOWEST ANNUAL MEAN			1096 1934
HIGHEST DAILY MEAN	6970 Feb 21	3820 Aug 2	19000 Mar 27 1960
LOWEST DAILY MEAN	210 Apr 15	539 Jan 13	5.0 Nov 14 1940
ANNUAL SEVEN-DAY MINIMUM	1210 Aug 26	749 Jan 10	168 Dec 8 1932
INSTANTANEOUS PEAK FLOW			27400 Mar 12 1955
INSTANTANEOUS PEAK STAGE			12.16 Mar 12 1955
ANNUAL RUNOFF (AC-FT)	1473000	1362000	1066000
10 PERCENT EXCEEDS	2920	2680	2270
50 PERCENT EXCEEDS	1920	1850	1300
90 PERCENT EXCEEDS	1280	1200	773



NIOBRARA RIVER NEAR SPENCER

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE

LOCATION.--Lat 42°44'23", long 98°13'26", in NW¹/₄NW¹/₄ sec.23, T.32 N., R.8 W., Knox County, Hydrologic Unit 10150007, on right bank at downstream side of county road bridge, 6.6 mi south of Verdel, 7.5 mi upstream from Verdigre Creek, and at mile 14.8.

DRAINAGE AREA.--11,580 mi².

PERIOD OF RECORD.--April 1938 to May 1940, June 1958 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,312.12 ft above sea level. Apr. 25, 1938, to June 16, 1939, nonrecording gage at site 2600 ft downstream; June 17, 1939, to June 13, 1940, nonrecording gage 2850 ft downstream; and June 14, 1940 to July 24, 1985, water-stage recorder at site 2600 ft downstream, all at datum 4.00 ft lower.

REMARKS.--Records poor. Natural flow of stream affected by irrigation and power developments.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	2080	1900	e2300	e2700	1670	3180	2300	2000	2060	2040	1490
2	1420	2210	1640	e2400	e2600	1400	3190	2270	1890	2070	2800	1280
3	1440	2370	1480	e2300	e2400	e1600	3680	2220	2090	2300	4130	1220
4	1690	2370	1330	e1200	e2300	e1800	3770	2030	2100	2360	3380	1170
5	1740	2100	963	e1100	e2300	e1900	3600	2080	2410	2360	2550	1160
6	1570	2200	842	e1500	e2400	e2100	3600	2080	2040	2970	1890	1160
7	1880	2370	1100	e1800	e2400	e2200	3410	1880	1940	3640	1520	1140
8	1810	1960	1260	e1900	e2500	e1800	4260	1790	2520	2470	1620	1140
9	1730	1750	1470	e1700	e2600	e1900	3710	1900	3490	1870	1650	1150
10	1350	1880	1920	e1500	e2600	e1700	2600	2080	3290	1890	1430	1140
11	1420	1970	1900	e1000	e2700	e1600	2030	2220	3190	2010	1420	1150
12	2070	2420	1420	e860	e2600	e1200	2420	2300	2690	1700	1900	1190
13	2850	2390	1550	e820	e2600	e1700	2160	2000	2650	1520	2020	1210
14	2290	2010	1750	e800	e2500	e3000	2130	2430	2890	1480	1670	1410
15	1580	1640	2100	e1000	2670	e2900	2940	2380	3430	1520	1560	1530
16	1570	1320	2790	e1200	3250	e2600	3160	2570	3320	1470	1440	1420
17	1660	1130	e2200	e1900	3540	e2700	2740	2300	2930	1520	1300	1390
18	1970	1230	e2100	e2100	3660	e2900	2250	2040	3140	1450	1270	1390
19	1950	1440	2130	e2200	2860	e3300	1910	2140	3000	1380	1350	1370
20	2260	1740	1570	e2300	2710	3630	2360	2390	3040	1280	1480	1380
21	2120	1930	1470	e2100	2670	3690	2230	2710	2740	1210	1500	1410
22	1760	1650	1530	e2000	2560	4180	1980	3330	2820	1380	1570	1560
23	1730	1530	1660	e1900	2360	4230	2960	2650	2910	1280	1540	1510
24	1880	1980	1800	e2000	2560	4160	3180	2340	4030	1540	1580	1580
25	2200	2210	2130	e2000	2480	3980	3490	2490	4270	1730	1580	1460
26	2600	1780	1870	e2100	2300	3730	3880	2060	4630	1920	1460	1410
27	2360	1820	1900	e2100	2000	3640	3130	2100	3850	1640	1460	1440
28	2170	2070	e2000	e2200	1570	3310	2550	2300	3520	1480	1470	1430
29	2230	2110	e2300	e2300	---	2930	2510	2150	3430	1720	1480	1470
30	2430	1950	e2200	e2500	---	2290	2290	2130	2590	2440	1410	1420
31	2370	---	e2200	e2600	---	2960	---	2100	---	2480	1550	---
TOTAL	59400	57610	54475	55680	72390	82700	87300	69760	88840	58140	55020	40180
MEAN	1916	1920	1757	1796	2585	2668	2910	2250	2961	1875	1775	1339
MAX	2850	2420	2790	2600	3660	4230	4260	3330	4630	3640	4130	1580
MIN	1300	1130	842	800	1570	1200	1910	1790	1890	1210	1270	1140
AC-FT	117800	114300	108100	110400	143600	164000	173200	138400	176200	115300	109100	79700

e Estimated

NIOBRARA RIVER BASIN

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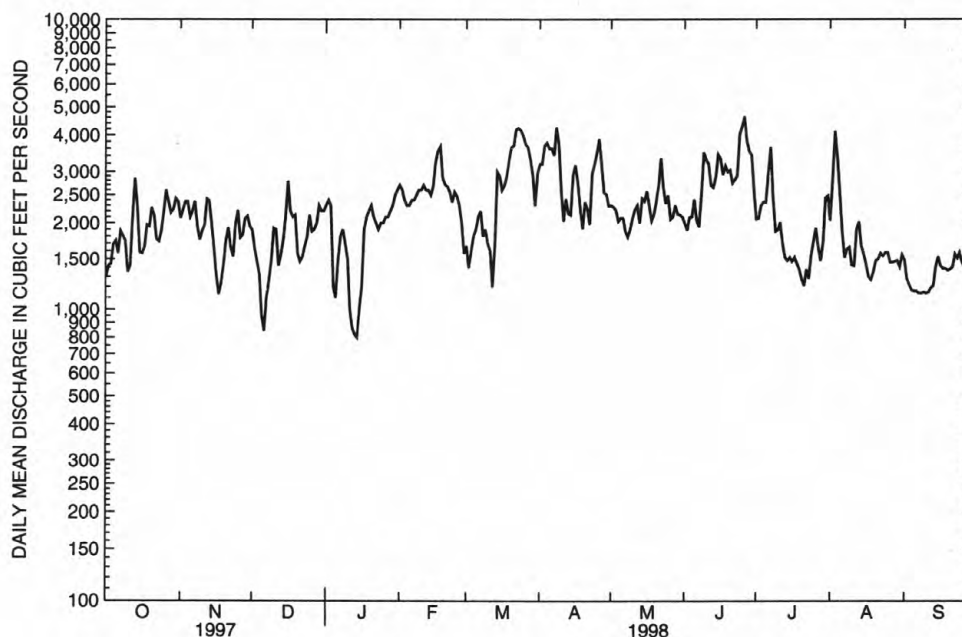
06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1415	1497	1363	1416	1881	2584	2300	2149	1847	1368	1130	1249
MAX	2480	2191	2118	2132	3557	4425	4693	5290	4442	5370	2049	2094
(WY)	1996	1996	1997	1997	1997	1960	1995	1995	1962	1962	1962	1986
MIN	1009	943	787	706	941	1444	1282	1228	1044	551	644	704
(WY)	1977	1977	1969	1940	1939	1981	1939	1969	1976	1974	1971	1939

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	884405		781495			
ANNUAL MEAN	2423		2141		1690	
HIGHEST ANNUAL MEAN					2461	
LOWEST ANNUAL MEAN					1269	
HIGHEST DAILY MEAN	7600	Feb 22	4630	Jun 26	25100	Mar 27 1960
LOWEST DAILY MEAN	842	Dec 6	800	Jan 14	104	Nov 30 1960
ANNUAL SEVEN-DAY MINIMUM	1210	Dec 3	1030	Jan 10	210	Nov 27 1976
INSTANTANEOUS PEAK FLOW (STAGE)			4950 (3.95)	Jun 26	39000	Mar 27 1960
INSTANTANEOUS PEAK STAGE			*5.59	Jan 22	*10.62	Mar 12 1966
ANNUAL RUNOFF (AC-FT)	1754000		1550000		1224000	
10 PERCENT EXCEEDS	3720		3210		2630	
50 PERCENT EXCEEDS	2170		2060		1500	
90 PERCENT EXCEEDS	1500		1350		880	

* Backwater from ice.



NIOBRARA RIVER NEAR VERDEL

MISSOURI-LEWIS AND CLARK RIVER BASIN

06467000 LEWIS AND CLARK LAKE NEAR YANKTON, SD

LOCATION.--Lat 42°50'56", long 97°28'54", in SW¹/₄ sec.7, T.33 N., R.1 W., Cedar County, NE, Hydrologic Unit 10170101, in powerhouse of Gavins Point Dam on Missouri River, 3.75 mi southwest of Yankton, 13.6 mi upstream from James River, 32.5 mi downstream from Niobrara River, and at mile 811.0.

DRAINAGE AREA.--279,500 mi², approximately.

PERIOD OF RECORD.--July 1955 to current year (monthend contents only). Prior to October 1955, published as Gavins Point Reservoir near Yankton.

GAGE.--Water-stage recorder. Datum of gage is above sea level. Prior to Dec. 9, 1955, recorder at temporary location on wall of intake structure unit 3.

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 504,000 acre-ft below elevation 1,210.0 ft (top of spillway gates). Normal maximum, 442,600 acre-ft below elevation 1,208.0 ft. Inactive storage, 157,000 acre-ft below elevation 1,195.0 ft. Dead storage, 23,000 acre-ft below elevation 1,180.0 ft (crest of spillway). From capacity table put into use Nov. 1, 1986; maximum capacity, 491,700 acre-ft. Normal maximum, 432,000 acre-ft. Inactive storage, 149,400 acre-ft. Dead storage, 17,700 acre-ft. Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of 14 taintor gates, each 40 ft wide by 30 ft high; spillway capacity, 280,000 ft³/s at pool elevation 1,210.0 ft. Crest of spillway is at elevation 1,180.0 ft. Normal releases are through 3 power units, installation completed in January 1957; maximum release through power units is 35,000 ft³/s at pool elevation, 1,210.0 ft. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by the Geological Survey, South Dakota District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 565,000 acre-ft, Apr. 1, 1960, affected by wind; minimum since initial filling, 61,950 acre-ft, Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 402,000 acre-ft, Nov. 2, Feb.2; minimum contents, 309,000 acre-ft, Mar. 12.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,206.86	380,000	--
Oct. 31	1,207.54	398,000	+18,000
Nov. 30	1,206.44	370,000	-28,000
Dec. 31	1,207.19	389,000	+19,000
CAL YR 1997.....	--	--	+6,000
Jan. 31	1,207.51	398,000	+9,000
Feb. 28	1,206.35	362,000	-36,000
Mar. 31	1,206.67	375,000	+13,000
Apr. 30	1,206.55	373,000	-2,000
May 31	1,206.10	360,000	-13,000
June 30	1,206.47	370,000	+10,000
July 31	1,206.26	364,000	-6,000
Aug. 31	1,206.18	362,000	-2,000
Sept. 30	1,207.14	388,000	+26,000
WTR YR 1998.....	--	--	+8,000

NOTE.--Lake frozen over Jan. 6 to Feb. 27..

MISSOURI RIVER MAIN STEM

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06486000 MISSOURI RIVER AT SIOUX CITY, IA

LOCATION.--Lat. 42°29'09", long 96°24'49", in NW¹/₄ SE¹/₄ sec. 16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001, on right bank on upstream side of bridge on U.S. Highway 20 and 77 at South Sioux City, Nebraska, 1.9 mi downstream from Big Sioux River, and at mile 732.2.

DRAINAGE.--314,600 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1897 to current year in reports of the U.S. Geological Survey. Prior to October 1928 and October 1931 to September 1938, monthly discharges only, published in WSP 1310. January 1879 to December 1890, monthly discharges only, in House Document 238, 73rd Congress, 2d session, Missouri River. Gage height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 716: 1929-30. WSP 876: Drainage area.

GAGE.--Water-stage encoder. Datum of gage is 1,056.98 ft above sea level. Sept. 2, 1878 to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan. 1, 1906 to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at site 227 ft downstream at datum 19.98 ft higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 6, 13-18, 21, 23. Records good except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers rain-gage and satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft³/s Apr. 14, 1952, gage height, 24.28 ft, datum then in use; minimum, 2,500 ft³/s Dec. 29, 1941; minimum gage height, 7.02 ft Jan. 19, 1996.

COOPERATION.--Records provided by Geological Survey, Iowa District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69200	72900	70100	29700	28300	29400	31800	30800	36100	33600	32400	33000
2	69100	73200	68100	29200	28100	29200	30500	32000	36100	33500	32700	33500
3	69300	71800	65400	29400	27800	29100	30500	32700	36300	33500	33800	34500
4	69400	71600	62600	28200	27800	28900	30900	32600	36700	33400	33000	34300
5	69300	71800	58900	29000	28200	28900	30700	32200	37200	33200	32700	34200
6	69200	71300	55800	e29200	28400	28600	30900	31900	37300	33600	32700	34100
7	69200	70400	53300	28400	27800	28600	30800	31700	37400	35800	32900	33700
8	69700	70500	51000	26900	27700	28600	32100	31100	38000	33800	32100	33300
9	69800	70600	48700	25400	28000	27200	33400	30800	39000	31700	31000	33300
10	68700	71200	46300	22200	28100	26400	31800	31500	38600	32900	31800	33600
11	69200	71400	43200	23200	28100	27500	30600	31600	38700	33100	31600	33600
12	70100	71500	39700	24100	28000	26900	29100	32100	39200	33900	31700	33500
13	71600	71800	37000	e24300	28200	27500	28800	32100	36800	33800	31800	33400
14	68800	71500	33300	e24600	27800	26800	28600	31400	33800	33300	31500	33200
15	68500	71800	30800	e24000	27600	26600	30600	31800	34000	33000	31800	33800
16	69400	71500	30700	e25400	27700	26800	31500	32900	30700	32800	32600	33700
17	68900	71200	30300	e25600	28200	27700	30800	32300	28700	32400	32600	33500
18	67100	70800	30000	e24300	28400	29100	30100	34300	29200	32400	32400	33800
19	68000	71100	29800	24600	28300	28800	30400	36000	29100	32400	32200	33800
20	68500	71400	29500	24400	28000	28600	30400	36100	28200	32200	32200	34000
21	69100	71900	29100	e24800	28200	29000	30800	35500	27900	32200	32600	33700
22	68800	72400	29200	e25400	28200	30400	31100	35500	27600	32400	32000	33600
23	68300	71800	29200	e25800	28700	30700	30700	34800	27400	32100	31300	33300
24	68500	71900	29100	26500	29100	30200	30500	33200	31000	32100	31400	33600
25	69200	71700	29200	27000	29200	30000	30200	32800	32000	32000	31800	33400
26	69800	71200	29200	28000	29500	30000	34100	33400	31500	33000	32100	33900
27	69600	72300	29000	28000	29600	30800	33900	34800	33700	33200	32200	34200
28	70100	72300	29300	29000	29500	32600	32200	35200	34400	33100	32500	34100
29	70600	72000	29400	28800	---	32700	31100	35600	34300	32800	32100	33600
30	70500	71100	29600	28000	---	33200	30100	36200	34300	32800	32000	33200
31	70900	---	29600	28200	---	32600	---	36800	---	32500	32200	---
TOTAL	2148400	2147900	1236400	821600	792500	903400	929000	1031700	1015200	1022500	997700	1010400
MEAN	69300	71600	39880	26500	28300	29140	30970	33280	33840	32980	32180	33680
MAX	71600	73200	70100	29700	29600	33200	34100	36800	39200	35800	33800	34500
MIN	67100	70400	29000	22200	27600	26400	28600	30800	27400	31700	31000	33000
AC-FT	4261000	4260000	2452000	1630000	1572000	1792000	1843000	2046000	2014000	2028000	1979000	2004000

MISSOURI RIVER MAIN STEM

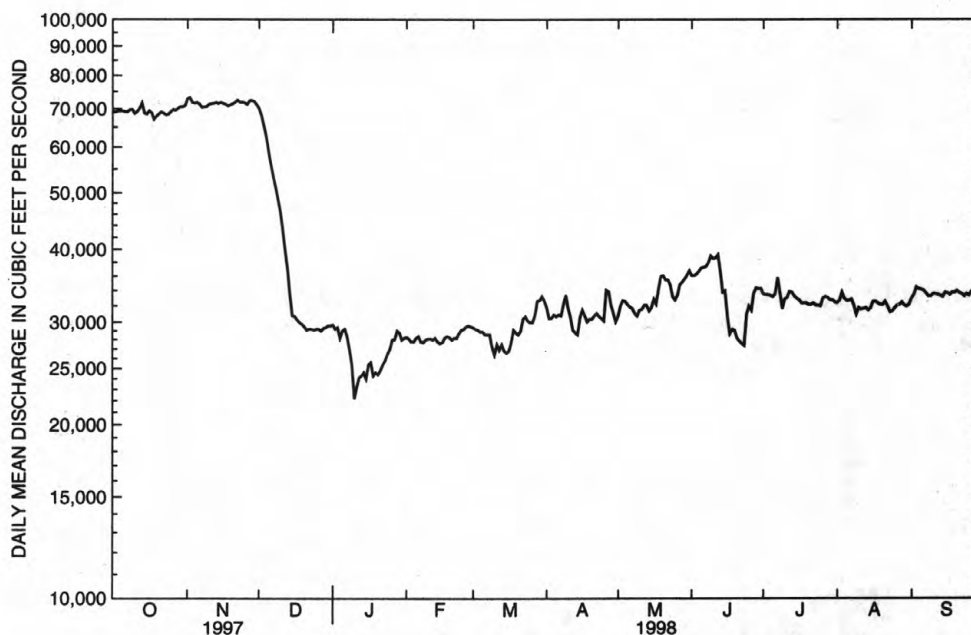
06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36150	30800	18550	15830	17060	23200	33350	33910	35660	36270	36750	36800
MAX	69300	71600	39880	27720	31120	47020	88040	78720	66400	65550	65360	66400
(WY)	1998	1998	1998	1987	1997	1997	1997	1997	1997	1997	1997	1997
MIN	14350	6951	8271	7316	6293	9135	17450	23820	23270	26890	24270	25790
(WY)	1962	1962	1962	1964	1963	1957	1957	1962	1960	1958	1993	1962

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1953 - 1998	
ANNUAL TOTAL	21754200		14056700			
ANNUAL MEAN	59600		38510		29570	
HIGHEST ANNUAL MEAN					55890	
LOWEST ANNUAL MEAN					19770	
HIGHEST DAILY MEAN	97400		Apr 10	73200	Nov 2	105000
LOWEST DAILY MEAN	21000		Jan 11	22200	Jan 10	3000
ANNUAL SEVEN-DAY MINIMUM	23500		Jan 10	24000	Jan 9	5430
INSTANTANEOUS PEAK FLOW				73600	Nov 1	101000
INSTANTANEOUS PEAK STAGE				23.24	Oct 13	30.65
ANNUAL RUNOFF (AC-FT)	43150000		27880000		21420000	
10 PERCENT EXCEEDS	81000		70100		46600	
50 PERCENT EXCEEDS	65900		32400		30100	
90 PERCENT EXCEEDS	28600		27900		11400	

* Post-regulation period, revised.



OMAHA CREEK BASIN

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06601000 OMAHA CREEK AT HOMER, NE

LOCATION.--Lat 42°19'29", long 96°29'43", in SW¹/₄ SE¹/₄ sec.11, T.27 N., R.8 E., Dakota County, Hydrologic Unit 10230001, on left bank 80 ft downstream from bridge on main street of Homer and at mile 4.7.

DRAINAGE AREA.--174 mi².

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-94-1: Drainage area. WDR NE-75-1: 1971-73.

GAGE.--Water-stage recorder. Datum of gage is 1,080.45 ft above sea level. Prior to Aug. 4, 1952, at bridge 0.5 mi downstream at datum 6.03 ft lower. Aug. 4, 1952, to Nov. 3, 1966, at site 80 ft upstream at datum 2.0 ft higher. Nov. 4, 1966 to Sept. 30, 1989, at present site at datum 2.0 ft higher. June 27, 1984 to Aug. 28, 1984, at temporary site 700 ft downstream at present datum.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	39	30	e20	69	40	92	101	73	124	e70	59
2	28	39	29	e21	55	45	69	92	73	119	e70	52
3	28	41	29	e22	e47	45	61	91	74	132	e78	50
4	27	42	e22	e22	e42	42	58	87	78	127	e90	46
5	27	42	e21	e22	e37	43	55	85	91	133	e100	44
6	27	42	e22	e21	e39	43	53	81	83	511	e100	44
7	27	41	e24	e21	e41	42	95	78	91	507	e86	41
8	28	40	e25	e20	e44	e30	260	76	143	119	e88	42
9	30	40	e25	e19	46	e26	161	79	231	185	e78	42
10	29	41	e24	e18	45	e24	112	90	132	106	e74	41
11	30	40	e24	e16	45	e26	97	81	513	97	e68	39
12	39	42	e20	e17	42	e28	89	90	454	91	e64	39
13	61	41	e21	e19	42	e30	84	83	184	90	e62	39
14	37	41	e24	e20	42	e33	73	75	191	85	62	38
15	33	41	e25	e21	45	e35	245	113	190	81	102	41
16	33	e35	e23	e21	51	e40	184	131	169	81	72	42
17	34	e29	e22	e22	53	43	124	86	190	81	66	40
18	34	e30	e21	e23	53	48	112	79	218	79	60	40
19	34	e31	e20	e23	50	48	104	77	168	76	58	40
20	32	e31	e19	e23	47	47	102	93	148	75	56	42
21	32	e32	e19	e24	49	53	95	91	140	75	95	42
22	32	e32	e20	e25	48	57	88	113	137	86	79	41
23	34	e32	e20	e26	51	61	85	98	238	82	60	41
24	37	32	e20	e28	51	53	82	92	509	81	59	41
25	55	32	e19	e32	48	61	82	87	157	83	56	42
26	56	33	e18	e38	49	91	230	85	134	81	53	41
27	45	33	e19	52	46	90	143	84	124	78	53	38
28	41	32	e19	67	42	194	114	81	121	e76	54	39
29	44	31	e20	146	---	99	108	77	276	e74	52	39
30	42	30	e20	99	---	74	104	77	192	e72	49	40
31	40	---	e21	106	---	84	---	79	---	e72	92	---
TOTAL	1103	1087	685	1054	1319	1675	3361	2732	5522	3759	2206	1265
MEAN	35.6	36.2	22.1	34.0	47.1	54.0	112	88.1	184	121	71.2	42.2
MAX	61	42	30	146	69	194	260	131	513	511	102	59
MIN	27	29	18	16	37	24	53	75	73	72	49	38
AC-FT	2190	2160	1360	2090	2620	3320	6670	5420	10950	7460	4380	2510

e Estimated

OMAHA CREEK BASIN

06601000 OMAHA CREEK AT HOMER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.5	21.0	17.8	17.9	48.9	72.4	55.8	59.1	88.3	57.4	33.2	26.4
MAX	89.6	75.2	62.4	82.0	472	315	426	248	356	331	181	131
(WY)	1994	1994	1995	1973	1971	1993	1985	1984	1967	1996	1993	1993
MIN	1.17	2.36	2.46	1.99	1.49	6.33	4.14	4.04	7.60	4.34	2.55	.75
(WY)	1957	1956	1977	1957	1956	1956	1956	1981	1981	1976	1968	1948

SUMMARY STATISTICS

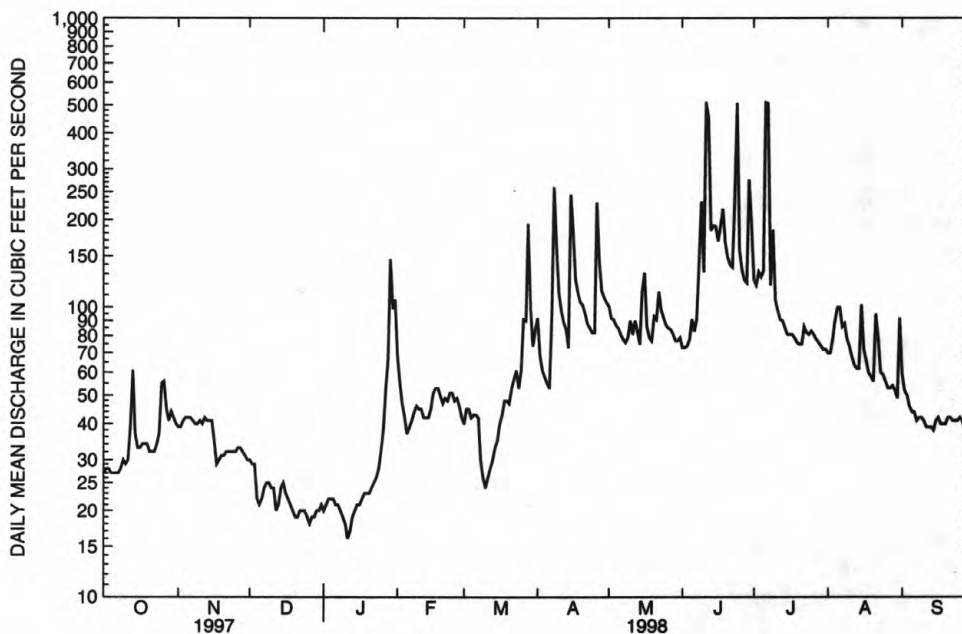
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1946 - 1998

ANNUAL TOTAL	25978	25768	
ANNUAL MEAN	71.2	70.6	43.3
MEDIAN OF ANNUAL MEANS			33.6
HIGHEST ANNUAL MEAN		130	1993
LOWEST ANNUAL MEAN			6.20 1981
HIGHEST DAILY MEAN	633 Mar 9	513 Jun 11	6840 Feb 18 1971
LOWEST DAILY MEAN	18 Dec 26	16 Jan 11	.10 Sep 16 1948
ANNUAL SEVEN-DAY MINIMUM	19 Dec 20	18 Jan 8	.16 Sep 8 1955
INSTANTANEOUS PEAK FLOW (STAGE)		2430 Jul 6	*21500 (22.30) Jul 17 1996
INSTANTANEOUS PEAK STAGE		7.44 Jul 6	28.47 Feb 19 1971
ANNUAL RUNOFF (AC-FT)	51530	51110	31370
10 PERCENT EXCEEDS	120	125	80
50 PERCENT EXCEEDS	54	49	18
90 PERCENT EXCEEDS	28	22	4.1

* Discharge from rating curve extended above 3,700 ft³/s on basis of slope-area measurements at gage heights 16.38 ft and 23.62 ft. Gage height for this discharge from floodmark.



OMAHA CREEK AT HOMER

MISSOURI MAIN STEM

63

06601200 MISSOURI RIVER AT DECATUR, NE

LOCATION.--Lat 42°00'26", long 96°14'29", in NE¹/₄ SW¹/₄ sec.36, T.24 N., R.10 E., Burt County, Hydrologic Unit 10230001, on right bank 0.1 mi upstream from Iowa Highway 175 bridge at Decatur, and at mile 691.0.

DRAINAGE AREA.--316,200 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage encoder. Datum of gage is 1,010.00 ft above sea level, supplementary adjustment of 1954.

REMARKS.--Estimated daily discharges: Nov. 25-27 and Jan. 24. Records good except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers rainage and satellite data collection platform at station.

COOPERATION.--Records provided by Geological Survey, Iowa District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69800	72100	71000	30000	28400	29600	33200	32400	38000	34800	32600	33100
2	69700	73100	70600	29600	28100	29500	32000	33200	37600	34400	32700	33700
3	69700	72700	67900	29400	28000	29400	31500	33800	37300	35300	33800	34600
4	69900	72400	64400	29000	27800	29100	31700	33500	37600	34200	33800	35000
5	69800	72900	61200	28300	28000	29100	31300	32800	37800	33800	33300	34800
6	69900	72700	57300	29500	28400	28900	30800	32300	37800	34800	33700	35000
7	70300	72500	53800	29200	28000	28800	30900	32300	37700	36600	34100	34800
8	70700	71600	51600	27100	27900	28900	31800	31900	38100	36000	34200	34600
9	70600	72400	49600	26500	28100	28300	33300	31400	39300	32400	32100	34400
10	70200	72600	46800	24500	28400	27000	33000	31500	38900	33300	32700	34300
11	70400	72000	43900	23600	28600	27300	31900	32000	38700	33200	32800	34400
12	71300	72300	41000	24300	28700	27500	31000	32200	39400	33900	32600	34100
13	72300	72300	38700	24700	28800	27400	30500	33000	38700	34300	32800	34300
14	71200	72400	35700	24900	28600	27800	30300	32700	35600	33900	32500	34100
15	70100	72400	33900	24700	28300	27300	30600	32800	36200	33600	33100	34300
16	70000	71500	32800	26000	28300	27600	32500	33800	34500	33500	32900	34700
17	69600	71300	32900	25800	28500	27900	31800	33400	31800	33200	33500	34200
18	68900	71500	32200	24800	28800	29300	30700	33400	31100	33300	33300	34300
19	68300	71800	31800	24600	28700	29600	30500	35700	31300	33100	33100	34500
20	68900	72000	31400	24700	28400	29200	30900	37000	30600	33000	33100	34800
21	69500	72800	30900	24900	28400	29000	30900	36700	29800	32800	33700	34600
22	69700	73000	30600	25800	28500	29800	31500	37000	29600	33100	33400	34500
23	69500	73200	30500	26400	28600	30800	31500	36900	29400	32700	32200	34500
24	69600	72600	30300	e26900	29000	30900	31300	35700	32500	32300	31700	34500
25	70100	e72500	30300	27100	29500	31100	31500	34900	33700	32300	31700	34800
26	70200	e72000	30200	27800	29600	31400	35200	35000	32900	32700	32400	34800
27	70300	e72800	29900	27900	29900	32300	38300	36700	33900	33400	32400	34900
28	70400	72600	30000	28400	29800	34300	36400	37000	35400	33200	32700	34900
29	71100	72700	30300	29100	---	34400	34600	37400	35800	32900	32500	34700
30	71400	71900	30300	28400	---	34000	33100	37300	36000	32900	32200	34500
31	71400	---	30200	28300	---	34000	---	38900	---	33000	32500	---
TOTAL	2174800	2170600	1282000	832200	800100	921500	964500	1064600	1057000	1041900	1020100	1034700
MEAN	70150	72350	41350	26850	28580	29730	32150	34340	35230	33610	32910	34490
MAX	72300	73200	71000	30000	29900	34400	38300	38900	39400	36600	34200	35000
MIN	68300	71300	29900	23600	27800	27000	30300	31400	29400	32300	31700	33100
AC-FT	4314000	4305000	2543000	1651000	1587000	1828000	1913000	2112000	2097000	2067000	2023000	2052000

e Estimated

MISSOURI MAIN STEM

06601200 MISSOURI RIVER AT DECATUR, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38360	31260	21150	18490	20300	25580	37260	38760	39490	39920	37840	39050
MAX	70150	72350	41350	26850	32380	49450	90050	80690	67970	66520	66170	67290
(WY)	1998	1998	1998	1998	1997	1997	1997	1997	1997	1997	1997	1997
MIN	24250	10470	12070	12360	12210	11580	24410	26130	28240	27680	25700	26750
(WY)	1993	1991	1991	1990	1991	1991	1991	1991	1991	1991	1993	1993

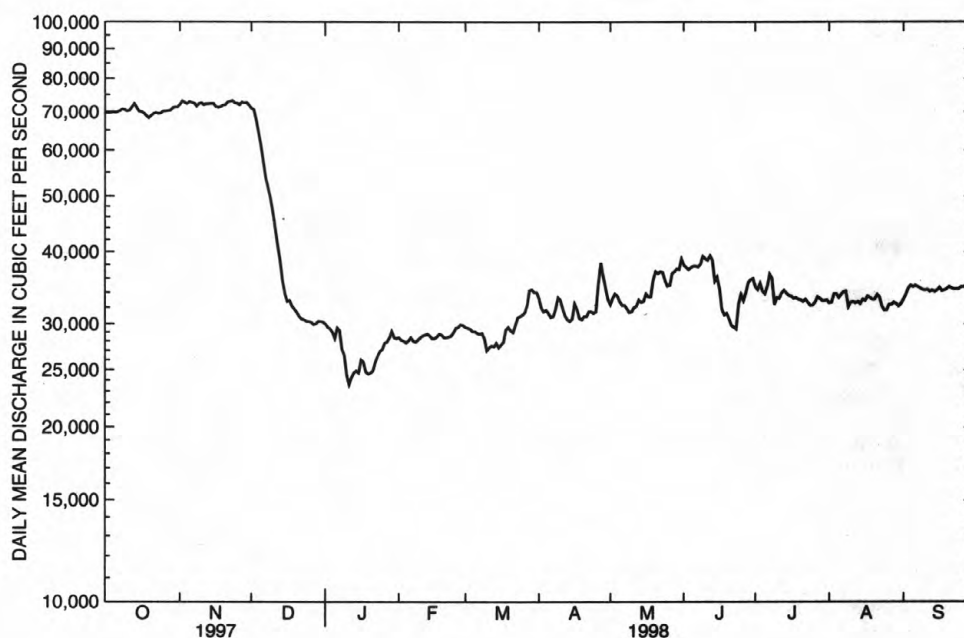
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1988 - 1998

ANNUAL TOTAL	22241700	14364000	
ANNUAL MEAN	60940	39350	32330
HIGHEST ANNUAL MEAN			57440
LOWEST ANNUAL MEAN			21450
HIGHEST DAILY MEAN	99900	Apr 15	73200
LOWEST DAILY MEAN	23200	Jan 1	23600
ANNUAL SEVEN-DAY MINIMUM	24700	Jan 1	24700
INSTANTANEOUS PEAK FLOW			74700
INSTANTANEOUS PEAK STAGE			30.28
ANNUAL RUNOFF (AC-FT)	44120000	28490000	23420000
10 PERCENT EXCEEDS	84300	71000	57300
50 PERCENT EXCEEDS	66900	33200	30200
90 PERCENT EXCEEDS	29400	28300	13700



MISSOURI MAIN STEM

65

06610000 MISSOURI RIVER AT OMAHA, NE
(National Stream-Quality Accounting Network, NASQAN, station)

LOCATION.--Lat 41°15'32", long 95°55'20", in SE¹/₄ NW¹/₄ sec.23, T.15 N., R.13 E., Douglas County, Hydrologic Unit 10230006, on right bank on left side of concrete floodwall, at foot of Douglas Street, 275 ft downstream from Interstate 480 Highway bridge in Omaha, and at mile 615.9.

DRAINAGE AREA.--322,800 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--September 1928 to current year. April 1872 to December 1899 (gage heights only) in reports of the Missouri River Commission and since January 1875, (gage heights only) in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage encoder. Datum of gage is 948.24 ft above sea level. See WSP 1730 for history of changes prior to Sept. 30, 1936. Oct. 1, 1936 to Sept. 30, 1982 at datum 10.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. Flow regulated by upstream main-stem reservoirs. U.S. Army Corps of Engineers rain-gage and satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396,000 ft³/s Apr. 18, 1952, gage height, 40.20 ft, present datum; minimum, about 2,200 ft³/s Jan. 6, 1937; minimum gage height, 6.85 ft, present datum, Feb. 5, 1989, result of freezeup.

COOPERATION.--Records provided by Geological Survey, Iowa District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71000	74000	76300	32700	31800	32600	41500	37100	44600	46200	38100	34600
2	70300	75300	74800	32300	31600	32500	40100	36700	42900	42600	37700	35300
3	70600	77000	72500	31400	31100	32400	38200	37600	42400	42600	37900	35900
4	70800	74900	69800	31100	30500	32200	37500	37800	41900	45000	39500	36900
5	71000	74600	65600	30100	30500	31900	37400	36800	41700	47700	39700	37500
6	71400	75100	61700	29900	30800	31900	36900	35700	41900	54000	39100	37500
7	71700	74400	58300	30800	30700	31700	40200	35400	41600	53000	40100	37800
8	72200	74000	55200	30200	29900	31600	45900	34900	43000	50400	41400	38000
9	72800	74500	53000	28600	29500	30900	45700	34200	51300	44300	42800	37700
10	74400	75000	50400	27700	30000	30100	44100	33800	48300	40600	40400	37200
11	74400	75100	47700	25600	30500	29600	41200	33600	49500	41800	40100	36900
12	74900	75500	44500	24900	30700	30000	38800	34800	53300	41600	39200	36600
13	77100	75100	41100	25700	30600	30100	37500	35700	47200	41800	37900	36100
14	78800	74600	37900	25800	31000	30200	36900	36300	48300	41000	37400	36200
15	76700	74900	35500	24900	30700	30300	37700	36800	54200	41700	37200	36000
16	75500	73300	34000	25400	30600	30400	41100	38100	58800	42300	40400	36300
17	75400	74200	33700	26600	31100	31000	42400	39200	49900	38800	36800	36400
18	75100	73900	33800	26600	31100	31700	40600	38700	44600	37300	36300	35600
19	73000	74500	33400	25800	31400	32600	39200	39100	41500	36300	36000	35600
20	73000	74200	32800	25500	31300	32300	39600	41800	40300	35400	35900	36400
21	72700	75000	32800	25800	31000	31400	40500	43400	39100	35400	39000	36400
22	73700	75800	32700	26500	30900	31000	39900	44400	37800	38000	40700	36200
23	74000	75500	32900	27300	31000	31500	39600	44600	36400	37600	38700	36000
24	74900	75400	33100	28000	31100	32100	39100	42800	43300	37100	36800	35800
25	76300	75600	32600	28400	31500	32600	38500	40700	59700	36800	35900	35700
26	78300	75700	32600	28900	32000	33200	39000	38900	52700	37300	35500	35800
27	76400	74800	32600	30100	32400	34400	43600	39400	45100	38100	35900	35700
28	75700	75100	32600	30400	32600	37300	44300	41100	45100	39000	35600	36000
29	75300	76300	32700	30600	---	39500	41900	45800	45000	38500	35500	36000
30	74700	78000	32600	31300	---	40700	39000	48400	46400	38100	34700	35500
31	74000	---	32900	30900	---	41500	---	43800	---	38100	34000	---
TOTAL	2296100	2251300	1372100	879800	867900	1011200	1207900	1207400	1377800	1278400	1176200	1089600
MEAN	74070	75040	44260	28380	31000	32620	40260	38950	45930	41240	37940	36320
MAX	78800	78000	76300	32700	32600	41500	45900	48400	59700	54000	42800	38000
MIN	70300	73300	32600	24900	29500	29600	36900	33600	36400	35400	34000	34600
MED	74400	75000	34000	28400	31000	31900	39800	38100	44800	40600	37900	36200
AC-FT	4554000	4465000	2722000	1745000	1721000	2006000	2396000	2395000	2733000	2536000	2333000	2161000

MISSOURI MAIN STEM

06610000 MISSOURI RIVER AT OMAHA, NE--Continued
(National Stream-Quality Accounting Network, NASQAN, station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38500	33600	20590	17330	19660	28060	38820	38490	41890	40600	39210	39110
MAX	74070	75040	44260	33250	40410	54660	93840	87620	76120	78560	68890	69770
(WY)	1998	1998	1998	1987	1997	1997	1997	1997	1997	1993	1997	1997
MIN	16920	8324	8296	8425	8162	10170	16480	26450	26890	27150	27280	28290
(WY)	1962	1962	1962	1964	1963	1957	1957	1961	1961	1958	1958	1958

SUMMARY STATISTICS

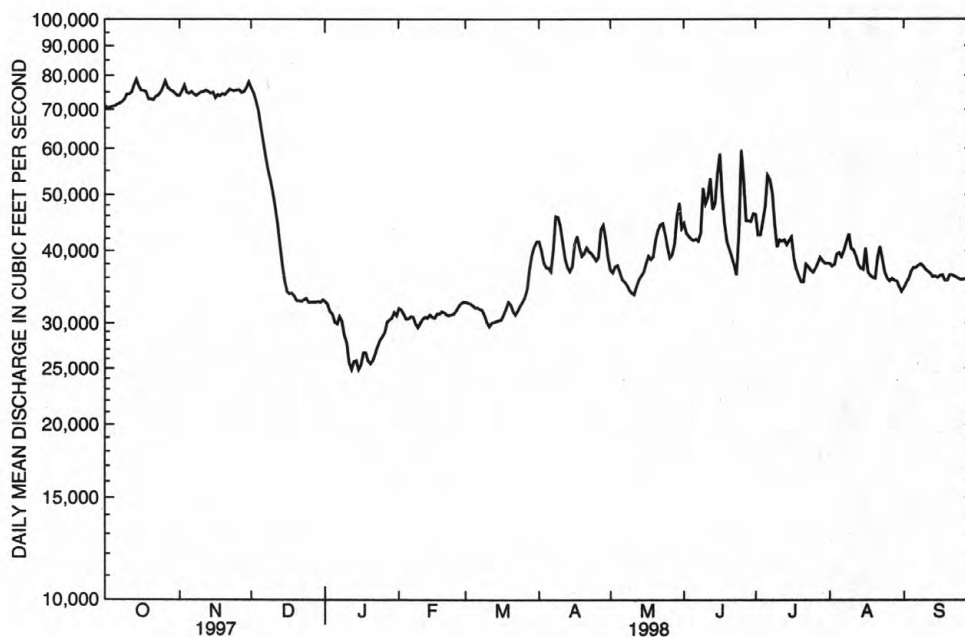
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

*WATER YEARS 1953 - 1998

ANNUAL TOTAL	23945900	16015700	
ANNUAL MEAN	65610	43880	33030
HIGHEST ANNUAL MEAN			62150
LOWEST ANNUAL MEAN			20490
HIGHEST DAILY MEAN	108000	Apr 16	78800
LOWEST DAILY MEAN	25600	Jan 1	24900
ANNUAL SEVEN-DAY MINIMUM	28300	Jan 8	25600
INSTANTANEOUS PEAK FLOW			79800
INSTANTANEOUS PEAK STAGE		24.13	Oct 14
ANNUAL RUNOFF (AC-FT)	47500000	31770000	23930000
10 PERCENT EXCEEDS	89300	74600	53000
50 PERCENT EXCEEDS	70500	38000	32400
90 PERCENT EXCEEDS	32800	30600	13400

* Post-regulation period, revised.



MISSOURI RIVER AT OMAHA

PLATTE RIVER BASIN

67

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'19", long 104°03'10", in SE¹/₄ SE¹/₄ SE¹/₄ sec.3, T.23 N., R.60 W., Goshen County, Hydrologic Unit 10180009, on right bank 2000 ft upstream from bridge on NE State Highway 86, 250 ft upstream from Wyoming-Nebraska State line, and 0.7 mi southeast of Henry, NE.

DRAINAGE AREA.--22,218 mi², of which 1,929 mi² is probably non-contributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Sheet-piling control since Mar. 9, 1994. Datum of gage is 4,025 ft above sea level, from topographic map. Prior to Nov. 6, 1929, non-recording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder at site 0.2 mi upstream at different datum. Oct. 7, 1959 to Feb. 22, 1972 water-stage recorder at site 0.2 mi upstream at different datum. Feb. 22, 1972 to Mar. 9, 1994, water-stage recorder at site 0.3 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.5 mi upstream. U.S. Corps of Engineers data collection platform with satellite telemetry at station.

COOPERATION.--Records provided by the Geological Survey, Wyoming District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683	369	254	219	197	151	3680	766	420	1270	1200	1030
2	559	355	254	219	197	155	3680	654	432	1340	1170	1000
3	489	343	254	215	197	165	3680	587	424	1360	1170	979
4	422	340	251	216	197	169	3710	530	435	1340	1230	909
5	378	332	239	223	197	171	3730	517	447	1380	1170	855
6	346	326	239	230	197	171	3790	574	468	1330	1080	840
7	331	324	238	230	197	282	3960	569	438	1290	1020	852
8	319	324	239	213	197	560	3850	546	417	1350	1000	846
9	311	323	239	209	197	1020	3810	520	401	1300	1040	796
10	296	316	244	e200	197	1420	3800	485	412	1270	1110	726
11	285	316	237	e180	189	1550	3770	499	408	1280	1190	696
12	279	308	233	e140	176	1640	3750	460	388	1220	1110	639
13	374	308	236	e160	172	1750	3690	440	366	1210	1110	619
14	432	e300	232	e220	171	1930	3780	480	358	1190	1120	604
15	422	e290	232	226	172	2120	3650	584	346	1200	1100	593
16	406	284	232	220	180	2350	3260	556	341	1260	1090	556
17	402	284	232	218	179	2650	3200	539	350	1290	1110	519
18	394	284	232	218	175	2880	3190	573	346	1300	1100	525
19	385	281	232	214	171	2990	3180	589	325	1310	1100	510
20	376	278	228	217	171	3180	3140	587	311	1310	1100	514
21	371	277	225	211	169	3290	3130	566	414	1300	1140	565
22	364	275	225	211	166	3350	3150	605	500	1290	1310	548
23	358	270	225	210	167	3410	2840	640	625	1280	1250	518
24	396	269	222	209	165	3460	2420	540	695	1280	1180	546
25	392	270	221	208	179	3530	2290	578	672	1310	1100	648
26	386	264	219	204	e170	3590	2220	505	690	1270	1090	669
27	379	263	225	201	154	3660	2190	476	813	1250	1040	614
28	382	261	e230	197	e155	3710	1870	433	915	1200	1010	603
29	383	261	221	197	---	3780	1210	416	1040	1160	1010	627
30	385	256	226	197	---	3760	919	417	1140	1250	1010	589
31	401	---	225	197	---	3720	---	417	---	1260	1000	---
TOTAL	12086	8951	7241	6429	5051	66564	94539	16648	15337	39650	34460	20535
MEAN	390	298	234	207	180	2147	3151	537	511	1279	1112	685
MAX	683	369	254	230	197	3780	3960	766	1140	1380	1310	1030
MIN	279	256	219	140	154	151	919	416	311	1160	1000	510
AC-FT	23970	17750	14360	12750	10020	132000	187500	33020	30420	78650	68350	40730

e estimated

PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	509	425	377	334	339	518	668	1175	1669	1530	1269	868
MAX	1666	1454	895	751	1063	4202	4407	7226	10360	7170	5751	4766
(WY)	1987	1987	1930	1930	1984	1974	1974	1971	1929	1983	1983	1983
MIN	150	174	191	166	148	141	141	43.9	49.1	611	154	230
(WY)	1957	1935	1991	1993	1993	1991	1991	1990	1992	1934	1934	1934

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

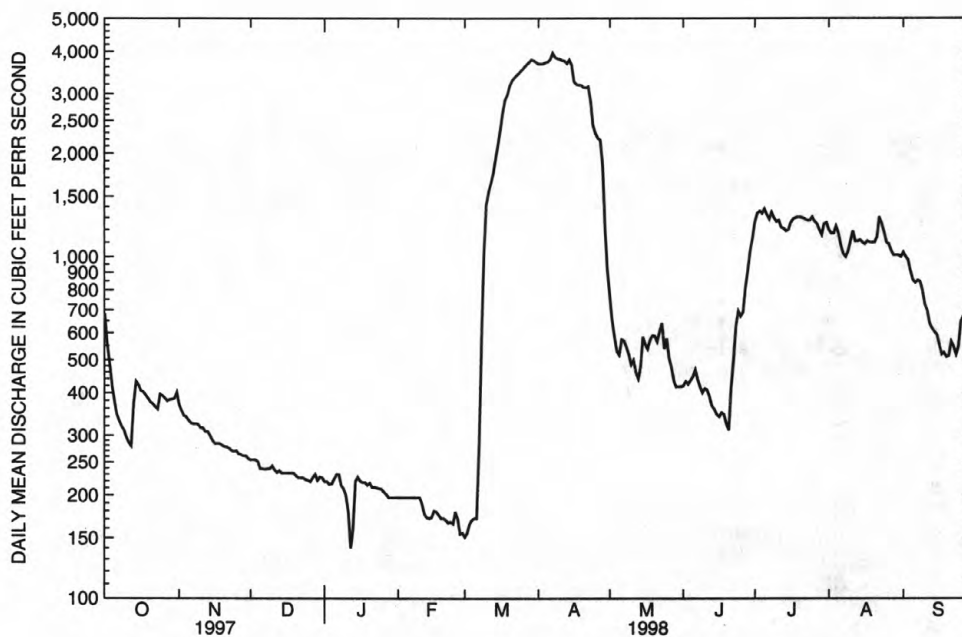
FOR 1998 WATER YEAR

WATER YEARS 1929 - 1998

ANNUAL TOTAL	474349	327491	
ANNUAL MEAN	1300	897	790
HIGHEST ANNUAL MEAN			2863
LOWEST ANNUAL MEAN			388
HIGHEST DAILY MEAN	5240 Jun 16	3960 Apr 7	17600 Jun 2 1929
LOWEST DAILY MEAN	170 Jan 12	140 Jan 12	3.9 May 13 1992
ANNUAL SEVEN-DAY MINIMUM	189 Jan 11	160 Feb 26	4.4 Jun 20 1992
INSTANTANEOUS PEAK FLOW		4040 Apr 7	^a 17900 Jun 2 1929
INSTANTANEOUS PEAK STAGE		4.77 Apr 7	^b 7.04 Jun 2 1929
ANNUAL RUNOFF (AC-FT)	940900	649600	572100
10 PERCENT EXCEEDS	3240	2860	1460
50 PERCENT EXCEEDS	645	476	488
90 PERCENT EXCEEDS	199	197	210

a Maximum observed.

b Site and datum then in use.



NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

PLATTE RIVER BASIN

69

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

PERIOD OF RECORD.--Water years 1966 to current year

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	TEMPER- ATURE WATER (° C) (00010)	TEMPER- ATURE AIR (°C) (00020)	PH WATER WHOLE FIELD (STAND- ARD UNITS (00400)	BARO- METRIC PRES- SURE (MM OF OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	SEDI- MENT SUS- PENDE (MG/L) (80154)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 21	1450	214	960	6.0	3.5	8.4	--	--	--	88	51
MAR 24	0950	3480	751	8.0	--	8.5	655	9.8	97	1530	14400
JUN 10	0815	405	790	15.0	18.0	8.4	658	8.9	102	94	102
JUL 29	1045	2310	662	22.0	--	8.1	662	7.2	95	148	921

PLATTE RIVER BASIN

06690000 LAKE MCCONAUGHY NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'45", long 101°40'03", in NW¹/₄ SW¹/₄ sec.3, T.14 N., R.38 W., Keith County, Hydrologic Unit 10180014, near right bank at outlet tower of Kingsley Dam on North Platte River, 4.5 mi west of Keystone, and at mile 55.8.

DRAINAGE AREA.--29,300 mi², approximately, of which about 25,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1941 to current year.

GAGE.--Electric tape gage read once daily. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 9, 1941. Capacity, 1,900,600 acre-ft (capacity table: Mar. 1, 1987) between elevations 3,130.0 ft, sill of outlet gates, and 3,270.0 ft, top of morning-glory spillway gates. Elevation of crest of morning-glory spillway is 3,254.0 ft. Dead storage negligible. Figures given herein represent total contents. Water is used for power development and irrigation in South-Central Nebraska by the Central Nebraska Public Power and Irrigation District.

COOPERATION.--Records of elevations and capacity table furnished by the Central Nebraska Public Power and Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,920,000 acre-ft July 12-16, 1971, elevation, 3,269.1 ft (capacity table, March 1946); minimum observed since reservoir filled to at least 25 percent capacity (April 1942), 383,600 acre-ft Oct. 17-19, 1956; elevation, 3,198.2 ft. (capacity table, March 1946).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,641,000 acre-ft June 23, elevation, 3,261.6 ft; minimum observed, 1,240,000 acre-ft Sept 24, 26-30, elevation, 3,246.6 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,257.8	1,532,000	--
Oct. 31.....	3,258.7	1,557,000	+25,000
Nov. 30.....	3,258.0	1,537,000	-20,000
Dec. 31.....	3,257.5	1,523,000	-14,000
CAL YR 1997	--	--	+106,000
Jan. 31.....	3,257.2	1,515,000	-8,000
Feb. 28.....	3,257.1	1,512,000	-3,000
Mar. 31.....	3,257.9	1,534,000	+22,000
Apr. 30.....	3,260.5	1,609,000	+75,000
May 31.....	3,260.8	1,617,000	+8,000
June 30.....	3,260.5	1,609,000	-8,000
July 31.....	3,253.3	1,409,000	-200,000
Aug. 31.....	3,248.6	1,289,000	-120,000
Sept. 30.....	3,246.6	1,240,000	-49,000
WTR YR 1998	--	--	-292,000

PLATTE RIVER BASIN

71

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW¹/₄, NE¹/₄, and NE¹/₄, SE¹/₄ (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel 4 (left channel) 215 ft downstream from bridge, and on right bank of channel 2, 5 ft downstream from bridge on U.S. Highway 385, and on left bank of channel 1, 5 ft upstream from bridge on U.S. Highway 385 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,193 mi².

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-8, 1915-16, and as "at Ovid" 1922-24.

REVISED RECORDS.--WSP 1310: 1902, 1906-7, 1948(P). WSP 1440: 1903-4. WDR CO-86-1: Drainage area.

GAGE.--Three water-stage recorders with satellite telemetry. Datum of gages is 3,446.76 ft above sea level. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1956. Since Oct. 1, 1956, water-stage recorders on channels nos. 2 and 4. Channel no. 2: Oct. 1, 1956, to Sept. 22, 1965, at site 300 ft downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum. Since Aug. 16, 1996, water-stage recorder on channel no. 1; satellite telemetry installed Oct. 24, 1996.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of 1,200,000 acres upstream from station, and return flow from irrigated areas.

COOPERATION.--Records provided by Geological Survey, Colorado District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	e1310	1140	1480	1670	693	1500	1910	1120	139	1090	e64
2	1130	e1330	1180	1580	1700	687	1490	1580	1230	113	1040	e67
3	e1140	e1290	1190	1580	1670	750	1460	1420	1290	e89	966	e69
4	e1140	e1250	1120	1600	1640	898	1420	1360	1300	e74	909	e67
5	e1080	e1210	1080	1620	1610	981	1380	1320	1280	e66	875	66
6	1050	e1170	1050	1630	1540	996	1340	1250	1100	e62	736	66
7	e1240	e1130	e1060	1680	1510	1060	1580	1110	1090	e55	659	65
8	1290	e1110	1070	1710	1520	949	1540	1120	1790	e54	612	71
9	e1230	e1110	1080	1660	1530	877	1450	1360	2510	55	641	92
10	1180	e1170	1040	1600	1520	869	1330	1970	2210	54	584	107
11	1190	e1240	1040	1560	1480	e829	1290	2250	2000	50	524	e144
12	1380	e1260	1120	1590	1380	791	1300	2360	1860	57	710	194
13	1330	e1280	1140	1480	1190	827	1140	2320	1830	57	485	191
14	1310	1260	1240	1420	1020	817	991	2000	1730	57	372	182
15	1260	1280	1290	1490	970	786	904	1760	1520	61	339	190
16	1140	1360	1190	1540	945	767	875	1600	1330	54	314	200
17	1010	1320	1140	1570	945	761	943	e1390	1200	56	256	233
18	941	1300	1220	1530	946	e773	963	1200	1030	65	178	266
19	868	e1260	1240	1550	913	770	1060	1020	936	69	137	371
20	801	1250	1230	1580	880	782	1260	863	860	85	98	e437
21	763	1230	1250	1580	943	786	1400	e753	698	77	83	e346
22	736	1180	1280	1590	1020	778	1670	e695	562	e73	79	359
23	659	1160	1260	1580	1010	835	1640	e773	494	81	77	422
24	634	1180	1240	1570	971	1100	1560	e620	371	515	74	481
25	e659	1140	1200	1560	883	1120	1500	e467	431	563	72	519
26	e592	1110	1190	1520	798	1110	1370	e792	305	876	69	575
27	745	1100	1240	1520	831	1110	1370	1140	292	1540	68	628
28	946	1080	1260	1540	783	1140	1370	1260	219	1400	67	642
29	1170	1090	1310	1570	---	1320	1570	1260	e176	1090	65	632
30	1280	1110	1390	1590	---	1460	2050	1180	e147	1310	65	616
31	e1300	---	1420	1630	---	1470	---	1120	---	1360	63	---
TOTAL	32354	36270	36900	48700	33818	28892	40716	41223	32911	10257	12307	8362
MEAN	1044	1209	1190	1571	1208	932	1357	1330	1097	331	397	279
MAX	1380	1360	1420	1710	1700	1470	2050	2360	2510	1540	1090	642
MIN	592	1080	1040	1420	783	687	875	467	147	50	63	64
AC-FT	64170	71940	73190	96600	67080	57310	80760	81770	65280	20340	24410	16590

PLATTE RIVER BASIN

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	307	355	414	528	612	559	559	1054	1503	312	175	244
MAX	2427	2358	1371	1571	1864	2200	2808	9922	12200	5059	1882	1964
(WY)	1985	1985	1985	1998	1930	1939	1983	1980	1983	1983	1997	1984
MIN	5.85	23.0	18.8	89.9	78.9	56.9	17.3	24.1	8.33	2.15	2.52	5.60
(WY)	1904	1911	1912	1965	1935	1904	1904	1911	1910	1903	1902	1903

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1902 - 1998
ANNUAL TOTAL	443433	362710	
ANNUAL MEAN	1215	994	555
HIGHEST ANNUAL MEAN			2882
LOWEST ANNUAL MEAN			76.3
HIGHEST DAILY MEAN	^e 9500 Jun 19	2510 Jun 9	30800 Jun 16 1921
LOWEST DAILY MEAN	^a 46 May 21	50 Jul 11	^b .00 Aug 18 1902
ANNUAL SEVEN-DAY MINIMUM	50 May 18	55 Jul 7	.00 Jul 25 1903
INSTANTANEOUS PEAK FLOW		2640 Jun 9	37600 Jun 20 1965
INSTANTANEOUS PEAK STAGE		^c 5.67 Jun 9	^d 10.44 Jun 20 1965
ANNUAL RUNOFF (AC-FT)	879500	719400	402300
10 PERCENT EXCEEDS	2340	1580	1160
50 PERCENT EXCEEDS	801	1110	232
90 PERCENT EXCEEDS	114	80	29

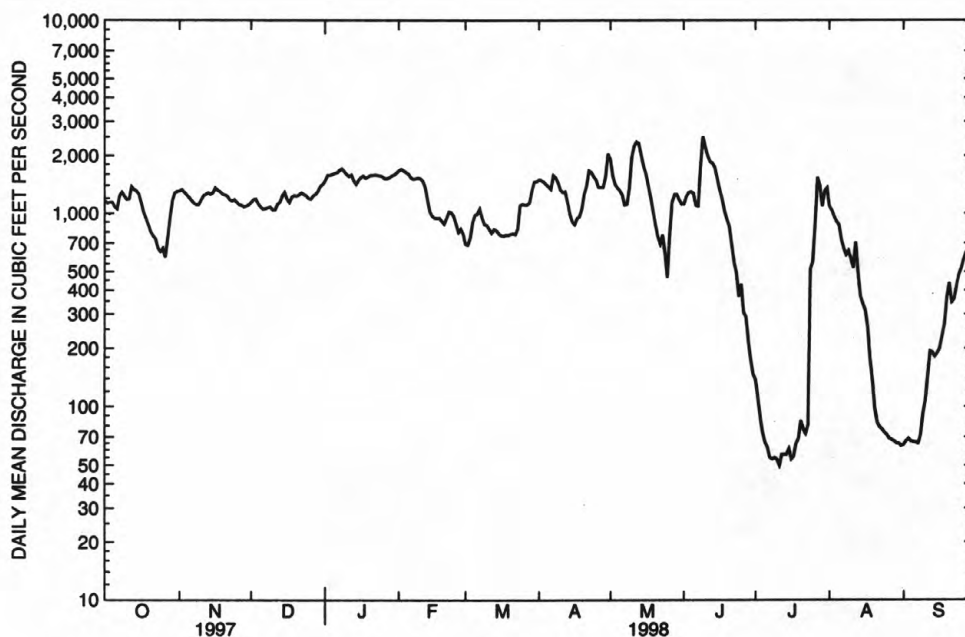
e-Estimated.

a-Also occurred May 22.

b-Also occurred Aug 19-20, 1902, and Jul 25 to Aug 7, 1903.

c-Gage height recorded for channel #2.

d-From floodmarks in gage well.



SOUTH PLATTE RIVER AT JULESBURG, CO

PLATTE RIVER BASIN

73

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE

LOCATION.--Lat 41°07'33" long 101°34'35", in NW¹/₄ SW¹/₄ sec.4, T.13 N., R.37 W., Keith County, Hydrologic Unit 10190018, on left bank 20 ft downstream from bridge on Highway L-51B connecting Interstate 80 and U.S. Highway 30, 0.5 mi southeast of Roscoe and at mile 54.1.

DRAINAGE AREA.--23,900 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,150 ft, from topographic map.

REMARKS.--Record good except for estimated periods, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	1360	1150	1580	2220	672	1620	2650	1170	190	1290	67
2	1240	1460	1150	1710	2130	667	1780	2370	1280	169	1130	77
3	1140	1520	1250	1830	2040	667	1830	1950	1500	144	929	70
4	1020	1470	1240	1900	1950	e640	1830	1730	1670	124	732	56
5	909	1330	1150	2010	1840	e660	1790	1460	1740	145	672	53
6	877	1180	1040	1930	1800	e680	1670	1420	1630	113	573	53
7	920	1070	963	1900	1750	e680	1660	1330	1330	113	457	51
8	1090	1080	1010	1920	1780	e660	1860	1440	2020	137	401	49
9	1150	1070	1020	1860	1750	e600	1940	1790	2760	114	405	46
10	1200	1060	945	1760	1670	e540	1840	2220	3480	103	429	46
11	1240	1100	917	1730	1620	e500	1720	2830	3190	97	349	49
12	1440	1060	1010	1790	1570	e470	1640	2840	2910	91	396	53
13	1470	1130	1190	1860	1470	e540	1600	3220	2810	94	497	82
14	1440	1160	1200	1750	1170	e620	1400	2810	2780	99	338	117
15	1430	1220	1230	1800	990	e700	1130	2380	2490	82	251	121
16	1400	1370	1200	1960	878	757	938	2140	2080	70	228	122
17	1220	1620	1050	1980	810	779	898	1780	1720	68	203	132
18	1040	1680	1050	1970	814	795	891	1410	1350	62	165	149
19	876	1580	1150	1870	850	794	891	1140	1060	74	131	161
20	719	1520	1240	1810	937	824	1130	927	945	71	122	188
21	617	1540	1350	1790	1030	841	1390	800	922	59	113	208
22	557	1450	1410	1770	1210	795	1640	680	832	58	103	224
23	555	1310	1410	1720	1270	733	1970	655	733	57	90	257
24	511	1180	1450	1770	1240	840	1910	643	617	67	77	331
25	509	1240	1400	1860	1150	1180	1810	499	555	156	71	361
26	491	1320	1240	1900	909	1230	1630	414	507	325	72	400
27	441	1350	1190	1890	775	1170	1540	705	400	652	69	460
28	534	1310	1190	1910	815	1180	1620	1230	357	1320	62	512
29	695	1220	1170	2000	---	1290	1770	1340	279	1200	58	532
30	904	1160	1280	2130	---	1520	2340	1360	224	1070	55	523
31	1180	---	1420	2230	---	1550	---	1210	---	1320	55	---
TOTAL	30095	39120	36665	57890	38438	25574	47678	49373	45341	8444	10523	5550
MEAN	971	1304	1183	1867	1373	825	1589	1593	1511	272	339	185
MAX	1470	1680	1450	2230	2220	1550	2340	3220	3480	1320	1290	532
MIN	441	1060	917	1580	775	470	891	414	224	57	55	46
AC-FT	59690	77590	72730	114800	76240	50730	94570	97930	89930	16750	20870	11010

e Estimated

PLATTE RIVER BASIN

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	567	495	570	918	1124	860	927	1419	2921	856	342	597
MAX	2392	2183	1323	1867	2280	1519	2767	7044	13800	6081	1924	2189
(WY)	1985	1985	1985	1998	1984	1987	1984	1983	1995	1995	1997	1996
MIN	96.9	77.5	98.5	145	455	273	199	76.7	50.8	13.1	6.45	.12
(WY)	1995	1995	1990	1995	1995	1995	1989	1992	1994	1990	1994	1994

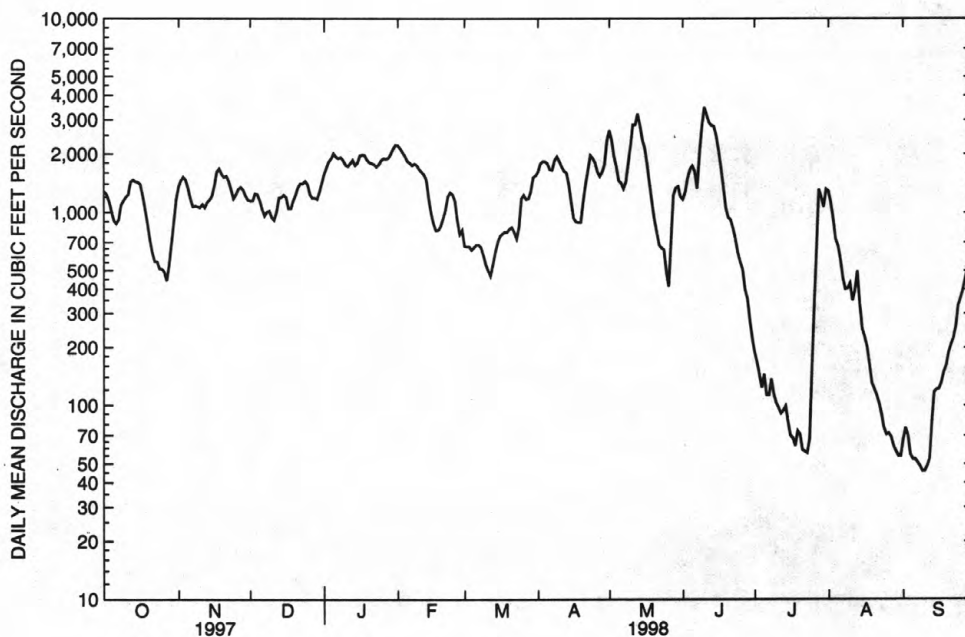
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1983 - 1998

ANNUAL TOTAL	434704	394691	
ANNUAL MEAN	1191	1081	962
HIGHEST ANNUAL MEAN			2941
LOWEST ANNUAL MEAN			281
HIGHEST DAILY MEAN	10100	Jun 16	3480
LOWEST DAILY MEAN	48	May 25	46
ANNUAL SEVEN-DAY MINIMUM	56	May 19	50
INSTANTANEOUS PEAK FLOW			3700
INSTANTANEOUS PEAK STAGE			6.41
ANNUAL RUNOFF (AC-FT)	862200	782900	697100
10 PERCENT EXCEEDS	2390	1910	1970
50 PERCENT EXCEEDS	555	1140	420
90 PERCENT EXCEEDS	123	101	48



SOUTH PLATTE RIVER AT ROSCOE

PLATTE RIVER BASIN

75

06767500 PLUM CREEK NEAR SMITHFIELD, NE

LOCATION.--Lat 40°38'30", long 99°42'37", in SE¹/₄ SW¹/₄ sec.21, T. 8 N., R. 21 W., Gosper County, Hydrologic Unit 10200101, on left bank 15 ft downstream from bridge on county road, 4.8 mi north and 1.4 mi east of Smithfield.

DRAINAGE AREA.--224 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1946 to September 1953, October 1968 to September 1975. Annual maximum, 1954-1968, 1978, at site 1.5 mi downstream at different datum. Continuous record collected September 1980 to January 1992 by Nebraska Department of Water Resources. April 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,400.00 ft, above sea level, from topographic map.

REMARKS.--Records fair except for estimated periods, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	17	17	17	17	18	18	15	16	13	53	9.0
2	9.8	16	16	17	17	18	18	15	16	12	23	9.8
3	9.6	15	16	17	16	17	17	15	15	12	27	9.3
4	9.8	15	e14	17	17	17	17	14	16	11	20	9.5
5	9.9	16	e13	16	17	16	17	14	16	16	16	9.0
6	10	15	e13	15	17	16	17	15	16	15	14	8.7
7	10	15	e13	16	17	15	18	15	16	13	14	9.1
8	10	15	e13	15	17	e14	19	15	18	13	14	9.0
9	11	16	e13	e14	17	e13	17	15	20	13	14	9.3
10	11	15	e13	14	19	e12	17	16	20	13	13	9.6
11	11	15	e14	e13	20	e13	17	16	21	14	13	9.1
12	22	16	e14	e13	19	e13	17	15	18	12	11	8.9
13	30	16	e14	14	18	e14	17	15	16	10	12	9.0
14	17	16	e15	e14	18	e15	16	15	15	11	11	9.5
15	17	16	e15	e14	18	e16	16	16	16	11	10	11
16	17	16	16	e14	19	17	16	17	15	12	11	10
17	17	e14	17	e15	20	17	16	16	15	11	9.7	10
18	17	e13	16	16	19	18	16	16	15	10	9.6	10
19	18	e14	17	16	18	18	16	16	16	10	9.8	10
20	18	15	17	16	18	17	16	16	14	10	9.4	10
21	18	16	16	e15	18	17	16	16	14	8.5	11	10
22	18	15	17	e14	18	18	16	38	14	10	11	10
23	18	15	17	e14	18	17	15	29	16	11	10	11
24	18	15	17	16	18	17	16	20	16	12	11	11
25	24	15	17	16	17	17	16	17	15	15	9.6	11
26	27	16	17	16	18	17	16	16	14	20	9.7	11
27	20	15	16	16	17	20	15	16	14	15	11	9.4
28	18	16	16	16	17	19	15	17	14	12	10	8.9
29	20	17	17	16	---	19	16	16	14	13	9.5	9.0
30	19	22	17	16	---	18	16	16	13	75	8.2	11
31	18	---	17	16	---	17	---	17	---	66	9.0	---
TOTAL	502.9	468	480	474	499	510	495	525	474	499.5	424.5	292.1
MEAN	16.2	15.6	15.5	15.3	17.8	16.5	16.5	16.9	15.8	16.1	13.7	9.74
MAX	30	22	17	17	20	20	19	38	21	75	53	11
MIN	9.6	13	13	13	16	12	15	14	13	8.5	8.2	8.7
AC-FT	998	928	952	940	990	1010	982	1040	940	991	842	579

e Estimated

PLATTE RIVER BASIN

06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946-53, 1969-75, 1996-98, BY WATER YEAR (WY)

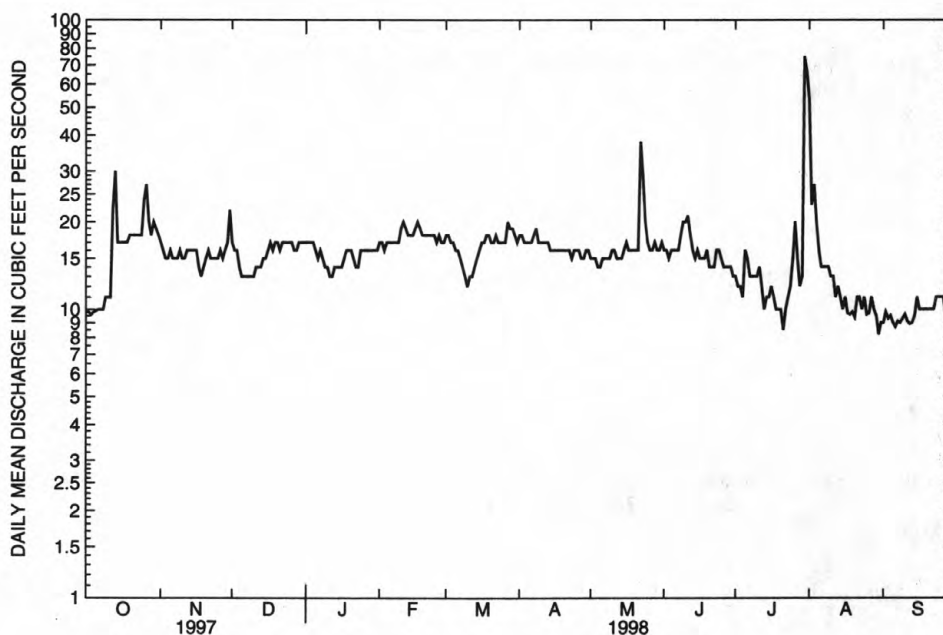
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.5	2.17	1.85	1.82	4.65	8.19	3.09	7.12	36.7	8.32	5.19	6.38
MAX	130	16.3	15.5	15.3	18.4	55.6	16.5	26.0	179	52.7	23.1	49.5
(WY)	1947	1997	1998	1998	1949	1948	1998	1996	1947	1948	1996	1969
MIN	.000	.000	.000	.000	.000	.000	.000	.055	.000	.000	.000	.000
(WY)	1948	1948	1947	1947	1951	1951	1948	1970	1952	1953	1947	1952

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1946-53, 1969-75, 1996-98

ANNUAL TOTAL	5067.4	5644.0		
ANNUAL MEAN	13.9	15.5	7.70	
HIGHEST ANNUAL MEAN			27.4	1947
LOWEST ANNUAL MEAN			.099	1953
HIGHEST DAILY MEAN	30	Oct 13	75	Jul 30
LOWEST DAILY MEAN	7.4	Aug 9	8.2	Aug 30
ANNUAL SEVEN-DAY MINIMUM	7.7	Sep 13	9.1	Sep 6
INSTANTANEOUS PEAK FLOW			264	Jul 30
INSTANTANEOUS PEAK STAGE			*9.65	Jul 30
ANNUAL RUNOFF (AC-FT)	10050	11190	5580	
10 PERCENT EXCEEDS	18	18	16	
50 PERCENT EXCEEDS	15	16	.02	
90 PERCENT EXCEEDS	8.3	10	.00	

* Maximum stage since station re-established in April 1996; stage may have been higher since station discontinued in 1975.

** Site and datum then in use.



PLUM CREEK NEAR SMITHFIELD

PLATTE RIVER BASIN

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06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED TOTAL (MG/L) (00300)
04-02-98	1530	4.20	18	822	8.6	10.0	9.0	701	13.6
05-04-98	1400	4.14	14	866	8.6	26.0	18.5	690	16.3
05-22-98	1630	5.46	56	880	8.0	22.5	20.0	699	5.0
06-02-98	1600	4.09	15	922	8.2	26.0	22.5	702	7.0
07-07-98	1200	4.05	12	892	7.9	27.5	24.5	700	6.3
08-10-98	1230	4.09	13	881	8.0	26.5	22.0	703	6.7
09-08-98	1400	3.96	9.6	897	8.5	28.0	22.0	700	9.7

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-02-98	128	--	<.010	1.30	.038	.42	.23	.46	.27	1.6	1.8
05-04-98	193	.806	.017	.823	.022	.41	.26	.43	.28	1.1	1.3
05-22-98	60	.786	.093	.879	.502	1.1	.66	1.6	1.2	2.0	2.5
06-02-98	88	1.64	.131	1.77	.204	1.9	.29	2.1	.49	2.3	3.8
07-07-98	83	1.54	.053	1.59	.071	.49	.43	.56	.50	2.1	2.2
08-10-98	84	1.35	.018	1.37	.069	1.3	.23	1.3	.30	1.7	2.7
09-08-98	121	--	<.010	1.03	<.020	--	--	.76	.31	1.3	1.8

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-02-98	.488	.423	.427	1.3	<.0020	<.0020	<.002	.015	<.0020	<.0020	<.0030
05-04-98	.463	.406	.399	1.2	--	--	--	--	--	--	--
05-22-98	.652	.403	.415	1.3	--	--	--	--	--	--	--
06-02-98	1.14	.519	.511	1.6	--	--	--	--	--	--	--
07-07-98	.641	.611	.505	1.5	--	--	--	--	--	--	--
08-10-98	.878	.522	.524	1.6	--	--	--	--	--	--	--
09-08-98	.629	.459	.477	1.5	--	--	--	--	--	--	--

06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

WATER-QUALITY RECORDS

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE

LOCATION.--Lat 40°40'57", long 99°32'27", in NE¹/₄ NW¹/₄ sec.12, T.8 N., R.20 W., Dawson County, Hydrologic Unit 10200101, on left bank 25 ft upstream from county highway bridge, 4 mi south of Overton, 4 mi downstream from Plum Creek and at mile 142.

DRAINAGE AREA.--56,300 mi², of which about 51,620 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 1914 (gage heights only), October 1914 to 1994, October 1997 to September 1998. Monthly discharge only for some periods, published in WSP 1310. Published as "near Elm Creek" 1914-15.

REVISED RECORDS.--WDR NE-67, WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,297.83 ft above sea level. July 1914 to October 1917, nonrecording gages at site 8 mi downstream at different datum. June 1918 to Sept. 12, 1928, nonrecording gage at present site (south channel only) at datum 4.0 ft higher. Sept. 13, 1928 to Sept. 30, 1930, nonrecording gage and Oct. 1, 1930 to Sept. 30, 1968, water-stage recorder, at present site (south channel only) at datum 2.0 ft higher. Oct. 1, 1968 to Feb. 3, 1976, water-stage recorder on south channel at present site at datum 2.0 ft higher, and Feb. 4 to June 2, 1976 (south channel gage discontinued), at datum 1.0 ft higher. Oct. 1, 1968 to July 10, 1974, north channel gage at present site at datum 2.0 ft higher and July 11, 1974 to June 1, 1976, at datum 1.0 ft higher. June 2, 1976 to Aug. 19, 1984, at site 600 ft downstream, at datum 1.0 ft higher. Aug. 20, 1984 to Oct. 6, 1986, at site 600 ft downstream.

REMARKS.--Records good except for period of estimated record, which is poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	3120	3400	3920	3450	2500	4830	3490	2040	574	2370	1540
2	2430	3000	3420	3600	3350	2420	5480	3310	1980	405	2660	1690
3	3400	3150	3500	3210	3500	2460	5810	3310	1830	489	2840	1760
4	3290	3360	3640	2950	3520	2420	5760	3160	1760	430	2620	1810
5	3300	3560	3570	2900	3440	2590	5420	2820	1700	516	2440	2020
6	2690	3560	3440	2840	3620	2710	5290	2560	1660	502	2180	2080
7	3030	3460	3350	3240	3620	2730	5350	2220	1630	661	1930	2080
8	2920	3300	3290	3420	3540	2730	5120	2050	1540	735	1760	2010
9	2540	3180	3620	3300	3680	2180	5030	2100	1790	749	1740	1790
10	2580	3040	3680	3060	3850	e1900	5080	2210	2490	1050	1620	1920
11	2270	2980	3610	2840	3910	e1500	5100	2720	3340	1200	1400	1900
12	2440	3040	3200	2300	3890	e1100	5080	2900	3850	1290	1330	1880
13	2530	3250	3370	2200	3870	e1100	4950	2770	3880	1460	1490	1910
14	2910	3240	3650	2670	3770	e1200	4780	2690	3350	1160	1320	1720
15	2910	3160	4740	2830	3660	e1200	4480	2700	3190	888	1190	1880
16	2640	2970	4800	2840	3520	e1100	4250	2760	3280	890	998	1910
17	2430	3480	4050	3060	3330	1090	3980	2490	3010	659	752	1890
18	2390	3560	3610	3380	3210	1030	3710	1790	2660	495	543	1810
19	2360	3950	3430	3660	3180	1800	3910	1880	2160	415	380	1840
20	2350	3730	3350	3940	3150	3280	3630	1620	1860	370	305	1770
21	2340	3650	3400	3840	3040	3450	3460	1790	1730	358	325	1730
22	2280	3450	3120	3270	2900	3340	3260	2170	1510	348	372	1720
23	2360	3340	3260	2940	2800	3210	3500	2110	1230	439	433	1720
24	2740	3290	3320	3030	2780	2980	3560	1980	1290	840	496	1620
25	2990	3280	3360	3110	2780	2860	3740	1890	1200	1180	629	1800
26	3230	3220	3320	3330	2640	2950	3850	1800	910	1650	662	1930
27	3310	3230	3260	3520	2700	3400	3930	1690	725	1940	763	1880
28	3230	3300	3430	3630	2640	3770	3970	1630	591	2160	862	1200
29	3330	3560	3680	3360	---	4130	3740	1590	499	2160	1400	786
30	3530	3470	3820	3370	---	4410	3620	1630	661	2550	1640	1270
31	3390	---	4080	3540	---	4560	---	1850	---	2490	1680	---
TOTAL	86230	99880	110770	99100	93340	78100	133670	71680	59346	31053	41130	52866
MEAN	2782	3329	3573	3197	3334	2519	4456	2312	1978	1002	1327	1762
MAX	3530	3950	4800	3940	3910	4560	5810	3490	3880	2550	2840	2080
MIN	2090	2970	3120	2200	2640	1030	3260	1590	499	348	305	786
AC-FT	171000	198100	219700	196600	185100	154900	265100	142200	117700	61590	81580	104900

e Estimated

PLATTE RIVER BASIN

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06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

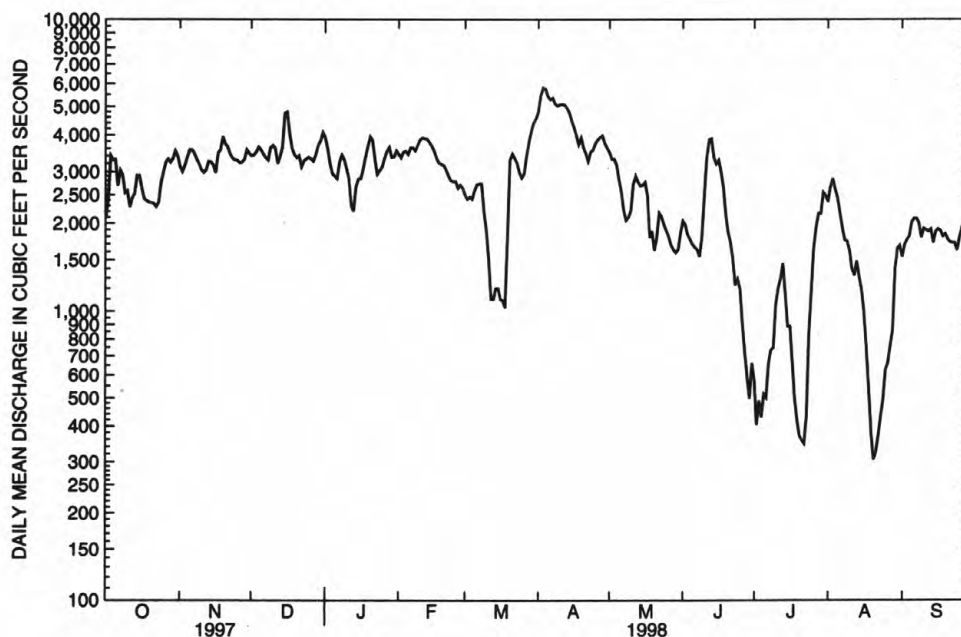
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1386	1464	1578	1645	1950	2121	1949	2199	2478	1076	691	1194
MAX	6330	5765	5012	4281	6730	7206	10050	12590	18970	11380	6635	8040
(WY)	1974	1985	1985	1984	1984	1984	1984	1984	1983	1983	1983	1983
MIN	75.1	169	156	336	474	665	519	171	232	159	83.7	54.9
(WY)	1942	1942	1942	1942	1942	1957	1967	1956	1959	1956	1956	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998 (SINCE STORAGE IN LAKE MCCONAUGHY)	
ANNUAL TOTAL	909168		957165		1641	
ANNUAL MEAN	2491		2622		1250	
MEDIAN OF ANNUAL MEANS					5835	
HIGHEST ANNUAL MEAN					1956	
LOWEST ANNUAL MEAN					1956	
HIGHEST DAILY MEAN	10300	Jun 19	5810	Apr 3	22300	Jun 22 1983
LOWEST DAILY MEAN	530	Jul 20	305	Aug 20	2.0	Aug 31 1942
ANNUAL SEVEN-DAY MINIMUM	613	Jul 15	408	Aug 18	5.4	Aug 25 1942
INSTANTANEOUS PEAK FLOW (STAGE)			6070	Apr 4	37600(**6.25)	Jun 5 1935
INSTANTANEOUS PEAK STAGE			4.15	Apr 4	7.44	Jun 22 1983
ANNUAL RUNOFF (AC-FT)	1803000		1899000		1189000	
10 PERCENT EXCEEDS	3610		3850		3010	
50 PERCENT EXCEEDS	2140		2780		1200	
90 PERCENT EXCEEDS	1230		902		282	

* No flow at times in 1919, 1925, 1927-28, 1930-41.

** South channel, datum then in use.



PLATTE RIVER NEAR OVERTON

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958 to current year..

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1958 to September 1996.

WATER TEMPERATURES: January 1958 to September 1996.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,480 microsiemens May 15, 1966 (south chan.); minimum daily, 176 microsiemens June 25, 1989 (south chan.).

WATER TEMPERATURES: Maximum, 37.0 °C June 13, 1959 (south chan.), July 9, 1960 (north chan.); minimum, 0.0 °C on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE INST. FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (° C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
FEB 26	1130	2820	828	8.5	5.5	705	11.6
MAY 04	1630	3150	949	8.7	19.5	695	11.5

DATE	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	SODIUM DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
FEB 26	204	92	11	290	42	.58	21	2.56
MAY 04	170	86	2.0	260	38	.63	15	1.26

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS DIS- TOTAL (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON DIS- SOLVED (μ G/L AS B) (01020)	IRON DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE DIS- SOLVED (μ G/L AS MN) (01056)
FEB 26	014	2.57	<.020	.136	.118	166	<10	5.5
MAY 14	010	1.27	.032	.028	.031	155	<10	4.0

PLATTE RIVER BASIN

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06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
02-26-98	1130	3.04	2820	828	8.5	2.0	5.5	705	11.6
04-02-98	1230	4.10	5750	857	8.6	10.5	8.5	701	11.4
05-04-98	1630	3.13	3150	949	8.7	22.5	19.5	695	11.5
05-22-98	1330	2.81	2170	865	8.7	24.0	21.0	699	9.4
06-02-98	1430	2.84	1990	928	8.8	3.0	24.0	702	8.6
07-08-98	1300	1.79	678	968	8.1	25.5	24.0	705	8.4
08-10-98	1500	2.58	1600	911	8.5	27.0	24.5	704	8.8
09-09-98	0830	2.75	1970	868	8.5	17.5	21.0	702	7.6

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
02-26-98	100	2.56	.014	2.57	<.020	--	--	--	--	--	--
04-02-98	106	--	<.010	1.32	.036	.92	.33	.95	.37	1.7	2.3
05-04-98	138	1.26	.010	1.27	.032	.98	.27	1.0	.30	1.6	2.3
05-22-98	116	.914	.029	.943	.061	1.4	.35	1.5	.41	1.4	2.4
06-02-98	112	.467	.025	.492	.037	1.3	.30	1.3	.34	.83	1.8
07-08-98	109	1.29	.015	1.31	.036	.83	.35	.87	.39	1.7	2.2
08-10-98	115	--	<.010	.571	.056	1.3	.26	1.3	.32	.89	1.9
09-09-98	93	--	<.010	.736	.021	.77	.40	.80	.42	1.2	1.5

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7U GF, REC (μ G/L) (82680)
02-26-98	--	.136	.118	.36	--	--	--	--	--	--	--
04-02-98	.149	.030	.039	.12	<.0020	<.0020	<.002	.042	<.0020	<.0020	<.0030
05-04-98	.118	.028	.031	.10	--	--	--	--	--	--	--
05-22-98	.223	.079	.076	.23	--	--	--	--	--	--	--
06-02-98	.192	<.010	.019	.06	--	--	--	--	--	--	--
07-08-98	.187	.072	.079	.24	--	--	--	--	--	--	--
08-10-98	.128	.021	.028	.09	--	--	--	--	--	--	--
09-09-98	.114	.070	.031	.10	--	--	--	--	--	--	--

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

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PLATTE RIVER BASIN

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06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

DATE	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82685)	SI-MAZINE, WATER, DISS, REC (µ G/L) (04035)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µ G/L) (82681)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µ G/L) (82675)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µ G/L) (82661)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µ G/L) (82660)
02-26-98	--	--	--	--	--	--	--	--	--	--
04-02-98	<.0040	<.0130	<.0050	<.0020	E.0045	<.0070	<.0130	<.0010	<.0020	<.0030
05-04-98	--	--	--	--	--	--	--	--	--	--
05-22-98	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--
07-08-98	--	--	--	--	--	--	--	--	--	--
08-10-98	--	--	--	--	--	--	--	--	--	--
09-09-98	--	--	--	--	--	--	--	--	--	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
05-18-98	1600	1030.	--	.0	.1	2.7	26.2	56.7	77.5	93.4	99.6	100.
06-16-98	1345	3330.	--	.0	.1	1.6	23.5	58.4	81.4	93.6	99.6	100.
07-13-98	1415	1500.	--	.0	.1	5.1	29.4	50.8	70.1	87.2	98.6	100.
08-18-98	1300	556.	--	.1	.1	3.8	24.3	48.6	69.0	86.1	97.9	100.
09-14-98	1200	1850.	--	.0	.1	2.8	19.6	41.7	66.4	87.3	97.1	100.
09-14-98	1201	1850.	80.	.1	.1	5.5	29.1	51.3	74.3	93.3	100.	--
09-14-98	1202	1850.	160.	.0	.0	2.7	19.2	41.4	67.4	85.5	95.4	100.
09-14-98	1203	1850.	240.	.0	.1	2.0	15.6	38.0	61.9	81.6	93.5	100.
09-14-98	1204	1850.	320.	.0	.0	2.4	15.7	37.5	64.0	87.2	95.3	100.
09-14-98	1205	1850.	730.	.0	.0	1.5	17.8	39.9	63.7	87.5	100.	--

PLATTE RIVER BASIN

06768020 SPRING CREEK NEAR OVERTON, NE

LOCATION.--Lat 40°42'26", long 99°33'34", in SE¹/₄ SE¹/₄, sec. 35, T. 9 N., R. 20 W., Dawson County, Hydrologic Unit 10200101, on upstream side of county road bridge, 1.0 mi west and 2.5 mi south of Overton.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,310 ft above sea level, from topographic map.

REMARKS.-- Records good except for periods of estimated record, which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	32	e14	18	21	16	28	15	71	65	140	78
2	8.4	31	e13	e17	22	18	28	15	71	63	152	88
3	10	29	e12	e19	21	17	27	14	74	53	169	68
4	11	27	e11	21	20	20	25	13	70	53	159	58
5	9.2	27	e9.8	26	21	19	23	14	80	61	166	30
6	9.5	24	e10	26	20	17	23	14	78	63	176	13
7	9.5	25	e11	23	19	e12	24	15	76	60	155	12
8	10	26	e13	e20	19	e11	24	16	97	60	135	11
9	15	26	e12	e18	20	e10	22	16	90	62	128	10
10	9.8	e23	e12	e17	23	e9.4	20	17	96	70	130	9.5
11	9.5	e21	e13	e16	22	e8.0	19	17	107	83	67	9.1
12	26	e19	e15	e15	21	e10	20	16	82	103	59	8.7
13	72	e18	17	e18	19	e14	21	15	77	113	52	8.1
14	45	e16	20	20	20	18	20	16	78	99	52	9.1
15	30	e14	22	21	20	19	22	16	77	71	55	11
16	27	e16	23	20	21	20	21	22	77	55	57	8.6
17	23	20	24	21	22	19	20	22	71	53	59	8.3
18	20	23	23	22	22	20	18	21	97	46	58	7.7
19	22	23	24	23	22	20	19	24	75	39	50	7.2
20	22	23	24	22	22	18	19	35	87	39	46	8.3
21	21	24	24	22	22	18	18	e130	99	36	55	8.4
22	21	24	25	22	21	20	15	e90	110	54	94	8.0
23	20	23	25	21	20	20	16	70	118	56	108	7.3
24	22	21	24	19	21	19	16	60	99	67	115	7.6
25	e25	22	25	16	20	18	17	57	91	113	111	6.4
26	e28	24	25	22	21	19	17	56	94	146	110	7.2
27	e29	21	24	21	21	22	17	54	102	151	99	6.9
28	29	e19	25	22	20	29	16	58	90	148	89	6.7
29	37	e17	24	21	---	29	16	65	91	143	80	6.7
30	35	e15	25	21	---	30	14	68	75	166	75	6.8
31	36	---	23	22	---	28	---	75	---	149	77	---
TOTAL	701.9	673	591.8	632	583	567.4	605	1136	2600	2540	3078	535.6
MEAN	22.6	22.4	19.1	20.4	20.8	18.3	20.2	36.6	86.7	81.9	99.3	17.9
MAX	72	32	25	26	23	30	28	130	118	166	176	88
MIN	8.4	14	9.8	15	19	8.0	14	13	70	36	46	6.4
AC-FT	1390	1330	1170	1250	1160	1130	1200	2250	5160	5040	6110	1060

e Estimated

PLATTE RIVER BASIN

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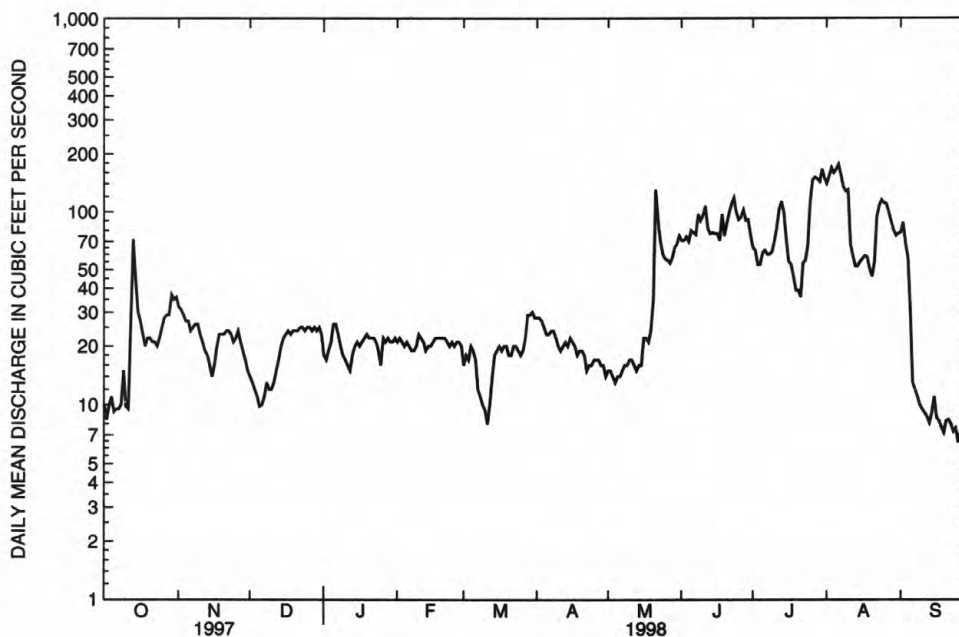
06768020 SPRING CREEK NEAR OVERTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.7	23.6	19.9	20.9	22.9	20.3	20.6	26.3	54.0	65.3	119	40.5
MAX	26.8	24.7	20.6	21.4	25.1	22.2	20.9	36.6	86.7	81.9	145	70.8
(WY)	1997	1997	1997	1997	1997	1997	1997	1998	1998	1998	1996	1996
MIN	22.6	22.4	19.1	20.4	20.8	18.3	20.2	20.2	33.0	35.8	99.3	17.9
(WY)	1998	1998	1998	1998	1998	1998	1998	1996	1997	1997	1998	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	11936.7		14243.7			
ANNUAL MEAN	32.7		39.0		36.2	
HIGHEST ANNUAL MEAN					39.0	
LOWEST ANNUAL MEAN					33.4	
HIGHEST DAILY MEAN	243	Aug 12	176	Aug 6	301	Jun 28 1996
LOWEST DAILY MEAN	8.4	Oct 2	6.4	Sep 25	6.4	Sep 25 1998
ANNUAL SEVEN-DAY MINIMUM	9.7	Oct 1	6.9	Sep 24	6.9	Sep 24 1998
INSTANTANEOUS PEAK FLOW (STAGE)			195 (6.09)	Jul 30	333	Jun 28 1996
INSTANTANEOUS PEAK STAGE			*6.15	May 21	7.50	Jun 28 1996
ANNUAL RUNOFF (AC-FT)	23680		28250		26230	
10 PERCENT EXCEEDS	59		94		95	
50 PERCENT EXCEEDS	24		22		24	
90 PERCENT EXCEEDS	12		11		14	

* Possible backwater from debris.



SPRING CREEK AT OVERTON

PLATTE RIVER BASIN

06768020 SPRING CREEK NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS
Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR ($^{\circ}$ C) (00020)	TEMPER- ATURE WATER ($^{\circ}$ C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-02-98	1430	4.22	27	1380	8.4	12.0	10.0	701	10.4
05-05-98	1530	4.03	14	1320	8.3	19.5	20.5	695	8.8
05-21-98	1930	6.12	72	466	7.9	19.0	18.0	700	4.9
06-04-98	1630	4.98	71	870	8.4	10.0	12.5	700	10.5
07-08-98	1700	4.79	63	941	8.2	26.0	25.5	701	10.4
08-10-98	1530	5.57	131	936	8.4	26.5	25.0	704	11.8
09-08-98	1700	3.91	11	1240	8.5	25.5	25.5	700	8.7

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-02-98	101	3.76	.030	3.79	.088	.99	.51	1.1	.59	4.4	4.9
05-05-98	108	2.33	.088	2.42	.055	1.2	.58	1.2	.63	3.1	3.7
05-21-98	56	1.29	.096	1.39	.955	.91	.67	1.9	1.6	3.0	3.3
06-04-98	108	1.03	.031	1.07	.022	1.8	.30	1.9	.32	1.4	2.9
07-08-98	139	1.25	.026	1.28	<.020	--	--	1.6	.45	1.7	2.9
08-10-98	156	--	<.010	.231	.054	2.3	.32	2.4	.38	.61	2.6
09-08-98	117	2.92	.017	2.94	<.020	--	--	1.1	.47	3.4	4.0

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-02-98	410	.318	.334	1.0	<.0020	<.0020	.018	.276	<.0020	<.0020	<.0030
05-05-98	.213	.085	.093	.29	--	--	--	--	--	--	--
05-21-98	.422	.424	.351	1.1	--	--	--	--	--	--	--
06-04-98	.480	.022	.019	.06	--	--	--	--	--	--	--
07-08-98	.491	.139	.140	.43	--	--	--	--	--	--	--
08-10-98	.483	<.010	<.010	--	--	--	--	--	--	--	--
09-08-98	.249	.100	.107	.33	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

Platte River Tributaries Study

[illegible][illegible][illegible]

PLATTE RIVER BASIN

06768020 SPRING CREEK NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06769000 BUFFALO CREEK NEAR OVERTON, NE

LOCATION.--Lat 40°44'04" (corrected), long 99°30'20", in NE¹/₄ SE¹/₄, sec. 20, T. 9 N., R. 19 W., Dawson County, Hydrologic Unit 10200101, on downstream side of State Highway 30 bridge, 1.7 mi east of Overton.

DRAINAGE AREA.--175 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to September 1958. April 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,296.67 ft above sea level. October 1949 to September 1958 at datum 0.41 ft higher.

REMARKS.-- Records fair except for periods of estimated record which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	26	e9.4	12	e11	e8.4	16	9.3	71	51	156	119
2	7.3	21	e8.4	14	e11	e8.2	15	8.6	64	49	147	124
3	8.6	17	e7.6	12	e11	e8.6	14	28	67	38	172	133
4	8.7	16	e7.0	8.9	e12	e9.2	13	33	63	45	189	135
5	10	16	e7.8	e12	e11	e9.0	13	33	57	56	196	112
6	8.8	15	e8.6	e13	e11	e8.4	13	30	80	63	179	56
7	9.5	15	e9.0	e12	e11	e7.2	14	17	79	70	168	27
8	8.3	15	e8.8	e11	e10	e6.8	14	45	83	59	161	28
9	8.3	15	e8.4	e9.6	e10	e6.4	13	55	86	57	135	27
10	10	16	e10	e8.6	e9.6	e6.0	13	63	75	88	127	25
11	11	16	e11	e8.0	e9.0	e7.0	13	60	76	102	93	23
12	17	15	13	e8.4	e8.6	e9.0	13	45	70	106	68	19
13	23	15	14	e9.8	e8.2	e11	12	50	45	110	56	18
14	29	16	15	e11	e8.0	e13	12	53	44	100	61	17
15	15	16	15	e11	e8.2	e14	12	68	37	77	64	17
16	10	16	15	e11	e8.4	e14	13	70	43	80	78	15
17	9.9	15	15	e11	e8.4	e14	12	63	40	71	86	13
18	9.2	15	15	e12	e8.6	e14	11	59	43	63	86	11
19	10	16	15	e12	e8.8	e14	11	59	44	56	64	7.6
20	10	16	14	e12	e8.8	e12	11	57	47	50	51	6.3
21	10	15	14	e12	e9.0	e13	10	66	49	50	59	10
22	11	16	14	e11	e9.4	e14	9.9	60	68	56	84	8.1
23	11	15	11	e10	e9.6	e13	11	59	73	72	79	6.4
24	13	15	15	e9.4	e10	e13	11	61	74	74	80	5.2
25	16	14	14	e8.4	e10	e12	11	60	65	92	85	3.9
26	17	14	11	e11	e9.8	e15	10	60	47	112	80	3.8
27	e19	13	14	e12	e9.8	19	9.7	59	40	129	73	4.9
28	20	e12	15	e12	e9.4	42	10	46	52	142	96	5.0
29	26	e11	13	e11	---	22	9.6	48	63	147	96	3.8
30	31	e10	14	e11	---	18	8.6	57	63	152	92	3.4
31	29	---	10	e11	---	16	---	66	---	168	104	---
TOTAL	434.4	463	372.0	338.1	269.6	397.2	358.8	1547.9	1808	2585	3265	987.4
MEAN	14.0	15.4	12.0	10.9	9.63	12.8	12.0	49.9	60.3	83.4	105	32.9
MAX	31	26	15	14	12	42	16	70	86	168	196	135
MIN	7.3	10	7.0	8.0	8.0	6.0	8.6	8.6	37	38	51	3.4
AC-FT	862	918	738	671	535	788	712	3070	3590	5130	6480	1960

e Estimated

PLATTE RIVER BASIN

06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 199 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.3	4.48	3.40	2.76	3.50	4.71	3.99	17.4	40.7	45.3	54.8	36.7
MAX	33.1	15.4	13.4	10.9	9.96	15.3	12.0	49.9	108	106	174	71.1
(WY)	1951	1998	1997	1998	1997	1952	1998	1998	1951	1951	1996	1950
MIN	.30	.000	.000	.000	.000	.000	.000	2.12	10.4	2.04	.000	.88
(WY)	1957	1955	1955	1954	1955	1956	1955	1958	1956	1954	1955	1955

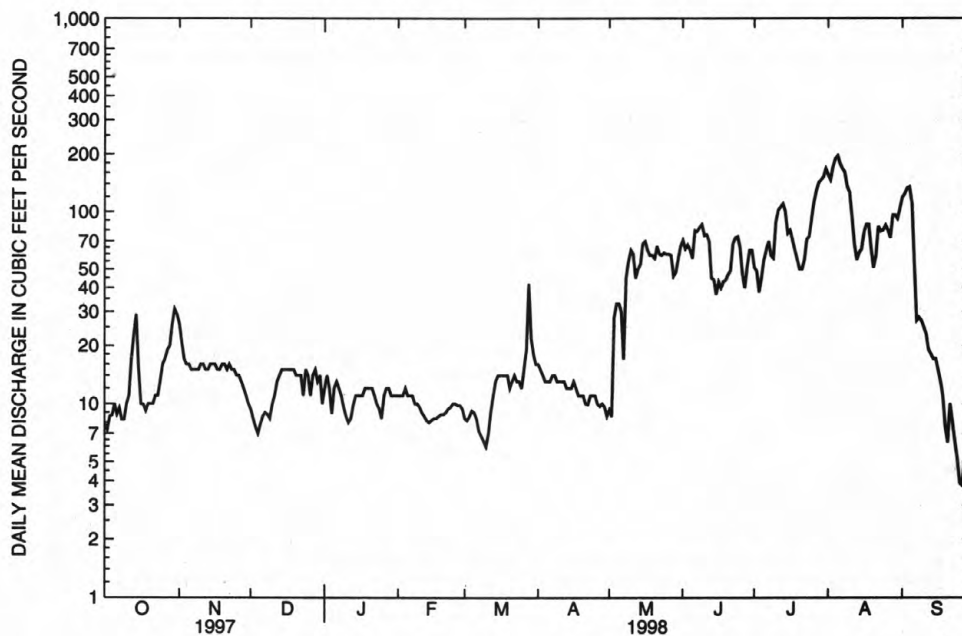
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1949-58, 1996-98

ANNUAL TOTAL	10657.9	12826.4	
ANNUAL MEAN	29.2	35.1	17.3
HIGHEST ANNUAL MEAN			35.1 1998
LOWEST ANNUAL MEAN			3.07 1955
HIGHEST DAILY MEAN	234 Aug 16	196 Aug 5	379 Jul 12 1958
LOWEST DAILY MEAN	4.8 Jan 15	3.4 Sep 30	.00 Apr 26 1953
ANNUAL SEVEN-DAY MINIMUM	5.2 Jan 10	4.3 Sep 24	.00 Jul 16 1953
INSTANTANEOUS PEAK FLOW		200 Aug 5	387 Aug 4 1996
INSTANTANEOUS PEAK STAGE		8.24 Aug 5	10.47 Jul 12 1958
ANNUAL RUNOFF (AC-FT)	21140	25440	12500
10 PERCENT EXCEEDS	64	84	62
50 PERCENT EXCEEDS	13	15	5.5
90 PERCENT EXCEEDS	8.1	8.5	.00



BUFFALO CREEK NEAR OVERTON

PLATTE RIVER BASIN

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06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-03-98	0900	4.45	14	1260	8.5	3.0	6.5	702	10.0
05-05-98	1430	5.22	33	962	8.6	25.5	16.5	695	10.4
05-22-98	1430	6.09	59	892	8.5	25.0	20.5	699	6.9
06-04-98	1530	6.30	64	823	8.2	9.0	14.0	700	8.3
07-07-98	1700	6.14	69	797	8.2	29.5	28.0	702	5.9
08-11-98	1130	6.56	91	902	8.0	24.5	23.5	705	6.1
09-09-98	1000	4.58	28	909	8.5	18.0	19.0	702	7.4

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-03-98	89	3.40	.028	3.43	.058	1.0	.79	1.1	.85	4.3	4.5
05-05-98	117	.592	.019	.611	.026	2.4	.42	2.4	.44	1.1	3.0
05-22-98	84	.820	.095	.915	.245	1.2	.53	1.4	.78	1.7	2.3
06-04-98	88	.272	.029	.301	.084	2.2	.32	2.3	.40	.70	2.6
07-07-98	82	.833	.032	.865	.085	.67	.49	.76	.57	1.4	1.6
08-11-98	77	--	<.010	.075	.049	2.1	.31	2.1	.35	.43	2.2
09-09-98	87	--	<.010	1.15	<.020	--	--	1.4	.42	1.6	2.5

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-03-98	.571	.494	.500	1.5	<.0020	<.0020	<.002	.086	<.0020	<.0020	<.0030
05-05-98	.395	.149	.155	.48	--	--	--	--	--	--	--
05-22-98	.286	.196	.191	.59	--	--	--	--	--	--	--
06-04-98	.416	.018	.014	.04	--	--	--	--	--	--	--
07-07-98	.215	.134	.134	.41	--	--	--	--	--	--	--
08-11-98	.378	<.010	.016	.05	--	--	--	--	--	--	--
09-09-98	.331	.109	.103	.32	--	--	--	--	--	--	--

PLATTE RIVER BASIN

06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

WATER-QUALITY RECORDS

[illegible]

PLATTE RIVER BASIN

06769525 ELM CREEK NEAR ELM CREEK, NE

LOCATION.--Lat 40°43'44", long 099°23'53", in NW¹/₄ NE¹/₄, sec. 20, T. 9 N., R. 18 W., Buffalo County, Hydrologic Unit 10200101, on right downstream side of bridge.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to current year..

GAGE.--Water-stage recorder. Elevation of gage is 2,270 ft above sea level, from topographic map.

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.13	16	16	9.2
2	.00	.00	.00	.00	.00	.00	.00	.00	.08	15	19	12
3	.00	.00	.00	.00	.00	.00	.00	.00	.06	16	22	14
4	.00	.00	.00	.00	.00	.00	.00	.00	.04	16	21	14
5	.00	.00	.00	.00	.00	.00	.00	.00	13	16	21	14
6	.00	.00	.00	.00	.00	.00	.00	.00	17	17	22	4.8
7	.00	.00	.00	.00	.00	.00	.00	.00	18	17	23	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	21	16	21	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	12	20	16	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	12	18	16	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	12	18	17	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	9.7	17	13	.00
13	.00	.00	.00	.00	.00	.00	.00	2.4	11	15	8.2	.00
14	.00	.00	.00	.00	.00	.00	.00	10	11	16	12	.00
15	.00	.00	.00	.00	.00	.00	.00	12	12	9.9	11	.00
16	.00	.00	.00	.00	.00	.00	.00	6.8	13	4.5	5.8	.00
17	.00	.00	.00	.00	.00	.00	.00	5.3	13	3.1	6.5	.00
18	.00	.00	.00	.00	.00	.00	.00	5.2	13	2.8	5.3	.00
19	.00	.00	.00	.00	.00	.00	.00	4.7	13	5.1	3.3	.00
20	.00	.00	.00	.00	.00	.00	.00	e40	13	6.8	3.7	.00
21	.00	.00	.00	.00	.00	.00	.00	e150	14	4.1	3.2	.00
22	.00	.00	.00	.00	.00	.00	.00	e50	14	2.7	3.3	.00
23	.00	.00	.00	.00	.00	.00	.00	1.7	13	2.7	5.9	.00
24	.00	.00	.00	.00	.00	.00	.00	.37	12	2.7	6.1	.00
25	.00	.00	.00	.00	.00	.00	.00	.36	13	8.1	4.1	.00
26	.00	.00	.00	.00	.00	.00	.00	.35	12	14	3.2	.00
27	.00	.00	.00	.00	.00	3.2	.00	.32	11	14	8.5	.00
28	.00	.00	.00	.00	.00	52	.00	.26	8.7	17	11	.00
29	.00	.00	.00	.00	---	.41	.00	.20	12	19	12	.00
30	.00	.00	.00	.00	---	.00	.00	.15	13	20	9.0	.00
31	.00	---	.00	.00	---	.00	---	.13	---	20	9.6	---
TOTAL	0.00	0.00	0.00	0.00	0.00	55.61	0.00	290.24	336.71	389.5	358.7	68.00
MEAN	.000	.000	.000	.000	.000	1.79	.000	9.36	11.2	12.6	11.6	2.27
MAX	.00	.00	.00	.00	.00	52	.00	150	21	20	23	14
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.04	2.7	3.2	.00
AC-FT	.00	.00	.00	.00	.00	110	.00	576	668	773	711	135

e Estimated

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996-98, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.037	.000	.000	.000	.90	.000	6.59	9.09	6.79	9.10	2.10
MAX	.000	.073	.000	.000	.000	1.79	.000	9.76	11.2	12.6	11.6	2.34
(WY)	1997	1997	1997	1997	1997	1998	1996	1996	1998	1998	1998	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.63	5.31	3.70	6.71	1.69
(WY)	1997	1998	1997	1997	1997	1997	1996	1997	1997	1996	1996	1996

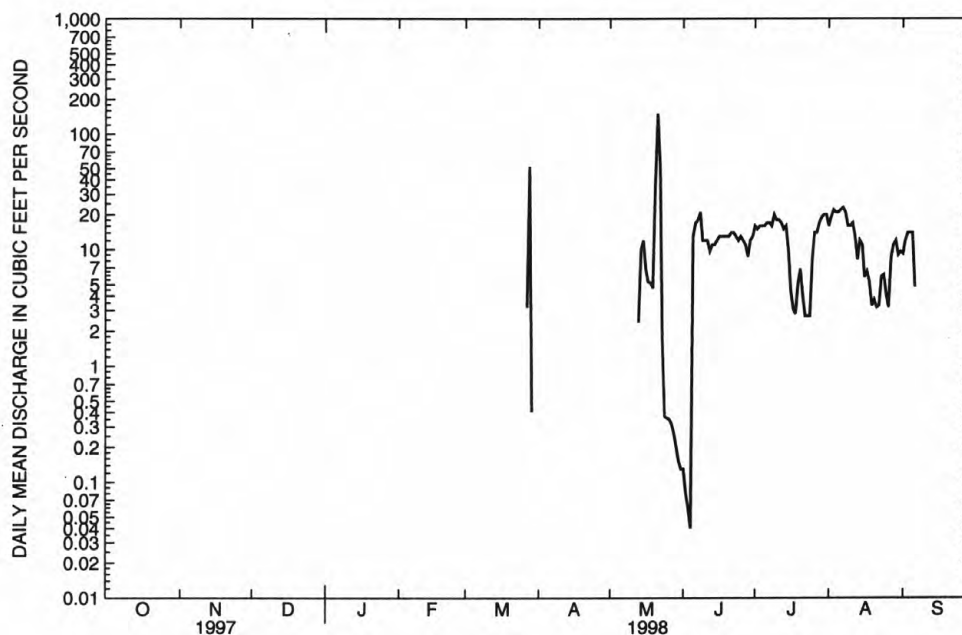
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	656.01	1498.76	
ANNUAL MEAN	1.80	4.11	2.95
HIGHEST ANNUAL MEAN			4.11 1998
LOWEST ANNUAL MEAN			1.80 1997
HIGHEST DAILY MEAN	16 Aug 14	150 May 21	167 May 27 1996
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Mar 21 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Mar 21 1996
INSTANTANEOUS PEAK FLOW		317 May 21	317 May 21 1998
INSTANTANEOUS PEAK STAGE		8.76 May 21	8.76 May 21 1998
ANNUAL RUNOFF (AC-FT)	1300	2970	2140
10 PERCENT EXCEEDS	9.0	14	11
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00



ELM CREEK NEAR ELM CREEK

PLATTE RIVER BASIN

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

WATER-QUALITY RECORDS
Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
05-20-98	1430	2.03	3.7	1300	8.5	28.0	25.0	695	8.8
05-21-98	1300	8.75	314	147	4.8	22.5	9.0	695	9.6
06-04-98	1400	1.61	.04	728	8.3	9.0	10.5	700	11.4
07-07-98	1330	3.03	17	752	8.2	28.0	27.0	703	6.7
08-11-98	1330	2.91	17	820	8.3	25.0	23.5	705	8.5

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
05-20-98	118	--	<.010	<.050	.048	1.3	.43	1.4	.48	--	--
05-21-98	91	2.27	.075	2.35	.737	2.5	1.1	3.2	1.9	4.2	5.6
06-04-98	112	.070	.020	.090	.030	1.4	.67	1.4	.70	.79	1.5
07-07-98	91	.269	.021	.290	.107	.56	.46	.67	.57	.86	.96
08-11-98	109	--	<.010	<.050	.054	1.8	.23	1.9	.28	--	--

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
05-20-98	181	<.010	.014	.04	--	--	--	--	--	--	--
05-21-98	.902	.511	.509	1.6	<.0020	.215	.172	E59.1	<.0020	<.0020	E.0710
06-04-98	.385	.158	.148	.45	--	--	--	--	--	--	--
07-07-98	.070	<.010	.037	.11	--	--	--	--	--	--	--
08-11-98	.195	<.010	<.010	--	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

101

06770175 WHISKY SLOUGH 1 MI EAST OF PHELPS-KEARNEY COUNTY LINE, NE

LOCATION.--Lat 40°39'21", long 99°09'39", in SE¹/₄ SE¹/₄, sec. 18, T. 8 N., R. 16 W., Kearney County, Hydrologic Unit 10200101, on downstream side of county road culvert, 4.0 mi west of Highway 44, and 1 mi east of county line.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to September 1998 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 2,200 ft above sea level.

REMARKS.-- Records fair except for periods of estimated record, which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	6.9	7.2	3.9	e3.0	2.6	8.1	4.3	4.2	1.7	.67	.78
2	.20	6.4	5.9	4.7	e2.9	2.4	7.3	4.3	3.9	1.9	1.2	2.1
3	.31	5.8	5.6	4.5	e2.8	2.5	6.8	4.1	3.9	2.1	1.3	1.1
4	.34	5.6	5.2	3.9	e2.8	2.4	6.6	4.1	3.9	1.6	1.3	1.0
5	.31	5.1	4.6	3.9	e2.7	2.3	6.3	4.3	3.9	2.6	1.3	1.1
6	.36	4.8	4.4	3.6	e2.7	2.2	6.2	4.4	3.9	1.4	1.3	.15
7	.39	4.9	4.2	3.6	e2.8	2.4	17	4.4	3.8	1.9	1.3	.06
8	.49	4.7	4.1	3.5	e2.8	3.9	23	4.4	7.8	1.3	1.4	.05
9	.59	4.2	4.0	3.5	e2.9	4.9	16	4.8	7.9	1.3	1.3	.14
10	.57	4.3	3.8	3.4	e3.5	2.1	11	5.1	9.1	2.7	1.8	.18
11	.56	4.2	3.7	3.1	e4.0	2.2	9.0	5.1	9.3	1.8	1.8	.12
12	6.6	4.0	3.6	3.0	e4.3	2.6	8.2	5.0	8.6	1.6	2.3	.11
13	5.1	4.0	3.5	e2.5	e4.3	1.3	7.4	4.7	8.0	1.2	1.9	.09
14	2.9	3.8	3.5	1.9	e4.2	1.4	7.2	5.0	8.2	.67	2.6	.07
15	2.7	3.5	3.9	2.1	e4.1	1.3	7.3	5.3	7.7	.84	2.6	.04
16	2.8	3.4	3.7	2.4	e4.0	1.3	6.7	5.3	7.3	1.2	2.2	.06
17	2.8	3.0	3.9	2.5	e3.7	1.4	6.2	5.2	5.9	1.2	1.2	.09
18	2.7	2.9	3.9	3.0	e3.2	1.5	6.0	5.1	4.9	.87	1.2	.13
19	2.5	2.8	4.0	e3.2	e3.3	1.5	5.9	5.5	4.7	.49	1.7	.16
20	2.4	3.0	3.9	e2.9	3.5	1.4	5.4	5.5	4.4	.34	1.6	.18
21	2.4	2.9	4.0	e2.6	3.7	1.5	5.2	6.3	3.9	.31	1.3	.12
22	2.4	2.8	4.0	e2.6	3.7	1.6	4.8	11	3.8	.61	1.1	.11
23	2.4	2.6	4.2	e2.7	3.3	1.5	4.9	10	3.6	.02	.40	.23
24	3.2	2.7	4.3	e2.6	3.5	1.5	5.2	8.6	3.0	.01	.53	.25
25	7.1	2.9	4.1	e2.5	3.6	1.5	5.1	7.6	2.9	.03	1.8	.31
26	6.9	2.6	4.1	e2.3	3.2	1.5	4.8	7.0	2.4	.08	2.0	.34
27	6.2	2.3	4.3	e2.4	3.2	20	4.7	6.3	3.1	.11	.83	.26
28	5.8	2.4	4.2	e2.6	2.8	25	4.6	5.3	3.7	.16	.49	.10
29	8.2	13	4.0	e2.7	---	12	4.7	5.4	2.8	3.9	.57	.18
30	7.4	10	4.2	e2.8	---	9.6	4.4	5.2	2.2	3.0	.58	.10
31	7.5	---	4.1	e3.0	---	8.9	---	4.6	---	.79	.62	---
TOTAL	94.37	131.5	132.1	93.9	94.5	128.2	226.0	173.2	152.7	37.73	42.19	9.71
MEAN	3.04	4.38	4.26	3.03	3.38	4.14	7.53	5.59	5.09	1.22	1.36	.32
MAX	8.2	13	7.2	4.7	4.3	25	23	11	9.3	3.9	2.6	2.1
MIN	.20	2.3	3.5	1.9	2.7	1.3	4.4	4.1	2.2	.01	.40	.04
AC-FT	187	261	262	186	187	254	448	344	303	75	84	19

e Estimated

PLATTE RIVER BASIN

06770175 WHISKY SLOUGH 1 MI EAST OF PHELPS-KEARNEY COUNTY LINE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.01	4.53	4.16	3.14	3.60	4.12	4.90	5.13	7.27	5.05	1.83	.77
MAX	3.04	4.69	4.26	3.25	3.83	4.14	7.53	7.19	13.1	13.4	4.11	1.89
(WY)	1998	1997	1998	1997	1997	1998	1998	1996	1996	1996	1996	1996
MIN	2.98	4.38	4.07	3.03	3.38	4.11	2.93	2.61	3.63	.51	.016	.085
(WY)	1997	1998	1997	1998	1998	1997	1997	1997	1997	1997	1997	1997

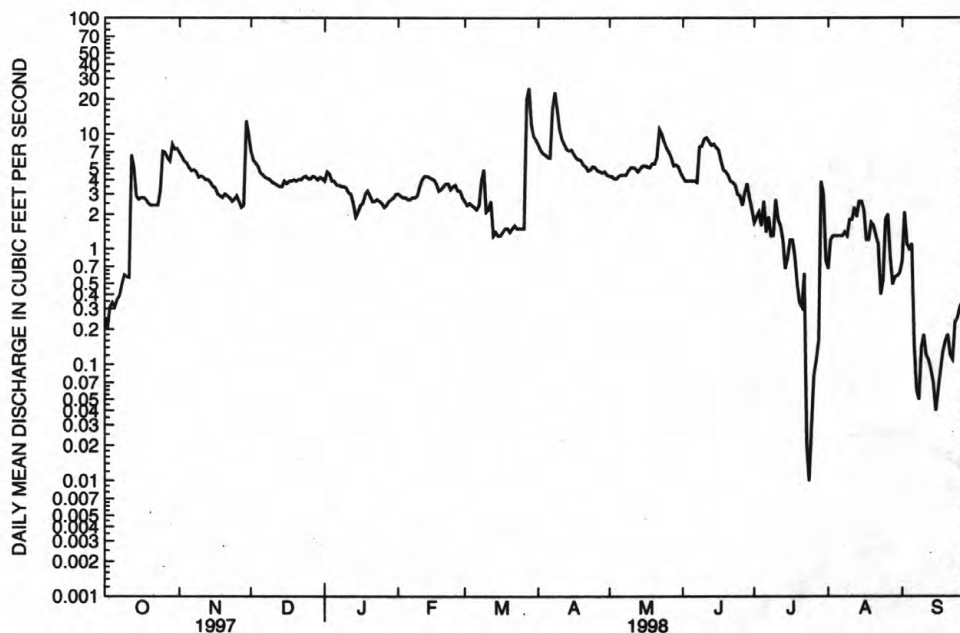
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR WATER

YEARS 1996 - 1998

ANNUAL TOTAL	989.50	1316.10	
ANNUAL MEAN	2.71	3.61	3.16
HIGHEST ANNUAL MEAN			3.61 1998
LOWEST ANNUAL MEAN			2.71 1997
HIGHEST DAILY MEAN	13 Nov 29	25 Mar 28	40 Jun 16 1996
LOWEST DAILY MEAN	.00 Jul 24	.01 Jul 24	.00 Jul 24 1997
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 24	.08 Sep 11	.00 Jul 24 1997
INSTANTANEOUS PEAK FLOW		54 Mar 27	78 Jun 16 1996
INSTANTANEOUS PEAK STAGE		2.80 Mar 27	3.39 Jun 16 1996
ANNUAL RUNOFF (AC-FT)	1960	2610	2290
10 PERCENT EXCEEDS	5.0	7.0	7.0
50 PERCENT EXCEEDS	2.9	3.1	3.2
90 PERCENT EXCEEDS	.00	.34	.18



WHISKY SLOUGH 1 MI E OF PHELPS-KEARNEY COUNTY LINE

PLATTE RIVER BASIN

103

06770175 WHISKY SLOUGH 1 MI EAST OF PHELPS-KEARNEY COUNTY LINE, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-01-98	1400	1.20	7.8	545	8.3	14.8	12.5	699	14.2
05-05-98	1030	1.19	4.2	514	8.4	11.5	11.5	699	12.6
05-22-98	0700	1.65	11	439	7.6	15.0	15.0	696	3.0
06-02-98	0930	1.46	3.8	464	7.7	21.0	15.0	702	7.2
07-08-98	1900	1.32	1.2	461	8.0	24.0	22.0	704	13.6
08-12-98	1200	1.02	2.2	547	7.9	21.5	18.0	710	8.3
09-09-98	1030	.77	.23	385	8.8	17.5	18.0	702	6.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-01-98	146	--	.086	<.050	.045	.33	.24	.38	.29	--	--
05-05-98	126	16.8	.142	16.9	.026	.29	.25	.31	.28	17	17
05-22-98	33	12.0	.197	12.2	.251	1.2	.94	1.5	1.2	13	14
06-02-98	78	17.5	.171	17.7	.057	.37	.30	.42	.36	18	18
07-08-98	169	13.1	.165	13.3	.061	1.2	.63	1.3	.69	14	15
08-12-98	94	17.4	.098	17.5	.097	.38	.28	.48	.38	18	18
09-09-98	71	7.25	.242	7.49	.043	.73	.86	.77	.90	8.4	8.3

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-01-98	.151	.133	.116	.36	<.0020	<.0020	<.002	.586	<.0020	<.0020	<.0030
05-05-98	.095	.078	.085	.26	--	--	--	--	--	--	--
05-22-98	.327	.304	.301	.92	--	--	--	--	--	--	--
06-02-98	.658	.035	.069	.21	--	--	--	--	--	--	--
07-08-98	.304	.142	.128	.39	--	--	--	--	--	--	--
08-12-98	.113	.108	.096	.29	--	--	--	--	--	--	--
09-09-98	.060	.033	.039	.12	--	--	--	--	--	--	--

06770175 WHISKY SLOUGH 1 MI EAST OF PHELPS-KEARNEY COUNTY LINE, NE--Continued

WATER-QUALITY RECORDS

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

Platte River Tributaries Study

[illegible]

PLATTE RIVER BASIN

06770195 NORTH DRY CREEK 2 MI SW OF PLATTE RIVER BRIDGE SOUTH OF KEARNEY, NE

LOCATION.--Lat 40°38'28", long 099°06'56", in SE¹/₄ SW¹/₄, sec. 22, T. 8 N., R. 16 W., Kearney County, Hydrologic Unit 10200101, on downstream side of county road bridge, 1.1 mi south of Platte River bridge on Highway 44, and 1.6 mi west of Highway 44, and approximately 2 mi south of Kearney.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,140 ft above sea level.

REMARKS.-- Records good except for periods of estimated record, which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	e29	32	14	e16	17	31	24	24	35	22	14
2	5.6	e30	25	16	e16	16	28	23	23	38	46	16
3	6.2	e29	23	18	e16	15	27	22	26	42	91	14
4	6.2	29	22	21	e16	15	25	21	27	36	61	13
5	5.8	28	22	15	e15	14	26	23	27	53	32	12
6	6.0	26	21	15	e15	e13	28	23	25	68	25	11
7	5.7	25	19	16	e14	e12	105	23	24	80	23	11
8	5.7	25	19	16	e15	e10	98	25	37	41	21	10
9	6.1	24	19	e14	e16	e9.0	63	23	30	31	19	10
10	5.5	24	18	e13	e17	e11	38	25	30	227	20	9.7
11	5.5	24	17	e12	e17	e9.0	35	22	32	187	20	9.0
12	5.8	24	18	e10	e17	e8.0	34	21	27	59	20	9.2
13	11	24	16	e11	e18	e9.0	30	18	26	39	20	8.8
14	11	24	16	e9.2	e17	e10	29	20	30	32	26	9.4
15	11	e22	17	e8.0	e16	e12	37	22	23	29	36	9.2
16	12	e20	17	e10	e16	e13	30	23	22	32	39	8.8
17	12	e18	15	e11	e16	e13	28	21	20	40	36	8.7
18	12	e17	16	e12	e17	e13	27	19	22	51	29	8.9
19	12	e16	16	13	e16	e14	26	19	21	59	35	8.8
20	12	13	15	e13	e15	15	25	19	22	64	39	8.5
21	12	12	16	e14	16	17	24	25	18	58	48	9.2
22	12	12	16	e14	18	18	23	83	21	55	45	9.4
23	12	11	16	e13	17	19	21	72	23	53	43	9.9
24	12	10	16	e14	18	18	26	35	24	56	44	10
25	16	11	16	e13	20	19	27	27	33	52	38	10
26	e25	12	15	e14	18	19	23	25	34	57	32	10
27	e25	11	16	e15	17	40	23	23	38	65	27	9.6
28	e26	12	16	e16	16	208	25	21	39	37	21	8.8
29	e27	60	15	e17	---	85	25	30	44	29	20	9.0
30	e27	56	16	e17	---	39	25	28	39	27	16	8.7
31	e27	---	16	e17	---	37	---	24	---	23	16	---
TOTAL	384.6	678	557	431.2	461	767.0	1012	829	831	1755	1010	304.6
MEAN	12.4	22.6	18.0	13.9	16.5	24.7	33.7	26.7	27.7	56.6	32.6	10.2
MAX	27	60	32	21	20	208	105	83	44	227	91	16
MIN	5.5	10	15	8.0	14	8.0	21	18	18	23	16	8.5
AC-FT	763	1340	1100	855	914	1520	2010	1640	1650	3480	2000	604

e Estimated

PLATTE RIVER BASIN

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06770195 NORTH DRY CREEK 2 MI SW OF PLATTE RIVER BRIDGE SOUTH OF KEARNEY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.7	20.9	16.1	12.9	16.7	20.3	22.0	31.1	29.2	55.9	30.1	16.1
MAX	17.0	22.6	18.0	13.9	16.9	24.7	33.7	47.7	43.2	84.8	40.5	30.1
(WY)	1997	1998	1998	1998	1997	1998	1998	1996	1996	1996	1996	1996
MIN	12.4	19.2	14.1	11.9	16.5	17.1	11.5	18.8	16.6	26.4	17.4	8.02
(WY)	1998	1997	1997	1997	1998	1996	1996	1997	1997	1997	1997	1997

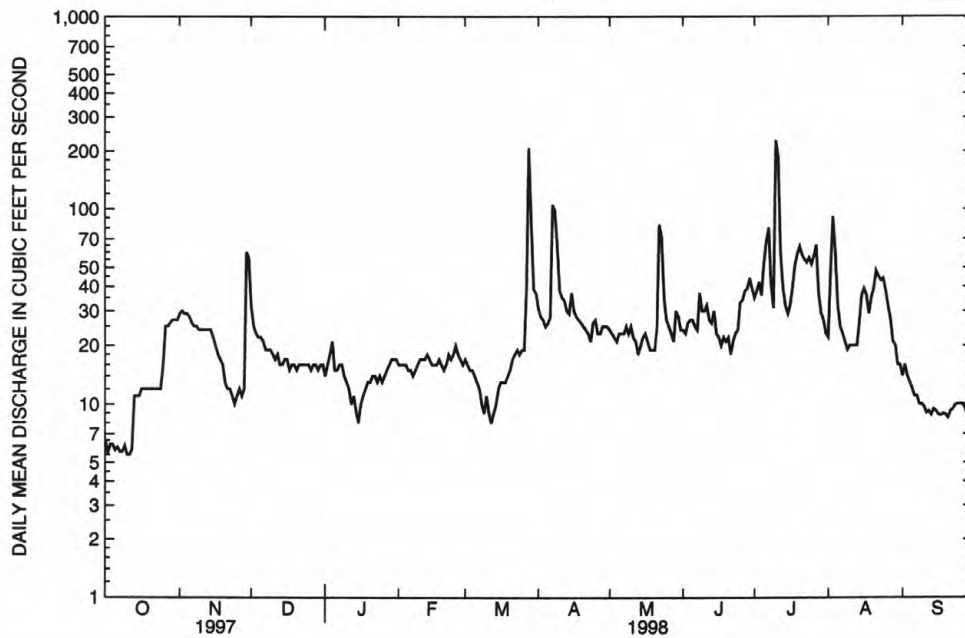
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	6352.4	9020.4	
ANNUAL MEAN	17.4	24.7	20.9
HIGHEST ANNUAL MEAN			24.7
LOWEST ANNUAL MEAN			17.2
HIGHEST DAILY MEAN	70	Apr 12	227
LOWEST DAILY MEAN	5.0	Sep 22	5.5
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 18	5.8
INSTANTANEOUS PEAK FLOW			417
INSTANTANEOUS PEAK STAGE			6.10
ANNUAL RUNOFF (AC-FT)	12600	17890	15180
10 PERCENT EXCEEDS	26	40	39
50 PERCENT EXCEEDS	17	19	18
90 PERCENT EXCEEDS	8.2	10	10



NORTH DRY CREEK 2 MI SW OF PLATTE RIVER BRIDGE S OF KEARNEY

PLATTE RIVER BASIN

06770195 NORTH DRY CREEK 2 MI SW OF PLATTE RIVER BRIDGE SOUTH OF KEARNEY, NE, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
11-19-97	1700	3.19	16	1260	8.2	2.0	8.0	705	11.6
04-01-98	1500	3.38	30	1210	8.2	12.5	13.0	699	8.7
05-05-98	0900	3.31	23	1120	8.4	11.5	13.0	699	9.0
05-22-98	1000	3.98	82	1040	8.0	20.5	16.5	705	6.6
06-02-98	1130	3.24	24	1100	8.3	28.0	22.0	702	9.1
06-08-98	1300	3.47	40	1040	7.9	17.5	15.5	--	9.2
07-09-98	1200	3.44	29	1140	8.9	24.5	24.0	704	6.1
08-12-98	1400	3.19	20	1200	8.0	21.5	23.5	710	8.1
09-09-98	1630	3.00	9.8	1210	8.7	32.0	26.5	707	9.7

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
11-19-97	107	9.73	.087	9.82	<.020	--	--	.98	.68	10	11
04-01-98	90	8.08	.244	8.33	1.90	1.6	1.5	3.5	3.4	12	12
05-05-98	94	7.93	.135	8.06	.030	.69	.41	.72	.44	8.5	8.8
05-22-98	73	5.15	.220	5.37	.763	4.3	1.3	5.0	2.0	7.4	10
06-02-98	114	7.70	.228	7.93	.033	1.0	.52	1.1	.55	8.5	9.0
06-08-98	--	7.34	.223	7.57	.231	2.0	.68	2.2	.91	8.5	9.7
07-09-98	79	3.37	.326	3.69	.541	1.7	1.7	2.3	2.3	6.0	6.0
08-12-98	103	7.39	.103	7.49	.085	1.0	.46	1.1	.54	8.0	8.6
09-09-98	131	7.27	.048	7.32	<.020	--	--	.90	.54	7.9	8.2

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
11-19-97	.475	.430	.460	1.4	<.0020	<.0020	<.002	.182	<.0020	<.0020	E.0082
04-01-98	.791	.806	.714	2.2	<.0020	<.0020	E.003	.175	<.0020	<.0020	<.0030
05-05-98	.509	.406	.413	1.3	--	--	--	--	--	--	--
05-22-98	1.82	.627	.567	1.7	<.0020	5.29	.151	7.95	<.0020	<.0020	<.0030
06-02-98	.590	.518	.450	1.4	--	--	--	--	--	--	--
06-08-98	.799	.539	.503	1.5	<.0020	.223	.069	8.78	<.0020	<.0020	E.0185
07-09-98	1.42	1.13	.911	2.8	--	--	--	--	--	--	--
08-12-98	.686	.560	.587	1.8	--	--	--	--	--	--	--
09-09-98	.343	.312	.293	.90	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

[illegible][illegible][illegible]

06770195 NORTH DRY CREEK 2 MI SW OF PLATTE RIVER BRIDGE SOUTH OF KEARNEY, NE, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06770200 PLATTE RIVER NEAR KEARNEY, NE

LOCATION.--Lat 40°39'32", long 99°05'08", in SE¹/₄ SE¹/₄ sec. 14, T. 8 N., R. 16 W., Kearney county, Hydrologic Unit 10200101, on right bank near downstream side of bridge on State Highway 44, 2 mi south of Kearney, and at mile 117.

DRAINAGE AREA.--57,260 mi², of which about 52,540 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1982 to current year.

REVISED RECORDS.--WDR-94-1: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 2134.11 ft above sea level.

REMARKS.--Records fair except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	3420	3630	3900	4140	3130	4290	2880	1850	684	2390	1460
2	1830	3330	3610	3900	4010	3000	4370	2730	1910	473	2630	1540
3	2770	3370	3480	3660	3950	2930	4460	2700	1970	455	2750	1770
4	3290	3510	3330	3280	3830	2790	4530	2630	2080	438	2740	1820
5	3450	3660	3120	3260	3480	2780	4520	2450	2000	448	2530	1910
6	3460	3800	2930	3210	3560	2970	4330	2340	1810	531	2290	1960
7	3010	3750	2930	3260	3740	3080	4930	2340	1970	599	2140	1860
8	3530	3430	2830	3260	3860	3060	4570	2270	2440	638	1990	1730
9	3400	3370	3020	3140	3980	2710	4230	2320	2370	546	1840	1700
10	3150	3310	3350	2960	4220	2610	4080	2400	2590	922	1780	1640
11	3130	3250	3340	2910	4200	e2000	4150	2490	2830	1270	1590	1740
12	3360	3160	3170	2640	4240	e1500	3900	2610	2930	1280	1300	1830
13	3230	3250	3130	2100	4430	e1500	3700	2790	3000	1330	1200	1860
14	3030	3290	3330	2630	4300	e1700	3680	2560	2880	1310	1150	1830
15	3050	3220	3910	3080	4510	e1700	3700	2460	2780	1020	1050	1790
16	2790	2950	4410	3020	4260	e1500	3420	2460	2750	797	964	1860
17	2540	3460	3910	2940	3960	e1600	3390	2350	2750	675	781	1850
18	2430	3600	3470	3260	3860	1550	3200	2210	2650	490	543	1840
19	2270	3690	3240	3710	3660	1460	3190	1790	2370	390	405	1770
20	2160	3760	3070	3860	3590	2640	3320	1700	2100	337	345	1710
21	2080	3660	3080	3880	3580	3110	3030	1840	1850	299	327	1580
22	2070	3520	3110	4000	3440	3110	e2800	2900	1800	305	331	1650
23	2060	3390	2890	3820	3500	3050	e2700	2430	1620	302	365	1730
24	2490	3280	2940	3580	3530	2990	e2700	2120	1490	439	400	1730
25	3260	3150	2870	3460	3650	3010	2770	2020	1510	791	439	1670
26	3280	3040	2870	3540	3360	3080	2870	1960	1310	1280	632	1760
27	3350	3130	3030	3760	3120	3800	2950	1910	1090	1810	698	1720
28	3420	3240	3270	4190	3240	4610	3060	1780	913	1940	724	1690
29	3340	4090	3390	4180	---	4510	3060	1720	725	1990	821	1010
30	3580	3830	3580	4230	---	4430	2970	1660	607	2170	1220	1170
31	3620	---	3700	4280	---	4370	---	1700	---	2370	1400	---
TOTAL	90330	102910	101940	106900	107200	86280	108870	70520	60945	28329	39765	51180
MEAN	2914	3430	3288	3448	3829	2783	3629	2275	2032	914	1283	1706
MAX	3620	4090	4410	4280	4510	4610	4930	2900	3000	2370	2750	1960
MIN	1830	2950	2830	2100	3120	1460	2700	1660	607	299	327	1010
AC-FT	179200	204100	202200	212000	212600	171100	215900	139900	120900	56190	78870	101500

e Estimated

PLATTE RIVER BASIN

06770200 PLATTE RIVER NEAR KEARNEY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1748	1777	1904	2091	2510	2680	2517	2623	3768	1998	1304	1968
MAX	3859	4717	4404	4487	6612	7148	9535	11770	17660	10910	6393	7903
(WY)	1987	1985	1985	1984	1984	1984	1984	1984	1983	1983	1983	1983
MIN	464	792	734	864	1157	1132	724	289	315	123	288	230
(WY)	1992	1990	1990	1991	1995	1991	1989	1989	1992	1990	1991	1990

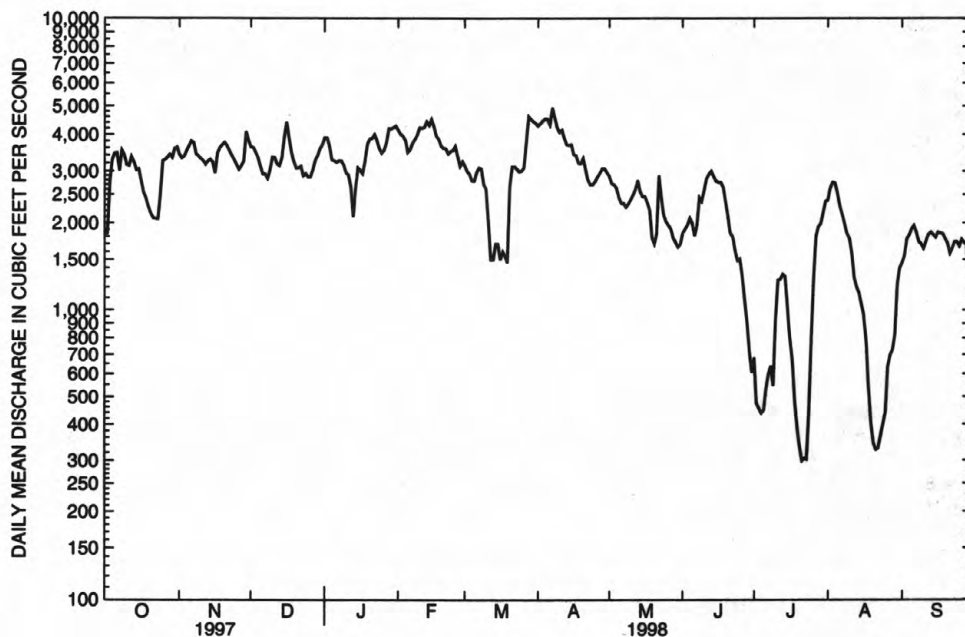
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1983 - 1998

ANNUAL TOTAL	908725	955169	
ANNUAL MEAN	2490	2617	2236
MEDIAN OF ANNUAL MEANS			2025
HIGHEST ANNUAL MEAN			5418
LOWEST ANNUAL MEAN			797
HIGHEST DAILY MEAN	9380	Jun 24	4930
LOWEST DAILY MEAN	203	Jul 21	299
ANNUAL SEVEN-DAY MINIMUM	348	Jul 19	366
INSTANTANEOUS PEAK FLOW (STAGE)			5170
INSTANTANEOUS PEAK STAGE			4.92
ANNUAL RUNOFF (AC-FT)	1802000	1895000	1620000
10 PERCENT EXCEEDS	3610	3900	4340
50 PERCENT EXCEEDS	2300	2870	1630
90 PERCENT EXCEEDS	1040	947	423



PLATTE RIVER NEAR KEARNEY

PLATTE RIVER BASIN

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06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE

LOCATION.--Lat 40°38'28", long 98°59'22", in SE¹/₄ SE¹/₄, sec. 22, T. 8 N., R. 15 W., Kearney County, Hydrologic Unit 10200203, on downstream side of culvert on Highway L-5DA, 2.0 mi west of State Highway 10 and 1.1 mi west of Newark..

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,100.6 ft above sea level.

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	17	15	7.5	6.0	5.2	16	13	13	6.4	9.9	.85
2	3.6	15	13	7.8	5.8	4.9	15	12	12	6.5	9.4	.84
3	3.6	13	12	6.8	5.4	5.2	13	12	11	6.9	7.1	.81
4	3.6	12	12	6.6	5.7	5.1	13	12	12	6.6	8.9	.43
5	3.7	10	10	6.7	5.4	5.0	13	12	12	11	9.0	.38
6	3.7	9.5	9.9	5.9	5.2	5.2	12	12	12	7.0	9.1	.45
7	3.7	9.5	9.8	5.8	5.5	5.2	43	11	12	7.4	8.9	.35
8	3.6	9.1	9.8	6.3	5.5	4.2	51	10	25	5.7	6.3	.31
9	3.6	8.0	9.4	5.6	5.5	2.5	39	11	22	5.7	5.7	.16
10	3.6	7.5	8.2	4.9	6.9	1.7	30	12	23	7.9	8.6	.09
11	3.7	7.5	7.7	4.7	8.5	1.5	26	11	24	7.0	8.3	.09
12	6.6	7.2	7.5	4.1	8.5	1.5	23	9.7	21	6.1	9.7	.14
13	8.4	7.4	7.4	3.7	8.6	1.7	20	9.0	20	7.1	8.3	.20
14	5.2	6.4	7.3	3.8	8.2	1.8	19	8.7	23	8.3	8.4	.21
15	3.9	5.4	7.7	4.0	8.5	1.8	21	8.3	20	7.6	8.2	.19
16	3.0	5.3	7.1	4.2	8.4	1.9	19	7.8	19	6.5	6.4	.28
17	2.8	5.7	7.5	4.4	8.2	2.8	18	8.1	18	6.2	4.6	.36
18	2.7	5.5	7.4	4.7	7.6	5.3	17	8.0	17	6.9	4.0	.43
19	2.0	5.4	6.9	5.4	7.1	6.1	17	7.7	18	7.2	4.6	.55
20	1.8	5.6	6.7	6.0	6.9	6.2	16	7.5	16	7.2	3.7	.46
21	1.7	5.2	7.5	5.1	7.1	6.8	15	26	13	7.8	3.1	.42
22	1.8	4.8	6.9	5.2	7.0	8.5	15	70	13	7.3	1.9	.47
23	1.9	4.9	6.5	5.4	6.7	9.7	15	26	17	2.8	1.9	.57
24	3.4	4.9	7.2	5.1	6.7	11	15	19	17	4.9	2.0	.64
25	19	5.3	6.5	4.9	7.7	9.7	15	16	15	5.5	.49	.94
26	13	4.8	6.3	4.3	6.3	9.3	14	14	15	5.2	.72	.90
27	11	5.8	6.8	4.8	6.1	28	13	13	13	5.2	.90	.73
28	12	5.1	6.7	5.3	5.6	37	12	13	11	6.4	.35	.93
29	17	17	6.4	5.2	---	27	13	14	9.4	12	.36	1.1
30	21	19	6.4	5.8	---	20	13	14	7.4	11	.61	1.1
31	20	---	6.5	5.9	---	19	---	13	---	8.5	.91	---
TOTAL	198.2	248.8	256.0	165.9	190.6	260.8	581	440.8	480.8	217.8	162.34	15.38
MEAN	6.39	8.29	8.26	5.35	6.81	8.41	19.4	14.2	16.0	7.03	5.24	.51
MAX	21	19	15	7.8	8.6	37	51	70	25	12	9.9	1.1
MIN	1.7	4.8	6.3	3.7	5.2	1.5	12	7.5	7.4	2.8	.35	.09
AC-FT	393	493	508	329	378	517	1150	874	954	432	322	31

PLATTE RIVER BASIN

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.50	9.89	7.99	6.15	7.67	9.24	11.4	13.0	14.7	7.71	5.85	2.36
MAX	6.60	11.5	8.26	6.95	8.53	10.1	19.4	17.5	20.4	14.3	11.0	5.26
(WY)	1997	1997	1998	1997	1997	1997	1998	1996	1996	1996	1996	1996
MIN	6.39	8.29	7.72	5.35	6.81	8.41	6.74	7.23	7.54	1.84	1.32	.51
(WY)	1998	1998	1997	1998	1998	1998	1996	1997	1997	1997	1997	1998

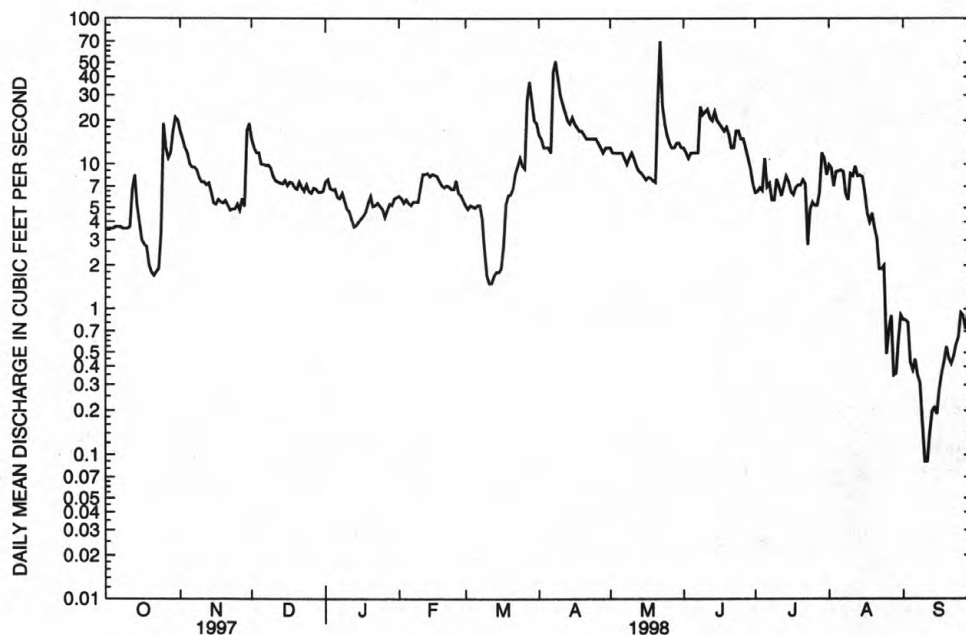
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	2298.69	3218.42	
ANNUAL MEAN	6.30	8.82	7.67
HIGHEST ANNUAL MEAN			8.82
LOWEST ANNUAL MEAN			6.53
HIGHEST DAILY MEAN	22 Mar 17	70 May 22	80 Jun 16 1996
LOWEST DAILY MEAN	.00 Jul 31	.09 Sep 10	.00 Mar 26 1996
ANNUAL SEVEN-DAY MINIMUM	.02 Sep 8	.15 Sep 9	.02 Sep 8 1997
INSTANTANEOUS PEAK FLOW		123 May 22	140 Jun 16 1996
INSTANTANEOUS PEAK STAGE		6.85 May 22	6.85 May 22 1998
ANNUAL RUNOFF (AC-FT)	4560	6380	5560
10 PERCENT EXCEEDS	11	17	17
50 PERCENT EXCEEDS	6.9	7.1	7.5
90 PERCENT EXCEEDS	.47	1.1	.87



FORT KEARNEY SLOUGH NEAR NEWARK

PLATTE RIVER BASIN

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06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-02-98	0930	4.51	15	513	--	7.0	8.5	700	11.4
05-06-98	1130	4.49	11	464	8.3	22.5	13.0	698	16.8
05-21-98	1630	5.78	55	278	7.7	22.0	18.6	700	4.3
06-04-98	1030	4.46	12	447	7.6	8.0	10.0	708	8.0
07-09-98	1100	4.15	5.5	462	7.7	22.5	20.0	704	3.1
08-12-98	1600	3.89	9.8	497	8.0	24.5	21.5	710	10.6
09-09-98	1330	3.07	.34	569	9.1	27.0	23.5	707	17.5

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-02-98	106	19.1	.055	19.1	.045	.32	.28	.36	.32	19	19
05-06-98	174	16.4	.092	16.5	.033	.59	.34	.62	.37	17	17
05-21-98	50	6.80	.161	6.96	.848	4.7	2.1	5.6	3.0	9.9	13
06-04-98	76	16.2	.053	16.3	.029	.34	.27	.36	.30	17	17
07-09-98	37	13.1	.211	13.4	.104	.77	.88	.87	.99	14	14
08-12-98	129	19.5	.057	19.5	.083	.39	.31	.47	.39	20	20
09-09-98	223	23.8	.091	23.9	.021	.64	.71	.66	.74	25	25

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD GF, REC (μ G/L) (82680)
04-02-98	.161	.162	.144	.44	<.0020	<.0020	<.002	.368	<.0020	<.0020	<.0030
05-06-98	.207	.173	.175	.54	--	--	--	--	--	--	--
05-21-98	2.32	1.65	1.62	5.0	--	--	--	--	--	--	--
06-04-98	.143	.140	.134	.41	--	--	--	--	--	--	--
07-09-98	.723	.744	.686	2.1	--	--	--	--	--	--	--
08-12-98	.275	.269	.267	.82	--	--	--	--	--	--	--
09-09-98	.127	.125	.102	.31	--	--	--	--	--	--	--

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

WATER-QUALITY RECORDS

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE

LOCATION.--Lat 40°38'26", long 98°55'08", in NE¹/₄ NE¹/₄, sec. 29, T. 8 N., R. 14 W., Kearney County, Hydrologic Unit 10200101, on upstream side of driveway bridge, 1.7 mi east of Highway 10 on Highway L-50A, 2.4 mi east of Newark.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to September 1998 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 2,079 ft above sea level.

REMARKS.-- Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	4.8	4.4	9.8	8.3	1.6	10	7.9	8.3	1.7	1.6	.43
2	1.2	3.7	3.8	9.4	6.7	1.6	7.4	8.1	6.4	1.4	3.7	.87
3	1.2	3.0	3.7	4.5	6.0	3.7	6.9	8.5	4.6	.44	4.9	.07
4	1.1	2.8	3.0	6.4	7.9	3.5	6.5	6.7	5.5	.57	4.6	.00
5	1.1	1.9	3.0	9.5	6.7	e3.3	6.5	7.1	5.4	4.7	4.1	.14
6	1.1	1.9	3.2	6.0	7.7	e3.2	6.5	8.0	5.7	3.0	2.9	.82
7	1.1	2.0	3.4	7.6	7.5	e2.9	19	6.3	6.9	7.3	2.0	1.2
8	1.1	1.7	3.5	9.9	7.3	e2.5	27	7.4	14	4.8	1.8	1.1
9	.96	1.4	2.4	4.2	7.5	e2.1	22	8.0	14	4.8	.89	.55
10	1.0	1.3	1.1	4.1	6.7	e1.8	17	7.7	17	6.0	2.2	.40
11	1.2	1.2	1.9	6.7	8.0	e1.5	16	6.9	21	8.1	2.9	.89
12	1.7	1.1	2.3	5.0	7.6	e2.0	21	6.3	18	12	3.5	1.1
13	2.2	1.1	3.0	5.4	8.1	e2.5	17	7.5	19	8.0	5.0	1.2
14	2.2	.71	5.5	6.5	8.2	e3.0	16	7.2	20	7.3	9.5	.42
15	2.0	.47	6.1	7.9	8.4	e3.5	14	6.4	19	4.8	9.3	.00
16	1.7	.53	4.4	8.3	7.8	4.4	14	5.3	20	6.0	7.4	.05
17	1.6	.65	7.5	7.5	7.7	4.5	14	8.2	15	2.9	5.2	.41
18	1.6	.56	6.3	5.7	6.0	4.2	14	8.0	5.8	.95	1.5	1.5
19	1.2	1.6	2.8	7.9	5.6	4.0	11	6.9	4.8	1.0	.41	.88
20	1.2	3.2	4.0	8.0	6.5	4.1	8.1	7.7	4.4	.58	.30	.08
21	1.2	3.1	7.5	4.2	7.2	4.5	9.8	11	3.7	.01	.25	.00
22	1.4	2.4	7.1	6.2	7.7	4.8	11	27	3.3	.00	.75	.04
23	1.4	3.5	5.8	6.9	6.6	4.5	9.8	19	2.8	.00	.27	.83
24	1.4	4.8	6.7	7.3	7.2	6.7	9.4	14	2.9	.04	.31	2.2
25	4.0	3.0	4.0	5.3	5.4	12	8.3	12	3.0	.55	.00	2.2
26	4.0	1.0	3.8	3.4	1.7	12	5.6	14	3.0	1.4	.00	1.8
27	4.2	1.3	7.5	5.6	1.7	12	6.4	14	2.4	1.6	.05	.77
28	4.3	1.3	6.3	6.3	1.4	12	9.0	11	1.9	1.3	.08	1.7
29	6.6	3.6	8.2	6.5	---	17	9.1	10	1.7	1.1	.16	2.2
30	8.5	5.3	5.4	6.9	---	12	8.4	11	.97	1.9	.14	1.1
31	7.4	---	5.9	8.6	---	13	---	5.1	---	1.3	.07	---
TOTAL	72.06	64.92	143.5	207.5	185.1	170.4	360.7	294.2	260.47	95.54	75.78	24.95
MEAN	2.32	2.16	4.63	6.69	6.61	5.50	12.0	9.49	8.68	3.08	2.44	.83
MAX	8.5	5.3	8.2	9.9	8.4	17	27	27	21	12	9.5	2.2
MIN	.96	.47	1.1	3.4	1.4	1.5	5.6	5.1	.97	.00	.00	.00
AC-FT	143	129	285	412	367	338	715	584	517	190	150	49

e Estimated

PLATTE RIVER BASIN

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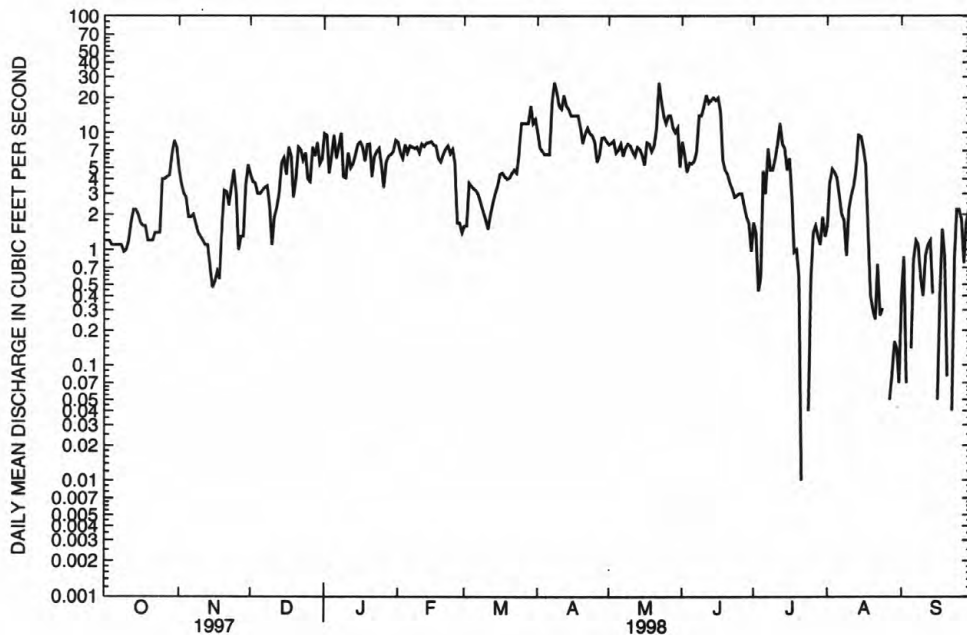
06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.58	5.26	3.98	4.28	4.95	4.43	6.27	6.52	6.39	2.92	1.92	1.35
MAX	2.83	8.36	4.63	6.69	6.61	5.50	12.0	9.49	8.68	5.11	3.17	2.90
(WY)	1997	1997	1998	1998	1998	1998	1998	1998	1998	1996	1996	1996
MIN	2.32	2.16	3.33	1.86	3.29	3.37	3.23	3.10	4.94	.58	.14	.33
(WY)	1998	1998	1997	1997	1997	1997	1996	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1996 - 1998
ANNUAL TOTAL	917.52	1955.12	
ANNUAL MEAN	2.51	5.36	4.16
HIGHEST ANNUAL MEAN			5.36 1998
LOWEST ANNUAL MEAN			2.96 1997
HIGHEST DAILY MEAN	15 Jun 4	27 Apr 8	33 May 27 1996
LOWEST DAILY MEAN	.00 Jul 31	.00 Jul 22	.00 Jul 31 1997
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 3	.07 Aug 25	.00 Sep 3 1997
INSTANTANEOUS PEAK FLOW (STAGE)		32 (2.00) May 22	46 (2.44) May 27 1996
INSTANTANEOUS PEAK STAGE		2.78 Mar 13	*2.78 Mar 13 1998
ANNUAL RUNOFF (AC-FT)	1820	3880	3010
10 PERCENT EXCEEDS	5.0	11	8.2
50 PERCENT EXCEEDS	2.5	4.4	3.1
90 PERCENT EXCEEDS	.08	.62	.43

* Backwater from ice.



DOWNSTREAM DRAIN NEAR NEWARK

PLATTE RIVER BASIN

06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

WATER-QUALITY RECORDS
Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-02-98	0830	.65	7.8	850	7.7	6.0	9.0	700	9.5
05-06-98	1200	.55	5.4	510	7.7	18.0	13.0	698	13.3
05-21-98	1600	1.18	13	427	7.7	23.0	16.0	700	7.3
05-22-98	0700	2.00	32	581	7.7	14.5	13.5	705	5.1
06-04-98	0930	.84	5.4	522	7.6	8.0	10.5	708	7.8
07-09-98	0930	.97	4.5	513	7.3	20.0	15.5	706	5.7
08-13-98	0930	.95	4.0	536	6.6	19.0	14.0	711	7.3
09-09-98	1230	.60	1.2	564	8.0	26.0	17.0	707	10.8

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-02-98	90	22.1	.041	22.1	.039	.17	.16	.21	.20	22	22
05-06-98	138	19.6	.065	19.6	.041	.27	.20	.31	.24	20	20
05-21-98	81	15.9	.084	16.0	.225	1.1	.74	1.4	.96	17	17
05-22-98	53	12.5	.097	12.6	.160	1.8	.89	1.9	1.1	14	15
06-04-98	75	21.0	.056	21.1	.032	.27	.17	.30	.20	21	21
07-09-98	62	19.1	.068	19.1	.065	.41	.38	.47	.45	20	20
08-13-98	76	22.5	.036	22.5	.076	.20	.13	.28	.21	23	23
09-09-98	121	26.1	.047	26.2	<.020	--	--	.29	.29	26	26

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-02-98	.125	.127	.110	.34	<.0020	<.0020	<.002	.449	<.0020	<.0020	<.0030
05-06-98	.101	.085	.093	.29	--	--	--	--	--	--	--
05-21-98	.400	.370	.344	1.1	--	--	--	--	--	--	--
05-22-98	.560	.295	.290	.89	--	--	--	--	--	--	--
06-04-98	.050	.061	.069	.21	--	--	--	--	--	--	--
07-09-98	.188	.159	.159	.49	--	--	--	--	--	--	--
08-13-98	.109	.099	.111	.34	--	--	--	--	--	--	--
09-09-98	.102	.100	.098	.30	--	--	--	--	--	--	--

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06770500 PLATTE RIVER NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°52'28", long 98°16'54", in SW¹/₄ SW¹/₄ sec.31, T.11 N., R.8 W., Merrick County, Hydrologic Unit 10200101, on left bank 20 ft downstream from bridge on U.S. Highway 34, 2 mi upstream from Burlington Northern Inc. bridge, 5 mi southeast of Grand Island, and at mile 70.0.

DRAINAGE AREA.--57,650 mi², of which about 52,940 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1942. WDR-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,831.90 ft above sea level (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 68 ft downstream and Oct. 23, 1933, to Aug. 19, 1980, water-stage recorder at site 98 ft downstream, all at same datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs (since storage in Lake McConaughy in 1942), power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2820	4100	3900	3730	4350	2790	4830	3560	2070	804	2940	1500
2	2330	3730	3700	3700	4200	2790	4790	3590	2070	863	3110	1590
3	2100	3480	3700	3540	4010	2780	4800	3530	2140	780	3230	1520
4	2790	3400	3630	2980	3980	2800	4710	3610	2240	662	3340	1640
5	3360	3490	3330	2730	3910	2870	4710	3690	2330	816	3320	1620
6	3560	3580	3010	3090	3780	2940	4810	3440	2310	957	3090	1580
7	3570	3650	3090	3090	3730	3120	6500	3130	2140	1040	2850	1600
8	3100	3610	3080	3060	3750	3030	7540	2930	2720	1030	2600	1530
9	3500	3480	2980	3170	3730	3270	6470	2870	3050	986	2350	1440
10	3410	3310	3020	2960	3970	2920	5400	2880	2900	1110	2200	1420
11	3150	3280	3090	2390	4070	2370	4960	2750	3410	1360	2240	1290
12	3250	3210	2800	2250	3970	e1900	4800	2790	3740	1600	2070	1350
13	3850	3110	2900	1470	3930	e1500	4650	3000	4000	1650	1750	1430
14	3490	3160	2880	1530	3930	e1500	4510	3050	4920	1630	1600	1440
15	3400	3100	3070	1720	3880	e1700	4680	3150	4200	1610	1590	1480
16	3530	2850	3560	3840	3710	e1700	4540	3220	3770	1270	1470	1400
17	3260	2730	3890	e4200	3580	e1450	4320	3030	3430	970	1370	1470
18	3050	3200	3680	e4300	3400	e1600	4150	2910	3290	931	1230	1460
19	2850	3280	3370	e4000	3270	e1500	3930	2650	2990	808	1030	1490
20	2670	3510	3220	e4100	3220	1990	3850	2340	2740	648	777	1550
21	2570	3560	3120	e4000	3240	3230	3830	2370	2470	558	767	1480
22	2550	3460	3170	4280	3260	3810	3620	4830	2250	870	566	1450
23	2400	3470	3230	4810	3220	3780	3320	5430	2180	844	472	1540
24	2430	3410	3120	4770	3130	3740	3380	4390	1990	742	423	1620
25	3730	3370	3210	4380	3110	3660	3290	3520	1780	890	437	1640
26	4000	3280	3190	4610	2990	3560	3430	3010	1750	1180	465	1620
27	3530	3190	3080	5110	2900	3760	3600	2720	1600	1610	673	1730
28	3710	3140	3030	4860	2830	5020	3660	2500	1380	2100	747	1750
29	3970	3840	3190	4690	---	5470	3830	2540	1170	2360	757	1790
30	4160	4430	3480	4730	---	5040	3680	2360	983	2750	806	1250
31	4270	---	3670	4650	---	4930	---	2230	---	2810	1200	---
TOTAL	100360	102410	101390	112740	101050	92520	134590	98020	78013	38239	51470	45670
MEAN	3237	3414	3271	3637	3609	2985	4486	3162	2600	1234	1660	1522
MAX	4270	4430	3900	5110	4350	5470	7540	5430	4920	2810	3340	1790
MIN	2100	2730	2800	1470	2830	1450	3290	2230	983	558	423	1250
AC-FT	199100	203100	201100	223600	200400	183500	267000	194400	154700	75850	102100	90590

e Estimated

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1273	1358	1392	1487	2026	2416	2082	2267	2533	1185	577	954
MAX	6970	5250	4607	4955	7065	7051	9906	12190	17000	10810	5865	6575
(WY)	1974	1985	1985	1984	1984	1984	1984	1984	1983	1983	1983	1983
MIN	.000	.000	.000	37.0	418	769	544	148	20.0	.000	.000	.000
(WY)	1942	1942	1942	1942	1942	1957	1967	1955	1956	1953	1953	1953

SUMMARY STATISTICS

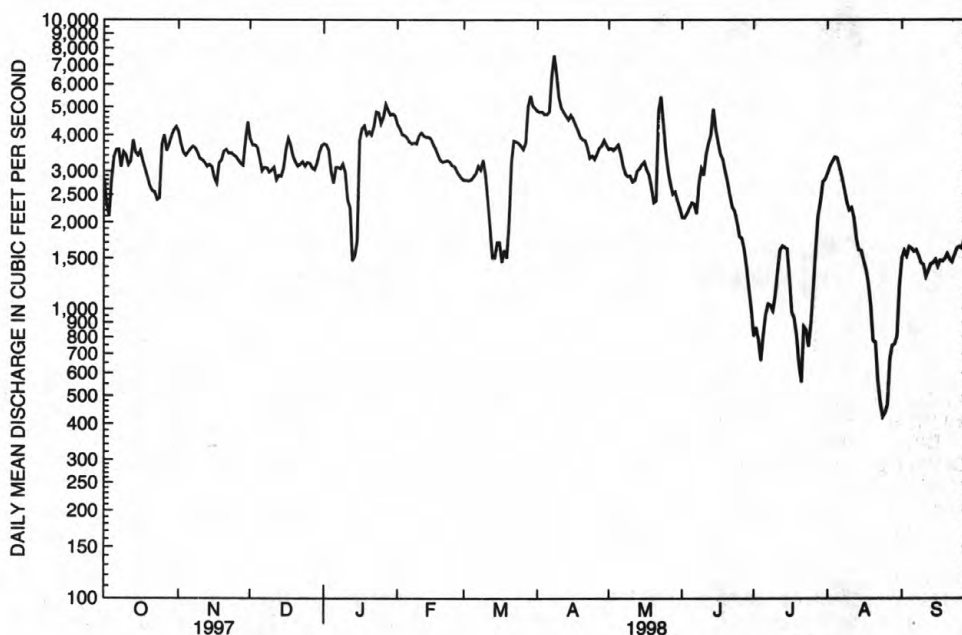
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1942 - 1998
(SINCE STORAGE IN LAKE MCCONAUGHY)

ANNUAL TOTAL	954846	1056472	
ANNUAL MEAN	2616	2894	1625
MEDIAN OF ANNUAL MEANS			1222
HIGHEST ANNUAL MEAN			5380
LOWEST ANNUAL MEAN			414
HIGHEST DAILY MEAN	9100	Jun 25	7540
LOWEST DAILY MEAN	310	Jul 23	423
ANNUAL SEVEN-DAY MINIMUM	347	Jul 26	540
INSTANTANEOUS PEAK FLOW			7800
INSTANTANEOUS PEAK STAGE			3.93
ANNUAL RUNOFF (AC-FT)	1894000	2096000	1177000
10 PERCENT EXCEEDS	3730	4310	3250
50 PERCENT EXCEEDS	2400	3090	1160
90 PERCENT EXCEEDS	1220	1240	136

* No flow at times in many years.

** Maximum for period of record (1934-98) 30,000 ft³/s, 5.99 ft June 6, 1935.

PLATTE RIVER NEAR GRAND ISLAND

PLATTE RIVER BASIN

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06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR ($^{\circ}$ C) (00020)	TEMPER- ATURE WATER ($^{\circ}$ C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-01-98	1000	3.31	4830	935	8.3	8.0	5.5	700	12.1
05-06-98	1630	2.71	3380	977	8.9	23.5	22.0	701	11.4
05-22-98	2000	3.18	5280	780	8.6	17.0	21.5	699	8.0
06-03-98	1400	2.27	2170	833	8.5	11.5	13.5	--	13.1
07-09-98	1500	1.74	1010	849	9.0	27.5	27.5	715	11.9
08-13-98	1230	2.21	1730	850	8.5	24.5	26.5	714	11.7
09-10-98	1000	2.13	1400	910	8.6	21.5	18.5	712	9.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-01-98	105	--	<.010	1.67	.043	1.0	.32	1.1	.36	2.0	2.8
05-06-98	143	--	<.010	.815	.038	1.4	.23	1.4	.27	1.1	2.2
05-22-98	99	.688	.025	.713	.054	3.0	.34	3.1	.39	1.1	3.8
06-03-98	--	.035	.022	.057	.025	1.9	.24	1.9	.26	.32	1.9
07-09-98	162	--	<.010	<.050	.029	1.8	.42	1.8	.45	--	--
08-13-98	156	.057	.011	.068	.082	.91	.21	1.0	.29	.36	1.1
09-10-98	105	--	<.010	.257	<.020	--	--	1.1	.33	.59	1.4

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-01-98	.204	.054	.044	.13	<.0020	<.0020	<.002	.076	<.0020	<.0020	<.0030
05-06-98	.169	<.010	.012	.04	--	--	--	--	--	--	--
05-22-98	.584	.033	.010	.03	--	--	--	--	--	--	--
06-03-98	.374	.023	.010	.03	--	--	--	--	--	--	--
07-09-98	.262	.033	.029	.09	--	--	--	--	--	--	--
08-13-98	.141	.017	.024	.07	--	--	--	--	--	--	--
09-10-98	.171	<.010	.014	.04	--	--	--	--	--	--	--

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

PLATTE RIVER BASIN

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06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82685)	SI-MAZINE, WATER, DISS, REC (µ G/L) (04035)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µ G/L) (82681)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µ G/L) (82675)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µ G/L) (82661)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µ G/L) (82660)
04-01-98	<.0040	<.0130	E.0044	<.0020	E.0066	<.0070	<.0130	<.0010	<.0020	<.0030
05-06-98	--	--	--	--	--	--	--	--	--	--
05-22-98	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	--	--	--	--	--
07-09-98	--	--	--	--	--	--	--	--	--	--
08-13-98	--	--	--	--	--	--	--	--	--	--
09-10-98	--	--	--	--	--	--	--	--	--	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK) (00009)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
05-19-98	1830	2600.	--	.0	.1	8.2	43.9	74.7	90.0	97.3	99.2	100.
06-16-98	1745	3620.	--	.1	1.5	22.9	54.6	76.4	89.5	96.9	99.6	100.
07-14-98	1330	1660.	--	.0	.2	10.9	43.5	72.9	88.2	97.6	100.	--
08-19-98	1100	1120.	--	.0	.2	4.9	34.3	63.1	83.6	96.0	99.6	100.
09-10-98	1100	1450.	--	.0	.2	7.9	48.1	77.8	91.3	97.7	100.	--
09-10-98	1101	1450.	50.	.0	.0	3.3	48.4	83.4	95.9	99.5	100.	--
09-10-98	1102	1450.	450.	.0	.2	5.1	33.8	57.5	75.2	90.9	100.	--
09-10-98	1103	1450.	850.	.0	.0	7.0	68.9	94.7	99.0	99.7	100.	--

PLATTE RIVER BASIN

06772000 WOOD RIVER NEAR ALDA, NE

WATER-QUALITY RECORDS

Platte River Tributaries Study

LOCATION.--Lat 40°51'10", long 98°28'20", in NE1/4 SE1/4 sec.7, T.10 N., R.10 W., Hall County.

DRAINAGE AREA.--599 mi².

PERIOD OF RECORD.--Water years 1966, 1974, October 1997 to September 1998.

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
04-01-98	0830	5.84	57	346	8.1	2.0	4.0	699	10.7
05-06-98	1500	4.65	14	767	9.4	27.5	24.0	701	14.2
05-22-98	1930	9.44	369	22	7.7	19.5	18.0	699	4.7
06-03-98	1700	4.66	12	975	.3	3.5	5.0	1	10.0
07-09-98	1600	4.78	19	1010	8.5	27.5	26.5	712	9.2
08-13-98	1100	4.40	6.8	1080	8.5	24.5	23.5	714	11.6
09-10-98	0800	4.03	14	1200	8.6	18.0	16.0	710	8.1

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
04-01-98	89	1.44	.053	1.49	2.54	6.1	1.2	8.6	3.7	5.2	10
05-06-98	184	--	<.010	<.050	.026	2.0	.87	2.0	.90	--	--
05-22-98	54	1.65	.119	1.77	1.88	1.9	.67	3.8	2.6	4.3	5.6
06-03-98	0	6.35	.110	6.46	.027	1.6	.82	1.7	.85	7.3	8.1
07-09-98	123	6.81	.120	6.93	.028	2.8	1.1	2.9	1.1	8.1	9.8
08-13-98	147	10.2	.087	10.3	.080	1.5	.68	1.6	.75	11	12
09-10-98	89	.365	.033	.398	<.020	--	--	3.4	1.1	1.5	3.8

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO ₄) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
04-01-98	1.57	.859	.842	2.6	<.0020	.0217	<.002	.161	<.0020	.0544	<.0300
05-06-98	.609	.297	.244	.75	--	--	--	--	--	--	--
05-22-98	1.32	.800	.815	2.5	--	--	--	--	--	--	--
06-03-98	1.73	1.53	1.43	4.4	--	--	--	--	--	--	--
07-09-98	1.79	1.30	1.12	3.4	--	--	--	--	--	--	--
08-13-98	1.32	1.04	1.02	3.1	--	--	--	--	--	--	--
09-10-98	.538	.155	.137	.42	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

[illegible]

PLATTE RIVER BASIN

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06772775 WARM SLOUGH NEAR CENTRAL CITY, NE

LOCATION.--Lat 41°05'27", long 98°04'39", in SW¹/₄ SW¹/₄, sec. 13, T. 13 N., R. 7 W., Merrick County, Hydrologic Unit 10200103, on downstream side of county road bridge, 4 mi southwest of Central City.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1718 ft above sea level.

REMARKS.-- Records fair except for periods of estimated record which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.70	e80	e15	e12	e14	e10	78	22	23	6.2	.12	e.00
2	e.60	e70	e15	e12	e13	e9.0	70	20	19	3.7	.00	e.00
3	e.50	e56	e14	e12	e13	e8.0	53	19	15	3.1	.00	e.00
4	e.50	e45	e14	e11	e13	e7.6	42	19	14	2.4	.00	e.00
5	e.50	e35	e14	e11	e14	e7.0	37	18	13	3.1	.03	e.00
6	e.50	e30	e14	e12	e14	e6.6	34	17	13	3.9	.12	e.00
7	e.50	e25	e14	e12	e14	e6.2	125	15	14	11	.16	e.00
8	e.60	e20	e14	e12	e14	e6.0	413	14	26	15	.00	e.00
9	e.90	e18	e15	e12	e14	e5.6	270	14	50	12	.00	e.00
10	e2.0	e16	e15	e11	e15	e5.0	e150	13	67	8.7	.00	e.00
11	e4.0	e15	e14	e11	e15	e5.2	e90	14	74	7.7	.00	e.00
12	e8.0	e15	e14	e11	e14	e5.4	e60	15	80	7.6	.04	e.00
13	e15	e15	e14	e11	e14	e5.4	e50	14	71	7.4	.00	e.00
14	e24	e15	e14	e11	e14	e5.6	e42	13	114	4.9	.00	e.00
15	e30	e15	e14	e8.0	e15	e6.0	e47	14	302	2.6	.00	e.00
16	e30	e15	e15	e5.6	e15	e6.0	e50	16	276	1.2	e.00	e.00
17	e25	e15	e15	e5.8	e15	e6.2	e49	17	e220	.52	e.00	e.00
18	19	e16	e15	e6.0	e15	e6.2	e40	16	e150	.12	e.00	e.00
19	17	e16	e15	e6.0	e15	e6.4	e36	14	e120	.23	e.00	e.00
20	14	e15	e14	e6.0	e14	e7.0	e33	14	e94	.12	e.00	e.00
21	12	15	e15	e6.2	e14	e10	e30	14	e70	.00	e.20	e.00
22	12	15	e15	e6.2	e14	e14	e28	47	e50	.08	e.50	e.00
23	12	15	e15	e6.4	e14	e19	e26	91	34	.00	e.70	e.00
24	12	14	e15	e6.4	e14	26	25	171	33	.00	e.20	e.00
25	20	14	e15	e6.6	e15	26	23	144	28	.00	e.10	e.00
26	35	14	e14	e6.8	e14	26	21	117	22	.28	e.00	e.00
27	40	15	e14	e7.4	13	30	19	83	18	.47	e.00	e.00
28	e50	14	e14	e9.0	e11	103	19	58	15	.57	e.00	e.00
29	e60	e14	e14	e13	---	148	20	40	12	.69	e.00	e.00
30	e70	e15	e14	e14	---	109	21	31	9.6	.81	e.00	e.00
31	e84	---	e13	e14	---	77	---	26	---	.58	e.00	---
TOTAL	600.30	692	446	294.4	393	718.4	2001	1140	2046.6	104.97	2.17	0.00
MEAN	19.4	23.1	14.4	9.50	14.0	23.2	66.7	36.8	68.2	3.39	.070	.000
MAX	84	80	15	14	15	148	413	171	302	15	.70	.00
MIN	.50	14	13	5.6	11	5.0	19	13	9.6	.00	.00	.00
AC-FT	1190	1370	885	584	780	1420	3970	2260	4060	208	4.3	.00

e Estimated

PLATTE RIVER BASIN

06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.68	14.5	9.79	7.71	10.9	16.0	27.9	25.7	37.9	1.57	.93	.75
MAX	19.4	23.1	14.4	9.50	14.0	23.2	66.7	36.8	68.2	3.39	2.73	2.26
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997
MIN	.000	5.89	5.18	5.92	7.76	8.74	.000	16.3	10.8	.52	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1996	1996	1996

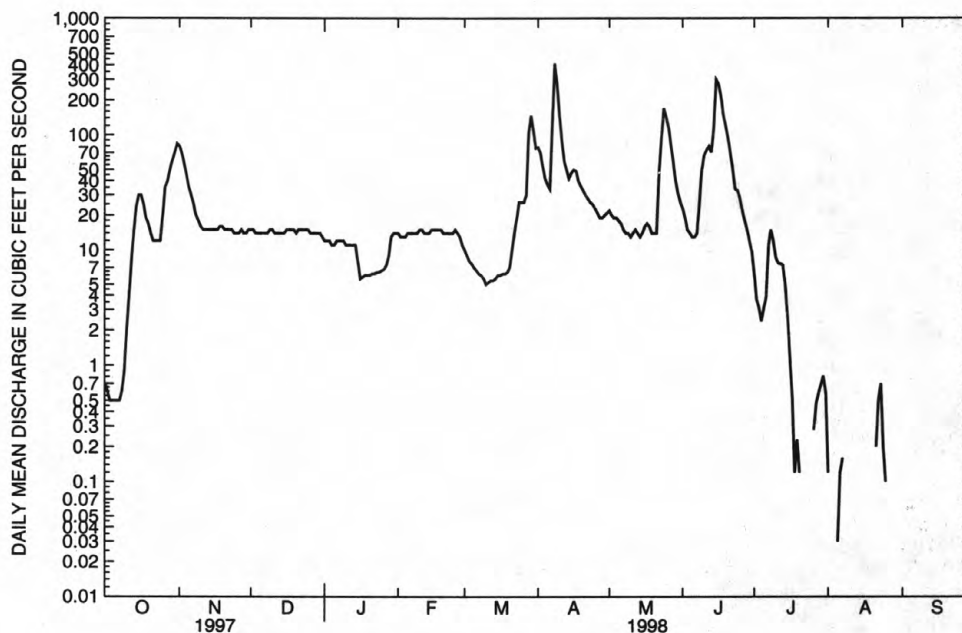
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	3928.13	8438.84	
ANNUAL MEAN	10.8	23.1	15.0
HIGHEST ANNUAL MEAN			23.1 1998
LOWEST ANNUAL MEAN			6.92 1997
HIGHEST DAILY MEAN	84 Oct 31	413 Apr 8	413 Apr 8 1998
LOWEST DAILY MEAN	.00 Jul 12	.00 Jul 21	.00 Apr 1 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 12	.00 Aug 13	.00 Apr 1 1996
INSTANTANEOUS PEAK FLOW		443 Apr 8	443 Apr 8 1998
INSTANTANEOUS PEAK STAGE		8.04 Apr 8	8.04 Apr 8 1998
ANNUAL RUNOFF (AC-FT)	7790	16740	10880
10 PERCENT EXCEEDS	24	54	30
50 PERCENT EXCEEDS	8.2	14	6.2
90 PERCENT EXCEEDS	.00	.00	.00



WARM SLOUGH NEAR CENTRAL CITY

PLATTE RIVER BASIN

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06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR ($^{\circ}$ C) (00020)	TEMPER- ATURE WATER ($^{\circ}$ C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
03-24-98	1100	4.05	26	722	8.4	10.0	5.1	719	15.2
04-24-98	0830	3.92	24	803	8.0	20.0	12.3	716	9.5
05-19-98	1000	3.60	14	776	7.9	24.5	22.0	722	6.3
05-22-98	1130	4.64	44	563	7.9	26.0	18.0	715	5.5
06-23-98	1400	4.29	34	731	7.7	34.0	23.0	715	6.1

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
03-24-98	127	5.92	.057	5.98	.027	.76	.52	.79	.55	6.5	6.8
04-24-98	95	7.34	.052	7.39	.036	.68	.41	.71	.45	7.8	8.1
05-19-98	76	5.50	.128	5.63	.189	1.6	.83	1.8	1.0	6.6	7.4
05-22-98	62	4.12	.118	4.24	.502	2.2	.95	2.7	1.5	5.7	6.9
06-23-98	76	5.02	.077	5.09	.154	1.2	.78	1.4	.94	6.0	6.5

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
03-24-98	.094	.048	.051	.16	<.0020	<.0020	<.002	.133	<.0020	<.0020	<.0030
04-24-98	.209	.168	.171	.52	--	--	--	--	--	--	--
05-19-98	.370	.232	.226	.69	--	--	--	--	--	--	--
05-22-98	.845	.546	.549	1.7	--	--	--	--	--	--	--
06-23-98	.609	.504	.488	1.5	--	--	--	--	--	--	--

06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

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06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06772898 SILVER CREEK, AT MILE 4, NEAR SILVER CREEK, NE

LOCATION.--Lat 41°17'51", long 97°42'50", in NW¹/₄ SW¹/₄, sec. 6, T. 15 N., R. 3 W., Merrick County, Hydrologic Unit 10200103, on downstream side of county road bridge, 3 mi southwest of Silver Creek and at river mile 4.0.

DRAINAGE AREA.--160 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,556 ft above sea level.

REMARKS.-- Records fair except for periods of estimated record which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	35	e15	14	18	e11	139	44	39	35	4.3	1.9
2	.89	30	e15	14	17	e11	111	41	36	31	5.7	1.7
3	.74	25	e14	14	16	e10	92	40	35	29	6.2	1.6
4	.53	23	e14	13	17	e9.0	78	39	35	27	5.8	1.4
5	.50	21	e14	13	20	e8.0	71	38	35	27	5.5	1.4
6	.50	21	e14	13	15	e7.0	67	38	34	27	4.9	5.0
7	.51	20	e14	13	15	e6.6	719	36	34	28	4.6	4.7
8	.56	20	e15	13	15	e6.2	1770	35	93	26	3.9	4.4
9	.52	19	e15	12	15	e6.0	829	35	311	29	3.2	3.6
10	.56	18	e15	12	15	e5.4	380	34	289	26	2.6	3.4
11	.56	18	e14	12	15	e5.4	222	36	265	23	2.1	3.3
12	1.8	18	e14	12	15	e5.6	156	50	208	22	1.8	3.5
13	2.1	18	e14	12	15	e6.0	119	51	147	19	1.9	3.5
14	1.4	16	e14	12	15	e6.4	97	46	305	17	1.8	3.5
15	1.7	16	e14	9.9	16	e6.4	124	48	676	15	1.6	3.6
16	1.7	16	e15	5.7	16	e6.4	119	54	467	12	1.5	3.5
17	1.9	18	e15	6.2	16	e6.6	97	52	282	11	1.1	3.5
18	2.1	22	e15	6.5	16	e7.0	82	47	219	9.8	.52	3.5
19	1.9	17	e15	6.6	16	e8.0	74	43	175	8.8	.42	3.8
20	1.8	16	e14	6.9	15	e9.0	67	46	131	7.7	.41	3.9
21	1.5	16	e14	7.0	15	e12	61	48	98	5.8	4.7	3.4
22	1.7	15	13	7.0	15	e17	57	57	81	14	5.2	3.4
23	3.4	15	14	6.9	15	e25	55	76	79	14	8.0	3.5
24	5.8	15	14	7.0	15	35	53	86	74	12	7.5	3.5
25	11	15	14	6.8	16	36	51	99	64	9.8	5.5	3.6
26	6.0	15	14	7.3	15	34	48	90	57	10	4.1	3.2
27	14	15	15	9.3	14	51	45	73	53	9.6	3.5	3.0
28	22	14	14	13	12	919	44	60	47	8.8	3.0	3.1
29	24	e15	13	16	---	441	45	52	44	7.5	2.6	3.1
30	33	e15	14	19	---	230	45	47	39	5.9	2.4	3.1
31	38	---	13	20	---	165	---	43	---	5.0	2.1	---
TOTAL	183.87	557	441	340.1	435	2112.0	5917	1584	4452	532.7	108.45	97.6
MEAN	5.93	18.6	14.2	11.0	15.5	68.1	197	51.1	148	17.2	3.50	3.25
MAX	38	35	15	20	20	919	1770	99	676	35	8.0	5.0
MIN	.50	14	13	5.7	12	5.4	44	34	34	5.0	.41	1.4
AC-FT	365	1100	875	675	863	4190	11740	3140	8830	1060	215	194

e Estimated

PLATTE RIVER BASIN

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06772898 SILVER CREEK, AT MILE 4, NEAR SILVER CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.18	24.8	15.4	11.5	18.1	44.5	111	41.4	86.3	12.2	6.63	3.67
MAX	6.44	31.0	16.6	12.1	20.6	68.1	197	51.1	148	17.2	16.2	7.15
(WY)	1997	1997	1997	1997	1997	1998	1998	1998	1998	1998	1996	1996
MIN	5.93	18.6	14.2	11.0	15.5	20.8	25.2	36.3	26.1	4.93	.14	.61
(WY)	1998	1998	1998	1998	1998	1997	1997	1996	1997	1997	1997	1997

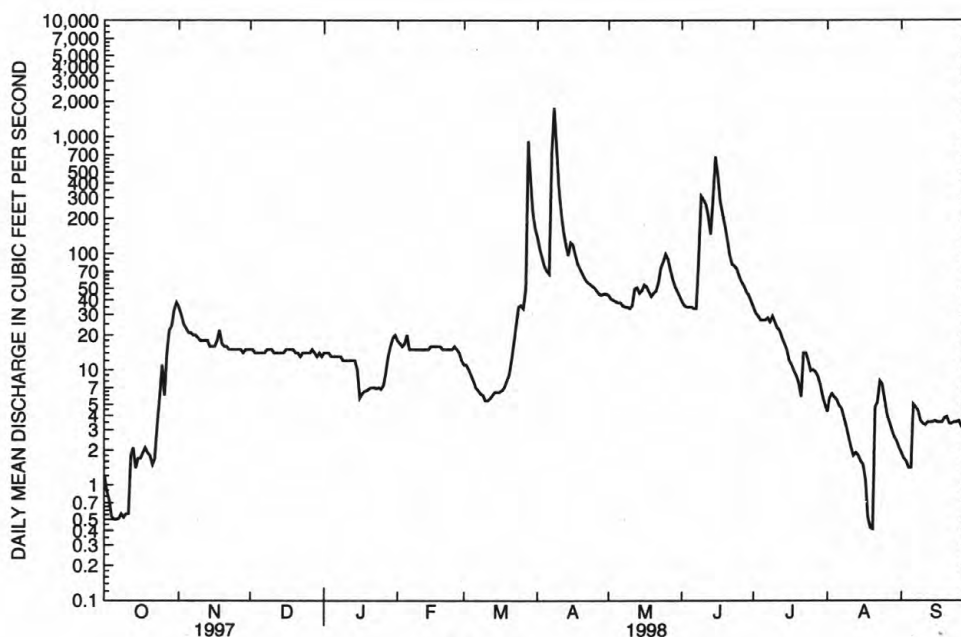
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	5627.75	16760.72	
ANNUAL MEAN	15.4	45.9	31.3
HIGHEST ANNUAL MEAN			45.9
LOWEST ANNUAL MEAN			16.7
HIGHEST DAILY MEAN	71	May 29	1770
LOWEST DAILY MEAN	.00	Aug 27	.41
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 27	.53
INSTANTANEOUS PEAK FLOW			2300
INSTANTANEOUS PEAK STAGE			8.42
ANNUAL RUNOFF (AC-FT)	11160	33240	22680
10 PERCENT EXCEEDS	31	81	52
50 PERCENT EXCEEDS	15	15	14
90 PERCENT EXCEEDS	.04	2.1	1.6



PLATTE RIVER BASIN

06772898 SILVER CREEK, AT MILE 4, NEAR SILVER CREEK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
03-24-98	1400	4.26	35	658	8.3	12.0	8.0	721	11.1
04-23-98	1930	4.70	54	654	8.4	21.0	11.0	722	8.5
05-19-98	1230	4.58	44	660	8.2	28.0	25.0	721	7.4
05-23-98	1330	4.96	76	668	8.2	19.0	19.0	699	7.4
06-09-98	1230	6.76	335	441	7.9	22.0	16.5	724	6.9
06-23-98	1630	4.94	82	653	8.0	33.0	27.0	718	6.8
07-21-98	1130	3.85	6.0	669	8.5	29.0	26.0	721	8.6
08-18-98	1330	3.53	.45	667	7.6	32.0	30.0	725	9.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
03-24-98	99	13.8	.119	13.9	.128	1.1	.73	1.2	.86	15	15
04-23-98	82	12.9	.044	13.0	.038	.53	.45	.57	.49	13	14
05-19-98	95	11.6	.118	11.7	.037	.77	.63	.81	.67	12	12
05-23-98	87	10.0	.391	10.4	.859	2.0	1.5	2.9	2.4	13	13
06-09-98	75	5.14	.069	5.21	.039	.66	.30	.70	.34	5.5	5.9
06-23-98	91	10.9	.041	10.9	.040	.90	.69	.94	.74	12	12
07-21-98	113	8.09	.106	8.20	.046	.74	.43	.79	.47	8.7	9.0
08-18-98	129	14.5	.121	14.6	.110	1.8	1.0	1.9	1.2	16	17

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
03-24-98	.398	.332	.306	.94	<.0020	<.0020	<.002	.360	<.0020	<.0020	<.0030
04-23-98	.073	.060	.060	.18	--	--	--	--	--	--	--
05-19-98	.234	.277	.251	.77	--	--	--	--	--	--	--
05-23-98	.769	.665	.618	1.9	--	--	--	--	--	--	--
06-09-98	.176	.080	.102	.31	--	--	--	--	--	--	--
06-23-98	.274	.264	.268	.82	--	--	--	--	--	--	--
07-21-98	.054	.042	.021	.06	--	--	--	--	--	--	--
08-18-98	.145	.013	<.010	--	--	--	--	--	--	--	--

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06772898 SILVER CREEK, AT MILE 4, NEAR SILVER CREEK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

06772898 SILVER CREEK, AT MILE 4, NEAR SILVER CREEK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06773050 PRAIRIE CREEK NEAR OVINA, NE

LOCATION.--Lat 40°59'03", long 98°24'59", in NW¹/₄ SE¹/₄ NW¹/₄, sec .26, T.12 N., R.10 W., Hall County, Hydrologic Unit 10200103, on downstream side of right pier of Hall County bridge number 18V7 on Engelman Road, 1.75 mi north of the Highway 2, Airport Road, and Engelman Road intersection.

DRAINAGE AREA.--132 mi².

PERIOD OF RECORD.--June 1991 to September 1995 (partial years only, 1991-93, 1995). November 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,873 ft above sea level, from topographic map.

REMARKS.--Records good, except for estimated period which are poor. Natural flow affected by beaver activity, small pump diversions and runoff from irrigation above gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	17	4.8	3.7	4.3	5.4	e21	15	12	12	7.5	1.6
2	2.0	11	4.7	e3.5	4.0	4.8	e15	14	12	13	9.3	1.4
3	2.0	7.2	4.4	e3.5	4.0	e4.5	e11	13	12	15	5.3	1.2
4	1.7	6.8	4.4	3.7	4.0	e4.3	e16	12	12	14	3.2	1.0
5	1.7	6.3	3.8	3.6	4.1	e4.1	e22	12	12	16	3.3	.87
6	2.1	5.4	3.9	3.7	4.1	e4.0	e40	12	12	18	3.8	.67
7	2.2	4.9	3.8	3.6	4.3	e3.8	e70	12	13	21	4.7	.45
8	2.1	4.3	3.9	3.6	4.2	e3.7	e200	12	25	22	5.8	.28
9	2.3	4.3	4.2	3.6	4.2	e3.6	e120	11	28	17	5.1	.26
10	2.1	4.3	4.0	3.5	4.7	e3.8	69	11	24	14	6.9	.25
11	2.5	4.1	3.9	3.3	4.8	e4.0	47	12	26	9.3	6.0	.25
12	6.5	4.2	4.0	3.5	4.6	e4.2	37	14	24	8.4	6.9	.24
13	14	4.3	4.0	3.4	4.2	4.5	31	11	20	9.6	10	.24
14	12	4.1	4.1	3.4	4.3	6.4	28	11	58	9.5	5.7	.24
15	4.6	3.8	4.1	3.6	5.1	6.8	44	12	63	11	3.1	.25
16	2.4	4.0	4.3	3.8	6.2	6.7	41	13	60	13	2.7	.24
17	2.0	3.8	4.3	3.8	6.0	7.4	29	11	34	12	3.0	.25
18	1.9	3.9	4.2	3.6	5.0	9.4	26	11	25	12	3.6	.25
19	1.9	4.1	4.3	3.7	4.5	8.8	25	10	18	12	5.7	.24
20	2.0	4.5	4.1	3.8	4.4	8.7	23	16	15	15	8.2	.20
21	2.0	4.3	4.1	3.6	4.6	10	21	16	14	17	10	.15
22	2.1	4.2	4.4	3.5	4.7	11	20	82	13	16	7.3	.15
23	2.2	4.2	4.3	3.6	4.7	10	18	144	18	14	6.0	.13
24	2.6	4.2	4.4	3.6	4.9	9.5	18	206	27	12	4.0	.13
25	13	3.9	4.3	3.3	4.2	9.5	17	43	19	13	2.0	.13
26	19	4.4	4.2	3.7	5.3	e6.0	17	25	14	12	2.3	.14
27	12	4.1	4.1	3.6	5.4	e10	16	20	13	7.0	5.1	.11
28	14	4.5	4.2	4.1	4.8	e20	15	16	12	4.5	2.5	.10
29	28	5.4	4.1	4.2	---	e50	16	15	12	6.8	2.1	.09
30	28	6.0	4.0	4.3	---	e35	16	15	12	13	2.0	.09
31	21	---	3.8	4.3	---	e25	---	13	---	8.6	1.8	---
TOTAL	213.8	157.5	129.1	113.7	129.6	304.9	1089	840	659	397.7	154.9	11.60
MEAN	6.90	5.25	4.16	3.67	4.63	9.84	36.3	27.1	22.0	12.8	5.00	.39
MAX	28	17	4.8	4.3	6.2	50	200	206	63	22	10	1.6
MIN	1.7	3.8	3.8	3.3	4.0	3.6	11	10	12	4.5	1.8	.09
AC-FT	424	312	256	226	257	605	2160	1670	1310	789	307	23

e Estimated

PLATTE RIVER BASIN

06773050 PRAIRIE CREEK NEAR OVINA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.54	5.07	4.20	3.76	4.44	8.32	14.2	20.0	27.1	33.1	15.4	2.70
MAX	6.90	5.25	4.62	4.40	4.63	11.9	36.3	43.6	75.1	109	46.6	8.70
(WY)	1998	1998	1994	1994	1998	1994	1998	1995	1991	1993	1997	1997
MIN	6.18	4.89	3.81	3.21	4.14	3.28	4.73	4.85	6.12	5.47	5.00	.14
(WY)	1994	1994	1997	1997	1994	1997	1997	1994	1997	1997	1998	1991

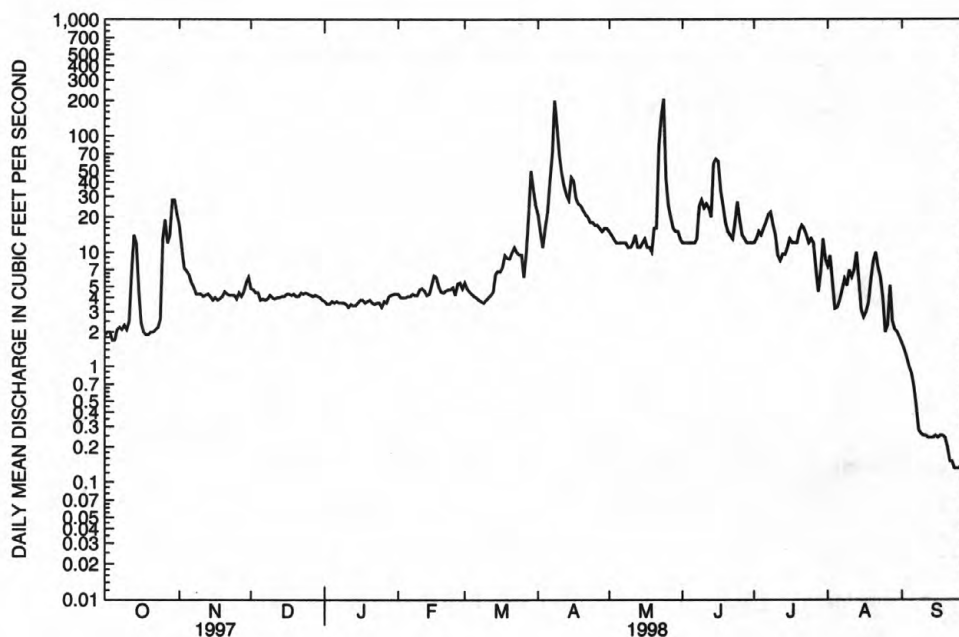
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998

ANNUAL TOTAL	3203.62	4200.80	
ANNUAL MEAN	8.78	11.5	8.84
HIGHEST ANNUAL MEAN			11.5 1998
LOWEST ANNUAL MEAN			6.17 1994
HIGHEST DAILY MEAN	583 Aug 12	206 May 24	1080 Mar 10 1993
LOWEST DAILY MEAN	.22 Sep 21	.09 Sep 29	.00 Sep 7 1991
ANNUAL SEVEN-DAY MINIMUM	.27 Sep 15	.11 Sep 24	.00 Sep 7 1991
INSTANTANEOUS PEAK FLOW		333 May 24	1290 Mar 9 1993
INSTANTANEOUS PEAK STAGE		7.41 May 24	10.77 Jun 2 1991
ANNUAL RUNOFF (AC-FT)	6350	8330	6400
10 PERCENT EXCEEDS	8.6	22	20
50 PERCENT EXCEEDS	4.0	4.8	5.3
90 PERCENT EXCEEDS	1.1	2.0	1.3



PRAIRIE CREEK NEAR OVINA

PLATTE RIVER BASIN

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06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE

LOCATION (REVISED).--Lat 41°19'43", long 97°40'30", in NW¹/₄ SW¹/₄, sec. 28, T. 16 N., R. 3 W., Merrick County, Hydrologic Unit 10200103, on the downstream side of bridge on Nebraska Highway 39, 2 mi northwest of Silver Creek.

DRAINAGE AREA.--492 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to September 1953. October 1996 to current year.

REVISED RECORDS.--WDR NE-97-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,550 ft above sea level.

REMARKS.-- Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	269	44	40	e33	e35	438	98	119	91	50	17
2	120	235	e41	43	e32	e35	343	97	103	89	59	16
3	94	193	e39	40	e34	e33	273	94	96	86	58	16
4	76	150	e35	e30	e38	e31	216	88	94	84	52	14
5	62	121	e33	e25	e41	e29	202	88	86	86	48	13
6	52	100	e31	e23	e40	e21	183	86	86	87	43	13
7	44	87	e30	e23	e39	e19	443	79	89	94	39	13
8	40	80	e27	e29	e38	e17	940	77	132	97	35	12
9	37	74	e24	e35	e38	e16	1320	77	266	109	34	11
10	32	71	e24	e30	e38	e14	1590	78	249	104	35	10
11	30	67	e26	e35	e38	e13	1530	82	255	96	36	9.5
12	35	65	e28	e35	e38	e15	1380	83	248	88	37	9.6
13	42	62	e30	e35	e38	e18	842	83	236	82	37	9.5
14	55	60	e27	e35	e38	e21	445	86	381	76	35	8.8
15	e83	55	e33	e30	e40	e17	349	91	566	68	33	9.3
16	e110	44	e40	e17	e42	e16	282	86	578	65	35	9.9
17	120	42	48	e20	e42	e17	308	90	599	66	31	9.6
18	94	56	45	e20	e43	e17	300	95	656	68	25	9.0
19	76	62	46	e21	e42	e20	240	92	566	64	21	9.5
20	63	53	44	e22	e40	e30	197	92	368	58	19	9.2
21	57	50	40	e22	e39	e44	173	94	250	52	33	8.8
22	50	50	42	e22	e39	e56	156	100	192	82	42	8.5
23	47	49	42	e23	e39	e72	141	105	164	111	62	8.2
24	46	49	41	e24	e39	100	133	219	148	92	49	8.1
25	64	49	42	e25	e40	93	125	367	138	78	34	8.7
26	84	48	39	e30	e39	109	111	495	145	72	27	8.0
27	136	47	37	e34	e38	251	103	517	140	67	27	7.0
28	158	45	41	e36	e35	459	99	317	121	63	24	7.0
29	198	45	41	e38	---	919	99	207	109	56	22	6.7
30	242	45	42	e39	---	925	100	159	97	48	19	6.3
31	275	---	42	e40	---	670	---	129	---	43	18	---
TOTAL	2791	2423	1144	921	1080	4132	13061	4451	7277	2422	1119	306.2
MEAN	90.0	80.8	36.9	29.7	38.6	133	435	144	243	78.1	36.1	10.2
MAX	275	269	48	43	43	925	1590	517	656	111	62	17
MIN	30	42	24	17	32	13	99	77	86	43	18	6.3
AC-FT	5540	4810	2270	1830	2140	8200	25910	8830	14430	4800	2220	607

e Estimated

PLATTE RIVER BASIN

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.1	78.2	30.6	24.9	35.3	83.3	165	103	169	52.6	38.8	38.8
MAX	90.0	80.8	36.9	29.7	38.6	133	435	144	243	78.1	41.8	86.8
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997
MIN	14.2	75.7	24.3	20.1	32.0	33.3	18.1	46.1	56.8	20.2	36.1	10.2
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1998	1998

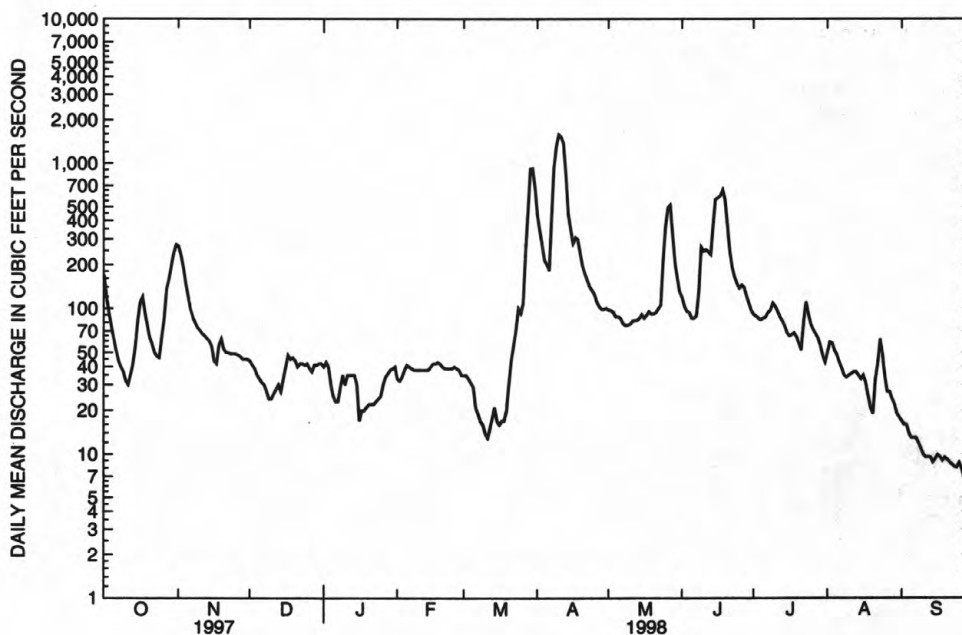
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	17831.3	41127.2	
ANNUAL MEAN	48.9	113	76.8
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			40.9
HIGHEST DAILY MEAN	479	Sep 28	1590
LOWEST DAILY MEAN	2.7	Aug 8	6.3
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 4	7.4
INSTANTANEOUS PEAK FLOW			1640
INSTANTANEOUS PEAK STAGE			9.29
ANNUAL RUNOFF (AC-FT)	35370	81580	55640
10 PERCENT EXCEEDS	85	249	156
50 PERCENT EXCEEDS	34	48	35
90 PERCENT EXCEEDS	16	17	13



PRAIRIE CREEK NEAR SILVER CREEK

PLATTE RIVER BASIN

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06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

WATER-QUALITY RECORDS Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
03-24-98	1500	3.71	100	691	8.5	13.0	7.5	720	11.9
04-23-98	1730	4.07	144	810	8.3	25.0	10.5	722	8.7
05-19-98	1400	3.55	92	755	8.8	36.0	27.0	722	10.5
05-26-98	1600	6.34	508	376	7.7	27.0	21.0	722	7.4
06-24-98	0930	4.12	150	739	8.2	31.0	24.0	717	6.6
07-21-98	1330	3.09	52	787	8.9	31.0	28.7	722	11.2
08-18-98	1500	2.77	27	523	9.0	30.0	35.0	726	15.3

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
03-24-98	105	2.48	.022	2.50	<.020	--	--	1.1	.58	3.1	3.6
04-23-98	83	3.19	.059	3.25	.099	1.0	.82	1.1	.92	4.2	4.4
05-19-98	140	2.29	.034	2.33	.037	2.0	.51	2.0	.55	2.9	4.3
05-26-98	88	1.46	.157	1.61	.265	3.3	1.5	3.6	1.8	3.4	5.2
06-24-98	84	2.79	.023	2.81	.033	1.3	.90	1.3	.93	3.7	4.2
07-21-98	154	3.76	.053	3.81	.038	2.7	.37	2.7	.41	4.2	6.5
08-18-98	232	1.37	.067	1.44	.034	2.7	.42	2.8	.46	1.9	4.2

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
03-24-98	.396	.283	.279	.86	<.0020	<.0020	<.002	.109	<.0020	<.0020	<.0030
04-23-98	.790	.762	.690	2.1	--	--	--	--	--	--	--
05-19-98	.722	.465	.408	1.3	--	--	--	--	--	--	--
05-26-98	1.52	.903	.843	2.6	--	--	--	--	--	--	--
06-24-98	1.00	.825	.812	2.5	--	--	--	--	--	--	--
07-21-98	.724	.356	.366	1.1	--	--	--	--	--	--	--
08-18-98	.337	<.010	<.010	--	--	--	--	--	--	--	--

PLATTE RIVER BASIN

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

Platte River Tributaries Study

[illegible]

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE

LOCATION.--Lat 41°22'04", long 97°29'40", in SE¹/₄ SW¹/₄ sec.12, T.16 N., R.2 W., Platte County, Hydrologic Unit 10200103, on left bank near northwest corner of county bridge, 1.5 mi south of Duncan, and 15.3 mi upstream from Loup River.

DRAINAGE AREA.--59,300 mi², of which about 54,630 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1895 to December 1909 (irrigation seasons only 1895-1900), July 1910 to December 1911 (gage heights and discharge measurements only), April 1912 to September 1915, June 1928 to current year. Published as "near Columbus" 1895-1915.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1897, 1899-1901, 1903-5, 1929-32, 1935(M), 1936. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,476.82 ft above sea level. June 1895 to December 1909, April 1912 to September 1915, and June to October 1928, nonrecording gage at site 7 mi downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage and Feb. 20, 1935 to Mar. 21, 1984 recording gage both at present site at 2.00 ft higher datum. Mar. 22, 1984, to Mar. 4, 1987, at site 300 ft downstream at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3280	5270	5170	4360	e4000	3770	7280	4100	2760	1320	3090	981
2	3210	4840	4690	4390	e4000	3630	6510	4000	2550	1170	3440	1460
3	2820	4430	4420	4290	e4000	3530	6080	3940	2560	1000	3590	1650
4	2560	4230	4280	4140	e4100	3450	6130	3870	2810	1060	3550	1700
5	2800	4120	3950	3590	e4200	3590	6090	3800	2900	979	3630	1780
6	3520	4260	3620	3430	e4300	3640	6130	3850	2920	1070	3690	1880
7	3810	4440	3340	e3300	e4400	e3400	8630	3700	2900	1380	3580	1860
8	4050	4660	3540	e3100	e4400	e3200	13800	3460	3490	1370	3240	1820
9	3720	4790	3770	e2700	e4400	e2000	13700	3290	4550	1530	2970	1790
10	4140	4730	3880	e2000	e4400	e1600	11900	3120	4510	1520	2700	1680
11	4160	4590	3870	e1000	e4600	e1400	10200	3090	4000	1580	2530	1600
12	4140	4430	3900	e600	e5000	e1600	9010	3160	4020	1620	2540	1560
13	4340	4370	3660	e500	5520	e1900	8070	3070	4070	1830	2440	1600
14	4760	4170	3970	e380	4690	e2100	6930	3130	5580	1950	2200	1660
15	4600	4020	3910	e500	4640	e2600	7040	3190	7900	1890	1900	1810
16	4310	4010	4000	e900	4590	e3400	6760	3340	7220	1870	1820	1800
17	4290	3590	4450	e1100	4510	e3600	6270	3250	6190	1670	1650	1820
18	3940	e3700	4850	e1500	4490	e4000	5710	3060	5510	1410	1450	1800
19	3560	e4200	4580	e2500	4310	e4500	5260	3070	4910	1230	1240	1860
20	3340	4340	4260	e3700	4180	5460	4820	3140	4020	1100	983	1920
21	3230	4550	4010	e3900	4060	4740	4700	3030	3550	861	1690	1880
22	3170	4630	4000	e4200	4010	4040	4710	3490	3130	1300	1330	1840
23	3160	4550	4080	e4000	4020	4280	4420	5640	2890	1140	884	1850
24	3190	4420	4150	e3900	4010	4250	4310	6750	2790	1260	773	1870
25	3820	4170	4100	e3900	4100	4220	e4200	6270	2520	1090	724	1890
26	4710	4030	4110	e3900	4020	4280	e3800	5620	2180	1110	629	1880
27	5100	4010	4130	e3900	3990	4380	e3900	4950	1970	1200	664	1760
28	4410	3970	4070	e4000	3950	6140	4180	4010	1840	1500	686	1760
29	4660	3860	3950	e4000	---	7430	4180	3420	1700	2000	851	1760
30	5040	4560	4030	e3900	---	7810	4150	3200	1510	2400	927	1690
31	5280	---	4250	e3900	---	7680	---	3010	---	2920	876	---
TOTAL	121120	129940	126990	91480	120890	121620	198870	118020	109450	45330	62267	52211
MEAN	3907	4331	4096	2951	4318	3923	6629	3807	3648	1462	2009	1740
MAX	5280	5270	5170	4390	5520	7810	13800	6750	7900	2920	3690	1920
MIN	2560	3590	3340	380	3950	1400	3800	3010	1510	861	629	981
AC-FT	240200	257700	251900	181500	239800	241200	394500	234100	217100	89910	123500	103600

e Estimated

PLATTE RIVER BASIN

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06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

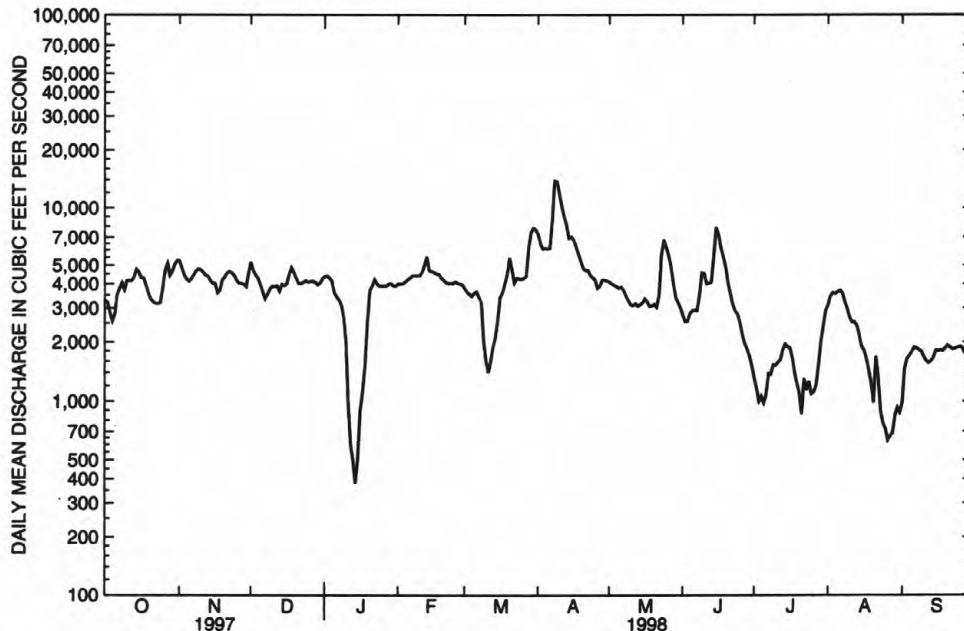
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1363	1509	1475	1530	2307	2964	2538	2623	2920	1442	622	955
MAX	6673	5617	5107	5603	8795	9531	13420	15450	18320	12590	6135	6785
(WY)	1974	1985	1985	1984	1984	1984	1984	1984	1983	1983	1983	1983
MIN	.000	.000	15.7	44.5	269	820	574	150	11.3	.000	.000	.000
(WY)	1957	1957	1942	1942	1942	1957	1967	1955	1956	1956	1956	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
					(SINCE STORAGE IN LAKE McCONAUGHY)	
ANNUAL TOTAL	1150457		1298188		1849	
ANNUAL MEAN	3152		3557		1390	
MEDIAN OF ANNUAL MEANS					6653	
HIGHEST ANNUAL MEAN					494	
LOWEST ANNUAL MEAN					1956	
HIGHEST DAILY MEAN	9300	Jun 24	13800	Apr 8	23800	Jul 1 1983
LOWEST DAILY MEAN	282	Jul 31	380	Jan 14	.00	Jan 4 1942
ANNUAL SEVEN-DAY MINIMUM	314	Jul 29	711	Jan 11	.00	Oct 1 1943
INSTANTANEOUS PEAK FLOW (STAGE)			14700 (6.77)	Apr 9	*25400 (6.36)	Mar 28 1960
INSTANTANEOUS PEAK STAGE			**7.44	Mar 15	7.86	Mar 11 1993
ANNUAL RUNOFF (AC-FT)	2282000		2575000		1340000	
10 PERCENT EXCEEDS	4740		5210		3970	
50 PERCENT EXCEEDS	3030		3800		1260	
90 PERCENT EXCEEDS	1340		1380		96	

* Maximum for period of record (1912-15, 1928-98) 44,100 ft³/s, 6.50 ft June 23, 1905, site and datum then in use.

** Backwater from ice.



PLATTE RIVER NEAR DUNCAN

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER-QUALITY RECORDS
Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
03-25-98	0900	4.96	4180	1020	8.6	12.0	7.0	719	10.8
04-24-98	1130	4.99	4300	965	8.9	21.0	17.0	722	11.5
05-18-98	1430	4.54	3040	797	9.1	37.0	28.4	722	7.4
05-22-98	1700	4.71	3510	777	9.1	18.0	20.0	718	10.1
05-23-98	1200	5.28	5580	723	8.6	18.5	19.0	699	8.4
06-24-98	1200	4.43	2790	803	8.9	34.0	27.0	718	10.9
07-21-98	1430	3.43	849	805	8.9	34.0	31.0	723	10.8
08-18-98	1630	3.72	1430	790	8.9	35.0	36.0	726	18.1

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
03-25-98	95	2.54	.019	2.56	<.020	--	--	1.1	.31	2.9	3.7
04-24-98	126	--	<.010	1.38	.035	.71	.27	.75	.30	1.7	2.1
05-18-98	101	5.06	.100	5.16	.031	.94	.43	.97	.46	5.6	6.1
05-22-98	118	.094	.018	.112	.059	1.5	.23	1.6	.29	.41	1.7
05-23-98	99	.620	.023	.643	.064	2.5	.31	2.6	.37	1.0	3.2
06-24-98	146	--	<.010	<.050	.040	.93	.33	.97	.37	--	--
07-21-98	154	--	<.010	<.050	.046	1.4	.29	1.5	.34	--	--
08-18-98	279	--	<.010	<.050	.041	1.3	.34	1.3	.38	--	--

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOR- THO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHOR- THO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
03-25-98	.266	.121	.102	.31	<.0020	<.0020	<.002	.083	<.0020	<.0020	<.0030
04-24-98	.107	.052	.038	.12	--	--	--	--	--	--	--
05-18-98	.193	.114	.106	.33	--	--	--	--	--	--	--
05-22-98	.185	<.010	.011	.03	--	--	--	--	--	--	--
05-23-98	.463	<.010	.015	.05	--	--	--	--	--	--	--
06-24-98	.120	<.010	.015	.05	--	--	--	--	--	--	--
07-21-98	.200	.012	.015	.05	--	--	--	--	--	--	--
08-18-98	.227	<.010	<.010	--	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

Platte River Tributaries Study

[illegible][illegible][illegible]

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

153

06775500 MIDDLE LOUP RIVER AT DUNNING, NE

LOCATION.--Lat 41°49'50", long 100°06'20", in NW¹/₄ SE¹/₄ sec.33, T.22 N., R.24 W., Blaine County, Hydrologic Unit 10210001, on left bank near upstream end of bridge on State Highway 2 at north edge of Dunning, 1.0 mi upstream from Dismal River, and at mile 204.

DRAINAGE AREA.--1,830 mi², of which about 79 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,604.14 ft above sea level. Prior to Sept. 12, 1946, nonrecording gage, and Sept. 12, 1946 to Sept. 30, 1962, water-stage recorder at site 0.2 mi upstream at datum 3.03 ft higher. Oct. 1, 1962 to May 15, 1989 at present site and May 15, 1989 to Mar. 20, 1990, at site 0.2 mi upstream, both at datum 3.00 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	457	544	489	507	522	452	500	497	490	463	536	454
2	463	533	477	511	522	434	535	481	484	471	527	451
3	472	494	479	512	508	e430	536	471	497	519	524	443
4	464	516	475	499	502	e430	527	480	481	537	519	435
5	458	517	452	482	511	e440	540	477	482	501	506	434
6	466	507	470	495	527	e430	539	478	474	500	496	436
7	467	497	463	486	525	e430	535	475	487	489	499	437
8	479	501	484	483	532	e430	508	487	610	499	494	432
9	469	480	475	471	544	e420	502	530	551	492	487	429
10	458	460	473	475	538	e410	524	513	532	486	502	432
11	459	483	459	e460	536	e400	534	513	528	490	489	433
12	615	482	463	e440	526	e440	548	528	507	484	518	436
13	585	476	457	e450	527	486	544	511	501	479	525	452
14	537	461	468	e460	521	508	559	515	548	476	502	488
15	562	439	504	e470	523	518	579	506	533	471	492	459
16	549	456	509	475	549	550	544	493	519	478	484	450
17	530	422	501	519	539	558	547	489	562	466	480	446
18	533	422	518	510	535	547	556	492	547	466	474	438
19	525	454	522	510	533	531	546	497	520	462	470	435
20	517	474	510	514	508	527	521	580	526	465	537	443
21	523	471	505	490	517	534	511	562	524	465	488	454
22	509	489	510	487	540	542	516	591	519	462	481	443
23	516	488	488	496	543	542	518	592	522	478	475	440
24	544	495	493	491	539	528	516	581	516	490	475	438
25	567	506	476	512	550	547	534	579	529	482	461	441
26	500	496	487	529	521	567	502	555	519	495	462	452
27	470	506	476	532	496	578	491	531	495	482	464	446
28	507	507	482	524	488	559	483	524	486	482	448	447
29	489	507	477	514	---	562	484	518	482	479	452	444
30	517	516	493	510	---	530	491	510	468	526	450	447
31	546	---	492	514	---	529	---	490	---	589	459	---
TOTAL	15753	14599	15027	15328	14722	15389	15770	16046	15439	15124	15176	13315
MEAN	508	487	485	494	526	496	526	518	515	488	490	444
MAX	615	544	522	532	550	578	579	592	610	589	537	488
MIN	457	422	452	440	488	400	483	471	468	462	448	429
AC-FT	31250	28960	29810	30400	29200	30520	31280	31830	30620	30000	30100	26410

e Estimated

PLATTE RIVER BASIN

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	408	417	414	408	428	453	453	441	419	394	396	398
MAX	519	517	509	494	526	544	553	590	545	488	490	504
(WY)	1997	1992	1994	1998	1998	1993	1995	1995	1995	1998	1998	1996
MIN	346	364	336	322	365	359	334	353	342	324	341	330
(WY)	1951	1948	1950	1949	1994	1968	1951	1948	1948	1970	1947	1955

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

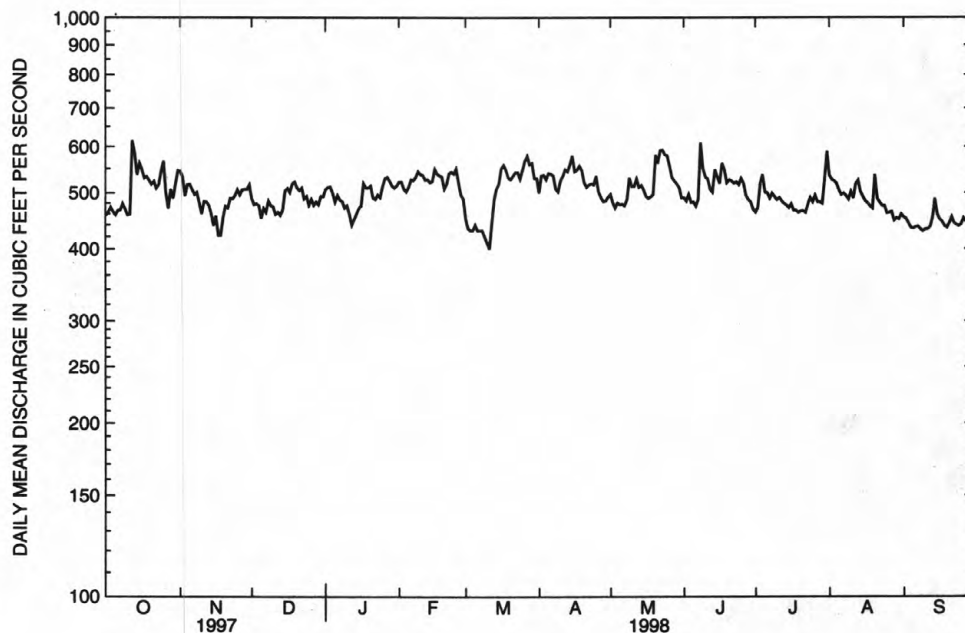
FOR 1998 WATER YEAR

WATER YEARS 1946 - 1998

ANNUAL TOTAL	176267	181688	
ANNUAL MEAN	483	498	419
HIGHEST ANNUAL MEAN			498
LOWEST ANNUAL MEAN			365
HIGHEST DAILY MEAN	615 Oct 12	615 Oct 12	778 Apr 20 1971
LOWEST DAILY MEAN	370 Mar 15	400 Mar 11	100 Dec 5 1950
ANNUAL SEVEN-DAY MINIMUM	406 Mar 13	423 Mar 5	231 Jan 1 1949
INSTANTANEOUS PEAK FLOW (STAGE)		712 Jun 8	*2480 (6.15) Mar 25 1996
INSTANTANEOUS PEAK STAGE		3.83 Jun 8	**7.02 Mar 31 1949
ANNUAL RUNOFF (AC-FT)	349600	360400	303600
10 PERCENT EXCEEDS	534	544	497
50 PERCENT EXCEEDS	480	496	413
90 PERCENT EXCEEDS	439	447	350

* Caused by ice jam release upstream.

** Backwater from ice.



MIDDLE LOUP RIVER AT DUNNING

PLATTE RIVER BASIN

155

06775900 DISMAL RIVER NEAR THEDFORD, NE
(Hydrologic bench-mark station and Radiochemical program)

LOCATION.--Lat 41°46'45", long 100°31'30", in SE¹/₄ NW¹/₄ sec. 23, T.21 N., R.28 W., Thomas County, Hydrologic Unit 10210002, on right bank 1,400 ft downstream from bridge on U.S. Highway 83, 2 mi upstream from boundary of Nebraska National Forest (Bessey Division), 14 mi south of Thedford, and at mile 32.9.

DRAINAGE AREA.--966 mi², approximately, of which about 30 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,800.13 ft above sea level.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	231	218	221	212	217	230	221	219	212	241	217
2	240	225	221	220	206	210	231	222	214	214	239	218
3	237	217	210	210	198	222	217	220	215	244	252	220
4	235	223	213	197	204	215	221	218	210	231	243	216
5	238	219	212	206	210	220	229	222	207	230	243	217
6	235	221	206	215	208	219	224	222	208	231	238	216
7	234	217	222	202	205	218	223	221	209	225	236	217
8	239	220	222	192	213	226	221	223	247	228	233	215
9	234	218	222	192	215	211	218	252	225	229	229	213
10	227	211	219	190	216	213	221	248	230	226	241	213
11	234	215	223	195	213	215	225	235	226	227	237	213
12	281	208	213	195	208	216	223	239	223	228	265	214
13	271	201	216	192	207	228	225	231	220	226	248	217
14	238	192	226	198	216	231	234	237	226	221	240	218
15	245	195	221	198	215	222	240	228	225	224	235	219
16	243	186	212	209	221	231	227	225	219	223	232	215
17	233	202	212	198	214	232	223	227	225	223	233	216
18	242	211	213	205	220	228	230	226	229	224	231	215
19	240	210	217	207	220	230	223	225	219	223	229	216
20	233	212	203	212	222	221	223	272	219	221	245	214
21	227	216	203	199	217	233	223	252	216	221	239	218
22	224	210	203	197	224	230	224	254	220	222	234	221
23	226	214	198	195	222	226	226	261	217	221	231	216
24	235	224	204	194	225	225	228	296	217	226	228	218
25	242	224	212	201	225	240	229	279	212	229	227	220
26	212	218	204	206	228	238	227	256	211	242	224	222
27	214	210	204	198	223	239	219	245	213	235	224	220
28	228	220	209	205	215	239	219	239	211	233	221	217
29	227	217	207	204	---	232	219	237	212	230	217	220
30	230	218	216	213	---	231	221	231	212	277	216	220
31	225	---	205	205	---	229	---	220	---	250	217	---
TOTAL	7296	6405	6586	6271	6022	6987	6743	7384	6556	7096	7268	6511
MEAN	235	214	212	202	215	225	225	238	219	229	234	217
MAX	281	231	226	221	228	240	240	296	247	277	265	222
MIN	212	186	198	190	198	210	217	218	207	212	216	213
AC-FT	14470	12700	13060	12440	11940	13860	13370	14650	13000	14070	14420	12910

PLATTE RIVER BASIN

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued
(Hydrologic bench-mark station and Radiochemical program)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	198	202	201	200	202	207	209	207	199	198	196	197
MAX	235	235	230	230	251	239	254	246	235	229	234	237
(WY)	1998	1997	1995	1985	1997	1997	1995	1995	1995	1998	1998	1997
MIN	181	183	170	175	185	188	191	183	179	172	176	179
(WY)	1974	1970	1979	1972	1968	1971	1985	1967	1975	1980	1974	1974

SUMMARY STATISTICS

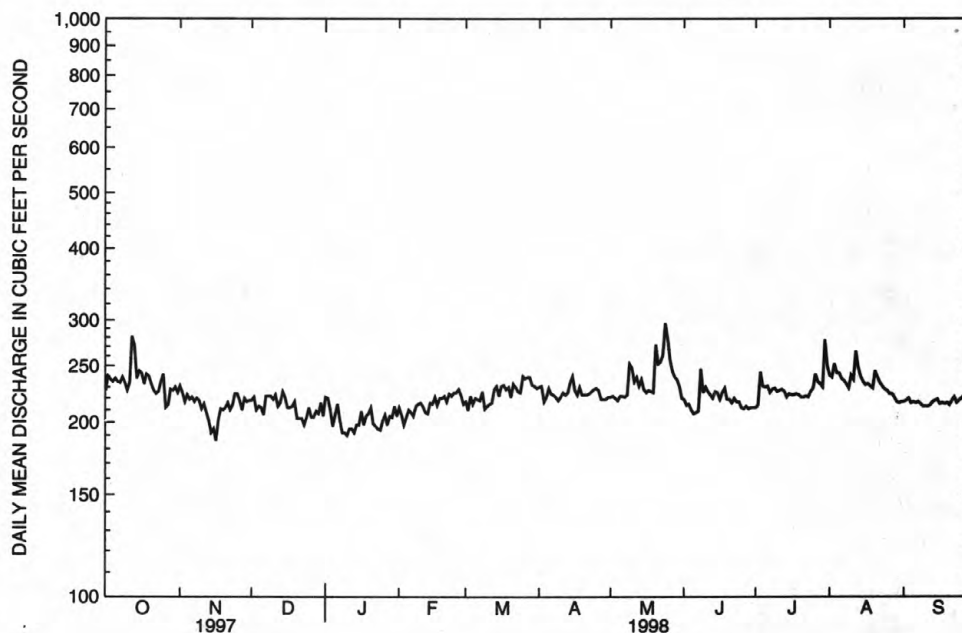
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1967 - 1998

ANNUAL TOTAL	83906	81125	
ANNUAL MEAN	230	222	201
HIGHEST ANNUAL MEAN			231
LOWEST ANNUAL MEAN			188
HIGHEST DAILY MEAN	281	Oct 12	296
LOWEST DAILY MEAN	186	Nov 16	186
ANNUAL SEVEN-DAY MINIMUM	199	Nov 12	193
INSTANTANEOUS PEAK FLOW (STAGE)			367
INSTANTANEOUS PEAK STAGE			1.46
ANNUAL RUNOFF (AC-FT)	166400	160900	145800
10 PERCENT EXCEEDS	249	239	225
50 PERCENT EXCEEDS	230	221	199
90 PERCENT EXCEEDS	212	205	182

* Backwater from ice.



DISMAL RIVER NEAR THEDFORD

PLATTE RIVER BASIN

157

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued
(Hydrologic and bench-mark station and Radiochemical program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DISCHARGE, INST. FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH	TEMPER- ATURE WATER (°C) (00010)	BAROMETRIC		HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)			
				WATER WHOLE FIELD (STAND- ARD UNITS) (00400)		PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)		FILTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)				
NOV	06...	1300	219	179	8.7	8.0	695	10.5	67	83	159		
APR	13...	1200	228	156	8.2	13.5	685	9.3	70	82	155		
MAY	19...	1200	227	186	8.3	17.5	691	8.4	70	19	162		
JUN	16...	1400	223	185	8.2	19.5	684	8.8	73	89	158		
SEP	15...	1130	217	173	8.2	16.0	693	8.7	66	81	160		
DATE		SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	
	NOV	06...	149	.22	94.0	21	3.4	7.0	5.3	5.5	.77	.33	53
	APR	13...	150	.21	96.3	22	3.4	6.9	4.9	5.8	.87	.28	54
	MAY	19...	114	.22	99.3	22	3.4	7.1	5.1	6.0	.74	.36	55
	JUN	16...	155	.21	95.1	23	3.7	8.1	5.2	5.5	.86	.34	53
	SEP	15...	153	.22	93.7	21	3.2	10	5.3	5.8	1.1	.31	55
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	
	NOV	06...	.022	.546	<.020	.23	.14	.154	.196	.148	5.4	<1.0	E4.3
	APR	13...	.011	.462	.037	.37	<.10	.219	.137	.144	<10	<4.0	1.4
	MAY	19...	<.010	.476	.038	.43	.10	.212	.132	.150	<10	<4.0	1.3
	JUN	16...	<.010	.389	.034	.51	.11	.216	.124	.011	<10	<4.0	2.2
	SEP	15...	.015	.510	.031	.15	<.10	.172	.127	.135	<10	<4.0	1.7

PLATTE RIVER BASIN

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE

LOCATION.--Lat 41°01'53", long 98°44'25", in NW¹/₄ NW¹/₄ sec.12, T.12 N., R.13 W., Buffalo County, Hydrologic Unit 10210004, 5 ft downstream and 30 ft shoreward from left downstream corner of county highway bridge, 0.6 mi northeast of St. Michael, 3.4 mi upstream from Sweet Creek, and at mile 9.0.

DRAINAGE AREA.--2,320 mi², of which about 1,590 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,921.26 ft above sea level. Prior to June 22, 1947, water-stage recorder, and June 25 to Sept. 30, 1947, nonrecording gage, at present site at datum 2.00 ft higher. Oct. 1, 1947 to July 3, 1958, nonrecording gage at present site and datum. July 4, 1958 to Sept. 7, 1960, water-stage recorder at site 600 ft upstream at present datum. Sept. 8, 1960 to June 24, 1968, water-stage recorder at site 100 ft upstream at present datum. June 25 to Nov. 21, 1968, nonrecording gage at present site and datum. Nov. 22, 1968 to May 19, 1981, water-stage recorder at site 40 ft upstream at present datum. May 20 to July 16, 1981, water-stage recorder at site 70 ft upstream at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Minor irrigation developments above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	319	242	237	391	248	362	286	148	199	231	148
2	189	319	238	241	306	251	375	276	140	188	239	142
3	183	314	237	241	261	233	368	268	146	181	235	145
4	172	302	232	256	248	225	364	260	150	172	227	143
5	167	287	232	239	246	205	372	253	158	758	227	139
6	157	274	227	248	267	201	397	236	158	1400	211	138
7	150	257	e230	245	246	221	543	220	148	604	200	129
8	152	243	e230	231	237	194	577	205	207	614	168	131
9	157	241	e235	158	238	e170	406	205	265	394	149	131
10	159	236	e230	e130	273	e150	318	215	278	341	168	126
11	162	235	e225	e145	278	e140	347	210	293	301	191	122
12	280	223	e225	e160	263	e160	375	211	325	258	197	125
13	412	230	e235	e140	264	e190	351	233	267	230	244	122
14	350	223	e245	e160	258	255	356	217	383	210	191	134
15	282	217	e250	e190	271	360	447	217	471	181	150	141
16	273	201	e245	e230	284	280	392	289	607	164	160	142
17	255	249	e245	e250	287	278	363	207	593	149	177	148
18	247	254	e245	e240	285	239	355	185	1100	135	149	143
19	247	278	233	e235	273	213	351	183	700	124	173	134
20	238	253	233	e235	273	199	335	195	563	114	156	132
21	228	226	237	e230	278	204	313	197	501	110	223	133
22	233	236	234	e225	271	220	293	201	452	151	350	136
23	240	225	230	e235	277	288	277	370	583	211	183	137
24	226	229	232	e235	268	286	280	237	750	226	150	153
25	455	225	237	e235	265	270	293	229	628	359	162	163
26	455	222	238	e280	247	281	302	209	454	416	178	166
27	353	218	232	e330	251	460	299	197	348	276	178	159
28	338	213	242	e390	251	1310	291	189	278	432	152	156
29	363	244	238	e420	---	707	287	176	247	418	145	153
30	381	253	239	e460	---	438	293	165	216	347	155	150
31	344	---	227	480	---	387	---	155	---	249	149	---
TOTAL	8043	7446	7300	7731	7557	9263	10682	6896	11557	9912	5868	4221
MEAN	259	248	235	249	270	299	356	222	385	320	189	141
MAX	455	319	250	480	391	1310	577	370	1100	1400	350	166
MIN	150	201	225	130	237	140	277	155	140	110	145	122
AC-FT	15950	14770	14480	15330	14990	18370	21190	13680	22920	19660	11640	8370

e Estimated

PLATTE RIVER BASIN

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06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE--Continued

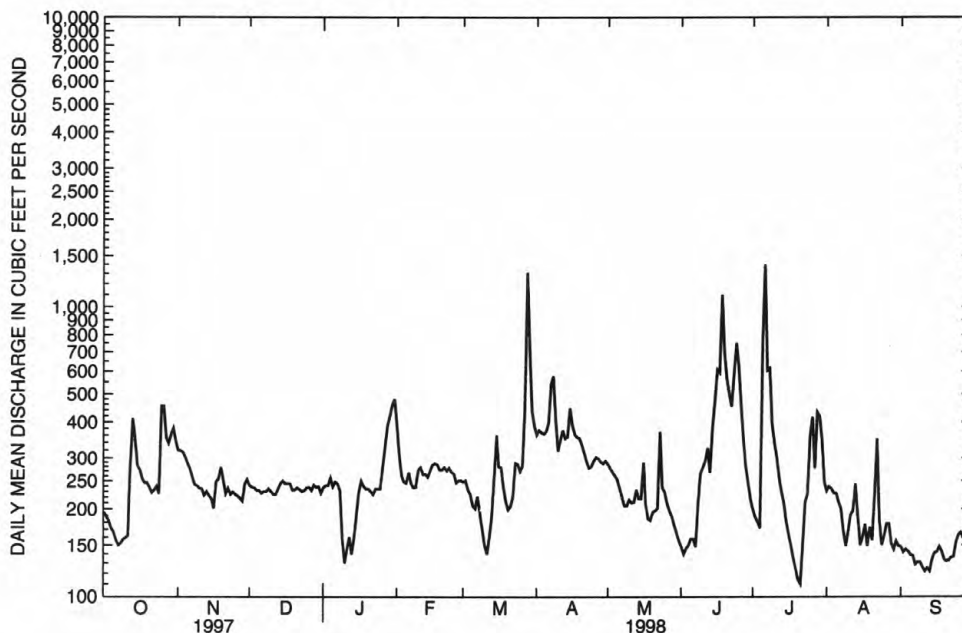
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	174	191	180	183	261	355	277	302	422	224	153	151
MAX	619	272	275	281	543	1747	549	562	2741	1121	482	370
(WY)	1947	1947	1994	1973	1966	1978	1984	1951	1947	1993	1962	1949
MIN	87.5	129	116	96.5	138	201	171	176	126	26.5	21.3	51.0
(WY)	1957	1957	1956	1972	1989	1981	1992	1975	1981	1980	1955	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1944 - 1998	
ANNUAL TOTAL	82925		96476			
ANNUAL MEAN	227		264		239	
HIGHEST ANNUAL MEAN					483	
LOWEST ANNUAL MEAN					161	
HIGHEST DAILY MEAN	1240 Aug 14		1400 Jul 6		28000 Jun 23 1947	
LOWEST DAILY MEAN	53 Jul 13		110 Jul 21		.00 Aug 5 1980	
ANNUAL SEVEN-DAY MINIMUM	70 Jul 7		127 Sep 7		.65 Aug 4 1980	
INSTANTANEOUS PEAK FLOW (STAGE)			1780 Jul 6		*50000 Jun 22 1947	
					**27500 (11.00) Jun 24 1947	
INSTANTANEOUS PEAK STAGE			5.37 Jul 6		12.00 Jun 22 1947	
ANNUAL RUNOFF (AC-FT)	164500		191400		173200	
10 PERCENT EXCEEDS	305		391		340	
50 PERCENT EXCEEDS	232		236		192	
90 PERCENT EXCEEDS	112		149		104	

* Maximum discharge, estimated.

** Maximum discharge, computed.



SOUTH LOUP RIVER AT ST. MICHAEL

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: June 1946 to June 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 19,300 mg/L June 19, 1946; minimum daily, 13 mg/L Dec. 30, 31, 1951.

SEDIMENT LOADS: Maximum daily, 672,000 tons June 22, 1947; minimum daily, 6.1 tons Dec. 30, 31, 1951.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE		TIME	DIS-CHARGE, INST. FT ³ /S (00061)	SPECIFIC CON-DUCTANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (°C) (00020)	TEMPER-ATURE WATER (°C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)
OCT	17...	1105	250	430	8.4	13.0	11.5	--	--	--
NOV	20...	1020	254	457	8.5	8.0	2.5	--	--	--
DEC	19...	1130	236	469	8.5	6.0	2.0	--	--	--
FEB	09...	1030	231	463	8.6	4.0	2.0	--	--	--
APR	01...	0930	360	473	8.5	7.0	5.0	33	200	216
MAY	13...	1015	246	452	8.5	21.5	18.0	--	--	--
JUN	30...	0850	212	378	8.6	22.5	24.0	55	160	180
AUG	04...	0920	223	408	8.6	19.5	22.0	--	--	--
SEP	15...	1010	139	410	8.5	23.0	21.0	--	--	--

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

[illegible]

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE

LOCATION.--Lat 41°18'10", long 98°52'45", in SW¹/₄ NW¹/₄ sec. 1, T. 15 N., R. 14 W., Sherman County, Hydrologic Unit 10210003, in control house of outlet works of Sherman Dam, 5 mi northeast of Loup City.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Mercury-column pressure gage read once daily. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam; closure date of dam, August 1960. First diversions from Middle Loup River, Nov. 8, 1962. Usable capacity, 65,237 acre-ft between elevations 2,118.5 ft, sill of canal outlet works, and 2,162.3 ft, crest of spillway. Dead and inactive storage, 3,839 acre-ft below elevation 2,118.5 ft. Figures given herein represent total contents. Water is used for irrigation of Farwell Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70,810 acre-ft June 25, 1989, elevation, 2,162.9 ft; minimum observed since appreciable storage was attained, 9,450 acre-ft Aug. 2, 1980, elevation, 2,127.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 69,650 acre-ft July 3, elevation, 2,162.5 ft; minimum observed, 47,140 acre-ft Sept. 8, elevation, 2153.7 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,157.3	55,670	--
Oct. 31.....	2,157.1	55,170	-500
Nov. 30.....	2,156.5	53,700	-1,470
Dec. 31.....	2,156.0	52,480	-1,220
CAL YR 1997	--	--	+240
Jan. 31.....	2,155.6	51,530	-950
Feb. 28.....	2,155.3	50,820	-710
Mar. 31.....	2,155.2	50,580	-240
Apr. 30.....	2,155.8	52,000	+1,140
May 31.....	2,162.1	68,500	+16,500
June 30.....	2,162.4	69,360	+860
July 31.....	2,156.4	63,760	-5,600
Aug. 31.....	2,154.4	48,730	-15,030
Sept. 30.....	2,157.4	55,920	+7,190
WTR YR 1998	--	--	+250

* Elevations read on or near last day of month.

PLATTE RIVER BASIN

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06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION.--Lat 41°12'13", long 98°26'46", in SE¹/₄ NW¹/₄ NE¹/₄ sec.10, T.14 N., R.10 W., Howard County, Hydrologic Unit 10210003, on left bank at St. Paul, 50 ft upstream from bridge on U.S. Highway 281, 6 mi upstream from confluence with North Loup River, and at mile 74.0.

DRAINAGE AREA.--8,075 mi², of which about 3,130 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1036: 1943. WSP 1390: 1896, 1903, 1928(M), 1944. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,776.61 ft above sea level. See WSP 1918 for history of changes prior to June 5, 1957. June 5, 1957, to Mar. 16, 1978, water-stage recorder on left bank approximately 410 ft upstream at same datum. Mar. 17 to May 31, 1978, nonrecording gage on railroad bridge immediately upstream at same datum.

REMARKS.--Records fair except for periods of estimated record, which are poor. Diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1850	2410	1310	1630	2280	1410	1880	590	864	702	683	434
2	2020	2390	1260	1490	2200	1500	1610	431	844	564	912	411
3	2180	2270	1260	1300	2010	1370	1440	514	835	413	1160	390
4	2160	2100	1240	1300	1820	1470	1500	567	1050	266	1100	379
5	2160	2000	1050	1370	1670	1360	1170	753	1540	615	958	379
6	2220	1980	1040	1370	1710	1490	1180	836	1310	4160	1150	400
7	2220	1960	969	1370	2010	1580	1960	849	1240	1710	1120	379
8	2200	1930	992	1420	1800	e1450	2870	823	1650	1280	1030	390
9	2260	1990	1290	1360	1950	e1200	2440	923	2740	838	901	379
10	2250	1960	1390	511	1930	e920	1530	1190	1940	585	971	395
11	2110	1870	1430	345	1770	e740	1240	1160	1920	578	1040	405
12	2740	1950	1530	544	1650	e780	1290	1140	2250	565	1450	436
13	3660	2010	1550	591	1510	e1040	1350	1010	1700	545	1400	447
14	2870	1790	1530	1040	1440	e2200	1340	992	1930	530	1260	472
15	2190	1900	1550	1220	1560	2440	2060	934	3390	358	1210	708
16	2170	1740	1640	1300	1610	2040	1850	934	1900	283	1140	715
17	2140	1430	1660	e1200	1570	1630	1310	934	1700	249	1210	836
18	2240	1450	1620	e1160	1490	1510	1160	842	2580	249	1050	749
19	2240	1570	1450	e1200	1380	1450	1130	868	3600	232	807	765
20	2110	1670	1510	e1200	1380	1520	1120	938	2370	257	723	647
21	2170	1570	1490	e1140	1300	1410	955	1070	1640	274	1560	559
22	2270	1680	1530	e1160	1240	1260	756	1390	1360	492	2110	639
23	2300	1540	1450	e1160	1300	1430	725	1620	1810	1440	1870	740
24	2340	1550	1400	e1200	1500	1470	699	1720	2300	629	1290	847
25	2780	1540	1440	e1350	1510	1380	633	1420	1810	390	1120	859
26	2890	1430	1460	e1550	1410	1280	927	1260	1500	492	860	934
27	2320	1430	1470	e1700	1620	1920	882	1210	1270	773	723	1390
28	2280	1300	1560	e1950	1520	4200	622	1140	1090	e790	544	1830
29	2330	1430	1530	e2150	---	2890	548	1040	1010	807	505	1740
30	2540	1380	1600	2260	---	1960	503	979	865	937	480	1740
31	2490	---	1620	2110	---	1950	---	896	---	774	445	---
TOTAL	72700	53220	43821	40651	46140	50250	38680	30973	52008	22777	32782	21394
MEAN	2345	1774	1414	1311	1648	1621	1289	999	1734	735	1057	713
MAX	3660	2410	1660	2260	2280	4200	2870	1720	3600	4160	2110	1830
MIN	1850	1300	969	345	1240	740	503	431	835	232	445	379
AC-FT	144200	105600	86920	80630	91520	99670	76720	61430	103200	45180	65020	42440

e Estimated

PLATTE RIVER BASIN

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1158	1281	1148	1164	1528	1765	1337	1148	1181	649	576	763
MAX	2444	1865	1836	1844	2478	4022	2291	2476	3253	3642	1171	1790
(WY)	1993	1996	1971	1990	1984	1978	1984	1995	1967	1993	1992	1985
MIN	404	771	686	770	969	1181	767	519	395	124	174	240
(WY)	1964	1965	1969	1972	1979	1970	1981	1975	1972	1980	1980	1980

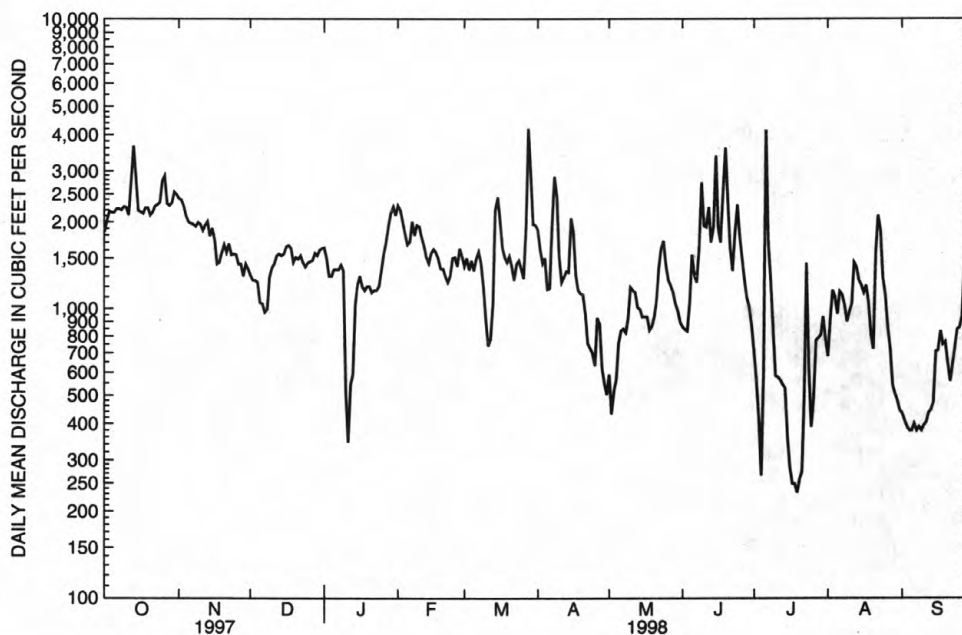
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1963 - 1998

ANNUAL TOTAL	526217	505396	
ANNUAL MEAN	1442	1385	1138
HIGHEST ANNUAL MEAN			1832 1993
LOWEST ANNUAL MEAN			831 1970
HIGHEST DAILY MEAN	8520 Feb 21	4200 Mar 28	21800 Jun 12 1984
LOWEST DAILY MEAN	232 Jul 10	232 Jul 19	23 Aug 9 1980
ANNUAL SEVEN-DAY MINIMUM	319 Jul 20	272 Jul 15	31 Aug 4 1980
INSTANTANEOUS PEAK FLOW		6820 Jun 15	72000 Jun 23 1947
INSTANTANEOUS PEAK STAGE		4.22 Jun 15	12.69 Jun 23 1947
ANNUAL RUNOFF (AC-FT)	1044000	1002000	824800
10 PERCENT EXCEEDS	2270	2220	1850
50 PERCENT EXCEEDS	1350	1380	1080
90 PERCENT EXCEEDS	529	544	358



MIDDLE LOUP RIVER AT ST. PAUL

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. FT ³ /S (00061)	SPECIFIC CONDUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)
OCT	15...	1250	2160	290	8.4	18.0	13.0	--	--
NOV	19...	1050	1590	307	8.4	9.5	1.0	--	--
DEC	18...	0900	1700	299	8.4	3.0	.5	--	--
FEB	12...	1010	1660	299	8.4	4.5	2.0	--	--
MAR	30...	0915	1990	303	8.4	5.0	9.5	74	120
MAY	14...	1320	1040	343	8.6	32.0	25.5	--	--
JUN	29...	1230	1090	314	8.6	30.0	27.0	40	140
AUG	03...	0950	1130	308	8.6	24.0	23.5	--	--
SEP	17...	1010	934	285	8.5	26.0	22.0	--	--

***ACID NEUTRALIZING CAPACITY, formerly ALKALINITY**

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06786000 NORTH LOUP RIVER AT TAYLOR, NE

LOCATION.--Lat 41°46'37", long 99°22'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.21 N., R.18 W., Loup County, Hydrologic Unit 10210006, on left bank 25 ft downstream from bridge on U.S. Highway 183, 0.4 mi north of Taylor and at mile 80.6.

DRAINAGE AREA.--2,350 mi², of which about 186 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to current year.

REVISED RECORDS.--WSP 856: 1937. WSP 1310: 1939(M). WSP 1730: 1956-57(M). WSP 1918: 1952. WDR NE-75: 1974. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,248.21 ft above sea level. Prior to Sept. 28, 1938, nonrecording gage at same site and datum. Sept. 28, 1938, to July 16, 1958, water-stage recorder at site 450 ft upstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are poor. North Loup Public Power and Irrigation District canal began diversion from river in April 1939 at point 5 mi above station. Several smaller diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	528	707	638	653	738	374	667	555	458	461	350	312
2	536	677	619	676	706	364	761	537	436	453	425	304
3	542	610	596	658	694	499	767	521	495	674	389	304
4	542	601	571	574	621	645	689	423	482	855	433	282
5	545	629	592	541	644	618	723	381	468	795	460	283
6	525	620	547	658	559	627	699	494	493	628	392	289
7	530	629	613	610	591	560	706	486	518	566	360	288
8	573	639	612	620	676	475	569	499	791	560	335	273
9	578	648	615	487	710	e440	610	567	1010	565	324	294
10	547	629	602	286	734	e360	643	621	793	553	452	318
11	552	648	509	316	676	e390	666	637	739	502	423	312
12	795	610	533	372	646	e420	697	694	676	465	447	303
13	952	574	545	e360	671	734	654	754	599	385	478	303
14	747	504	536	e420	656	825	651	660	993	326	486	440
15	601	351	591	e450	685	725	785	696	1150	281	437	493
16	610	331	580	e500	683	685	893	632	942	255	368	481
17	639	430	560	e470	688	750	717	544	966	239	347	455
18	610	583	623	e470	734	746	663	488	907	231	293	430
19	610	620	629	e480	715	716	642	447	758	225	239	402
20	601	687	628	e470	639	702	607	549	676	220	403	376
21	620	677	611	e450	566	686	604	565	628	216	459	416
22	610	620	628	e460	655	603	564	564	606	254	365	461
23	629	583	613	e450	655	679	556	783	678	265	332	468
24	668	592	619	e460	692	674	566	701	696	361	302	483
25	639	610	600	e500	707	648	628	744	694	409	292	468
26	521	584	588	e540	683	716	634	715	708	382	335	463
27	565	613	638	e600	637	780	603	690	687	321	338	441
28	728	621	626	e640	433	746	552	642	654	284	326	444
29	739	685	604	e660	---	763	557	579	598	253	307	444
30	739	665	651	685	---	701	553	533	507	258	298	448
31	718	---	583	700	---	692	---	486	---	316	294	---
TOTAL	19339	17977	18500	16216	18494	19343	19626	18187	20806	12558	11489	11478
MEAN	624	599	597	523	661	624	654	587	694	405	371	383
MAX	952	707	651	700	738	825	893	783	1150	855	486	493
MIN	521	331	509	286	433	360	552	381	436	216	239	273
AC-FT	38360	35660	36690	32160	36680	38370	38930	36070	41270	24910	22790	22770

e Estimated

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	484	513	483	488	560	620	599	545	486	319	304	389
MAX	706	731	669	738	863	896	836	1128	870	716	527	665
(WY)	1984	1987	1994	1941	1984	1993	1993	1995	1995	1962	1992	1951
MIN	295	373	365	331	402	454	405	300	285	119	143	200
(WY)	1941	1976	1979	1937	1939	1995	1940	1940	1940	1974	1969	1940

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

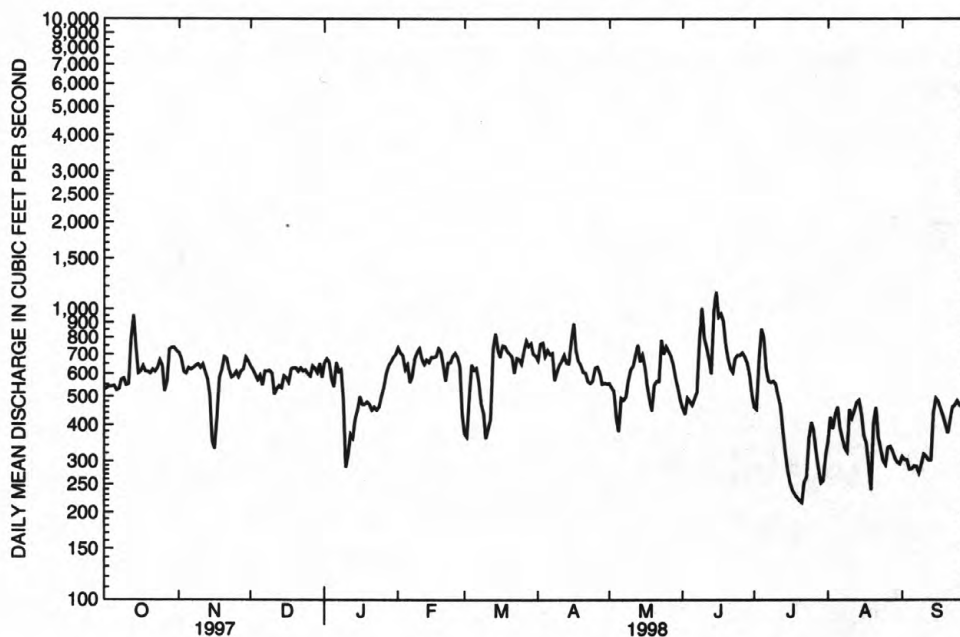
FOR 1998 WATER YEAR

WATER YEARS 1937 - 1998

ANNUAL TOTAL	203908	204013	
ANNUAL MEAN	559	559	483
HIGHEST ANNUAL MEAN			644
LOWEST ANNUAL MEAN			354
HIGHEST DAILY MEAN	1060	Feb 18	1150
LOWEST DAILY MEAN	180	Jul 20	216
ANNUAL SEVEN-DAY MINIMUM	198	Jul 19	234
INSTANTANEOUS PEAK FLOW (STAGE)			1240 (4.46)
INSTANTANEOUS PEAK STAGE			*4.56
ANNUAL RUNOFF (AC-FT)	404500	404700	349700
10 PERCENT EXCEEDS	711	724	682
50 PERCENT EXCEEDS	580	584	476
90 PERCENT EXCEEDS	349	323	269

* Backwater from ice.

** From floodmark; ice jam.



NORTH LOUP RIVER AT TAYLOR

06787300 CALAMUS RESERVOIR NEAR BURWELL, NE

LOCATION.--Lat 41°49'38", long 99°13'11", in SW¹/₄ SW¹/₄ sec.31, T.22 N., R.16W., Garfield County, Hydrologic Unit 10210008, near right bank in control house of outlet works of Calamus Dam on Calamus River, 4 mi upstream from mouth, 5.5 mi northwest of Burwell.

DRAINAGE AREA.--1,050 mi², approximately, of which about 110 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1985 to current year.

GAGE.--Fluid gage with continuous recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 1, 1985. Usable capacity, 102,750 acre-ft between elevations 2213.3 ft, bottom of conservation pool, and 2244.0 ft, top of inlet structure; inactive capacity, 23,830 acre-ft between elevations 2185.0 ft, sill of outlet gate, and 2213.3 ft. Dead storage 817 acre-ft below elevation 2185.0 ft. Figures given herein represent total contents. Water is used for irrigation of North Loup project of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 131,100 acre-ft June 25, 1988, elevation, 2244.71 ft; minimum observed since appreciable storage was attained, 62,080 acre-ft Oct. 1, 1991, elevation 2228.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 129,770 acre-ft June 9, elevation, 2244.46 ft; minimum observed, 84,500 acre-ft Oct. 1, elevation, 2234.47 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,234.49	84,570	--
Oct. 31.....	2,238.82	102,640	+18,070
Nov. 30.....	2,241.95	117,180	+14,540
Dec. 31.....	2,242.12	118,000	+820
CAL YR 1997	--	--	+2,660
Jan. 31.....	2,242.11	117,950	-50
Feb. 28.....	2,242.30	118,880	+930
Mar. 31.....	2,242.60	120,360	+1,480
Apr. 30.....	2,244.09	127,860	+7,500
May 31.....	2,244.16	128,220	+360
June 30.....	2,244.18	128,320	+100
July 31.....	2,241.29	114,000	-14,320
Aug. 31.....	2,237.47	96,750	-17,250
Sept. 30.....	2,234.91	86,220	-10,530
WTR YR 1998	--	--	+1,650

* Elevations read on or near last day of month.

PLATTE RIVER BASIN

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE

LOCATION.--Lat 41°15'48", long 98°26'56", in NW¹/₄ NW¹/₄ NE¹/₄ sec.22, T.15 N., R.10 W., Howard County, Hydrologic Unit 10210007, on right bank 310 ft downstream from bridge on U.S. Highway 281, 3 mi north of St. Paul, and 2.9 mi upstream from confluence with Middle Loup River.

DRAINAGE AREA.--4,302 mi², of which about 1,240 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WSP 1390: 1896. WDR NE-75-1: 1974. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,759.29 ft, adjusted, above sea level. See WSP 1918 for history of changes prior to Oct. 1, 1954.

REMARKS.--Records good except for period of estimated record, which is poor. Natural flow affected by diversions and ground-water withdrawals for irrigation and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1260	1320	1570	4730	1040	1450	692	857	1060	808	717
2	1120	1330	1240	1510	3980	870	1300	741	813	833	963	719
3	971	1300	1140	1600	3630	841	1340	761	715	794	1160	806
4	944	1160	1120	1390	3350	1030	1260	765	630	1010	1090	832
5	861	1160	1050	1360	2850	1160	1080	656	625	1700	1050	852
6	787	1130	1010	1500	2560	1100	1160	509	628	1720	1050	862
7	709	1190	1020	1780	2320	1140	1350	426	620	1390	1000	854
8	645	1220	1210	1820	2110	1020	1510	496	742	1100	954	853
9	703	1240	1380	e1500	1600	897	1310	502	1430	1030	872	848
10	723	1190	1500	e1150	1290	861	1140	595	2170	880	917	854
11	728	1230	1660	e1200	1370	817	977	686	1930	809	1300	846
12	920	1240	1700	e1140	1320	745	938	846	1790	747	1010	843
13	1420	1250	1640	e1060	1300	1020	950	898	1600	718	952	891
14	1580	1280	1670	e1220	1300	1670	963	893	1550	636	952	933
15	1190	1160	1520	e1240	1280	1520	1400	944	1760	544	958	1080
16	981	914	1450	e1400	1220	1280	1010	973	2530	467	944	1280
17	893	743	1360	e1350	1260	1340	1200	957	1840	410	871	1410
18	878	884	1340	e1350	1280	1570	1010	775	5700	453	758	1360
19	857	1010	1360	e1350	1390	1660	880	678	2520	468	636	1270
20	773	1100	1430	e1300	1370	1560	841	929	1590	493	576	1250
21	792	1140	1420	e1200	1310	1610	819	804	1580	488	748	1200
22	790	1180	1360	e1200	1290	1650	710	1250	1480	1420	991	1230
23	815	1090	1330	e1200	1380	1660	669	1160	1540	1680	1100	1070
24	856	1030	1400	e1250	1330	1670	616	1280	1260	829	1050	951
25	1340	1060	1410	e1450	1310	1560	598	1440	1280	689	1020	890
26	1450	1020	1420	e1900	1350	1520	991	1200	1530	841	861	936
27	1200	1140	1420	e2300	1360	1800	1030	1210	1620	877	824	900
28	1110	1330	1410	e3000	1270	2530	875	1150	1620	871	839	882
29	1310	1320	1470	e3300	---	1750	753	1090	1560	802	835	869
30	1370	1310	1620	e3800	---	1480	723	1040	1370	749	801	864
31	1290	---	1550	e4400	---	1650	---	932	---	732	730	---
TOTAL	31186	34611	42930	52790	52110	42021	30853	27278	46880	27240	28620	29152
MEAN	1006	1154	1385	1703	1861	1356	1028	880	1563	879	923	972
MAX	1580	1330	1700	4400	4730	2530	1510	1440	5700	1720	1300	1410
MIN	645	743	1010	1060	1220	745	598	426	620	410	576	717
AC-FT	61860	68650	85150	104700	103400	83350	61200	54110	92990	54030	56770	57820

e Estimated

PLATTE RIVER BASIN

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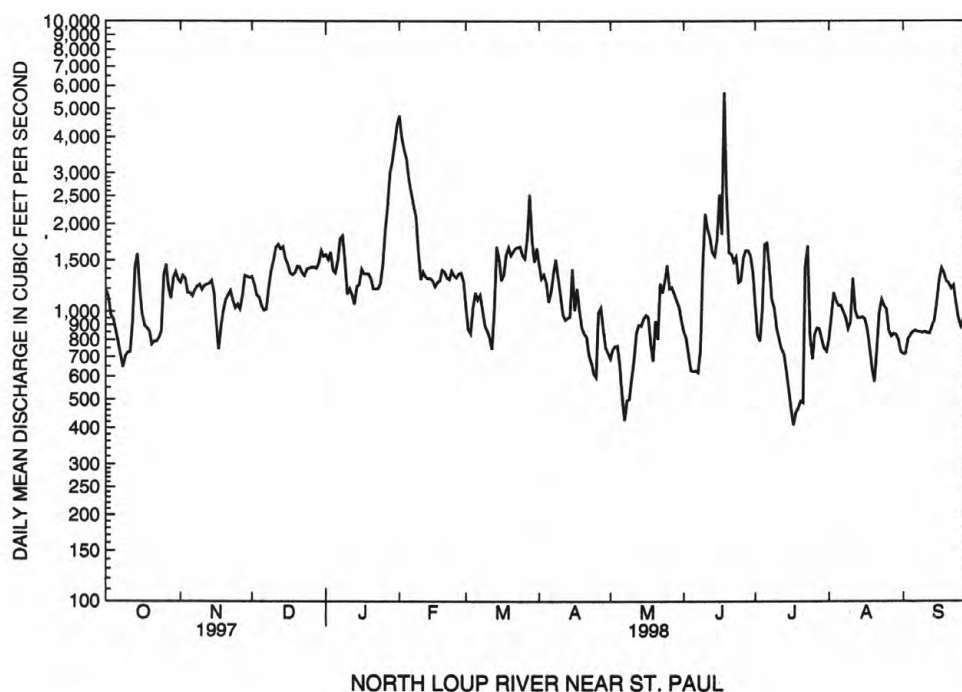
06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	891	922	872	885	1124	1266	1103	1058	1050	705	677	819
MAX	1224	1198	1385	1703	1861	2589	1843	1743	2516	2471	1812	1384
(WY)	1996	1980	1998	1998	1998	1936	1987	1995	1947	1993	1966	1965
MIN	568	647	433	517	603	787	702	576	606	199	221	326
(WY)	1940	1938	1930	1940	1942	1934	1946	1943	1934	1974	1941	1940

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1928 - 1998	
ANNUAL TOTAL	432943		445671			
ANNUAL MEAN	1186		1221		946	
HIGHEST ANNUAL MEAN					1223	
LOWEST ANNUAL MEAN					668	
HIGHEST DAILY MEAN	5210 Feb 20		5700 Jun 18		21300 Jun 22 1947	
LOWEST DAILY MEAN	536 May 22		410 Jul 17		85 Aug 8 1941	
ANNUAL SEVEN-DAY MINIMUM	653 Jun 24		475 Jul 15		98 Aug 6 1941	
INSTANTANEOUS PEAK FLOW			8050 Jun 18		90000 Jun 6 1896	
INSTANTANEOUS PEAK STAGE			5.17 Jun 18		*14.90 Jun 6 1896	
ANNUAL RUNOFF (AC-FT)	858700		884000		685400	
10 PERCENT EXCEEDS	1560		1660		1360	
50 PERCENT EXCEEDS	1160		1150		892	
90 PERCENT EXCEEDS	726		723		503	

* From floodmark, datum then in use.



06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to September 1978.

WATER TEMPERATURES: July 1974 to September 1978.

SUSPENDED SEDIMENT DISCHARGE: April 1946 to June 1953.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 426 microsiemens Jan. 18, 1976; minimum daily, 138 microsiemens Oct. 21, 1977.

WATER TEMPERATURES: Maximum, 34.0°C July 17, 1978; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 17,400 mg/L Apr. 27, 1951; minimum daily, not determined.

SEDIMENT LOADS: Maximum daily, 463,000 tons June 22, 1947; minimum daily, 20 tons Aug. 3, 1946, Feb. 22, 1953.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE INST. FT ³ /S (00061)	SPECIFIC CONDUCT- ANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	
OCT	15	0920	973	225	8.8	25.0	23.0	--	--	--
NOV	19	1340	1080	282	8.2	14.0	2.0	--	--	--
DEC	18	1300	1370	248	8.0	12.5	2.5	--	--	--
FEB	13	1050	1290	240	8.3	8.5	4.5	--	--	--
MAR	30	1240	1500	266	8.4	6.0	10.0	38	110	122
MAY	14	0940	823	259	8.5	26.0	21.0	--	--	--
JUN	29	0845	1580	223	8.6	27.5	26.0	35	91	110
AUG	03	1320	1150	242	9.0	29.0	26.5	--	--	--
SEP	17	1310	1380	221	8.5	30.5	24.5	--	--	-

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

[illegible]

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE

LOCATION.--Lat 41°25'03", long 97°47'37", in NE1/4 NE1/4 sec.32, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, at skimming weir on downstream end of settling basin on left bank, 2 mi downstream from point of diversion and 3.5 mi southwest of Genoa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 1,566.26 ft above sea level. Prior to Oct. 1, 1956, at datum 3.0 feet higher.

REMARKS.--Records good. Canal diverts from Loup River in sec. 6, T.16 N., R.4 W.; water is used in powerplants near Monroe and Columbus and is returned to Platte River 1.5 mi downstream from Loup River. Diversion began Dec. 2, 1936.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2700	2890	2540	1830	314	1040	2180	2120	1550	2640	2040	1750
2	2530	2950	2940	2130	259	179	1940	2100	1390	2320	2080	1740
3	2560	2900	2860	1040	466	666	1780	2070	1410	2070	2320	1500
4	2490	2820	1950	328	149	996	1870	1710	1460	1900	2560	1360
5	2410	2820	135	168	194	985	1880	1500	1500	2100	2530	1390
6	2150	2860	102	203	598	664	1790	1430	1630	2670	2460	1380
7	2020	2820	82	271	1190	147	2410	1390	1580	2890	2580	1370
8	1980	2760	129	265	1480	155	2890	1310	1840	2980	2480	1420
9	1990	2700	370	259	1960	143	2670	1370	2200	2990	2390	1050
10	2260	2900	412	157	1980	203	2420	1390	2500	2620	2200	1060
11	2260	2940	290	33	1980	184	2030	1420	2710	2470	2380	458
12	2410	2060	250	132	2010	162	1890	1380	2550	2430	2570	50
13	2710	2730	319	262	2050	194	1450	1450	2840	2310	2580	48
14	2170	2360	313	329	2380	211	1950	1380	2800	2190	2460	46
15	2280	211	561	550	2480	204	2400	1380	2920	2000	2410	46
16	2640	113	1400	756	2360	425	2640	1470	2700	1720	2450	81
17	2650	97	820	136	2210	590	2580	1460	2680	1520	2370	103
18	2710	748	1030	681	2780	551	2430	1400	2660	1360	2260	79
19	2650	1770	1480	1240	2950	550	2240	1390	2740	1410	2130	67
20	2690	2340	1580	1120	2990	864	2240	1450	2790	1440	1850	58
21	2720	2900	622	322	2860	1120	2170	1510	2770	1490	2000	83
22	2680	2840	742	906	2700	1640	2040	1600	2570	2250	2380	112
23	2510	2910	826	1550	2440	1790	1870	1810	2020	2660	2600	108
24	2500	2860	774	1300	2830	1970	1750	1910	2100	2870	2500	101
25	2850	2800	606	1440	2730	1900	1660	1990	2090	2550	2350	82
26	2770	2800	759	1070	2730	1740	1800	2010	2180	2270	2300	28
27	2120	2780	375	535	2830	1670	2420	1710	2480	2420	2200	25
28	2870	2790	916	569	2720	1730	2510	1780	2980	2450	2120	65
29	2880	2850	574	468	---	1580	2620	1670	2940	2330	2020	58
30	2860	2880	1160	152	---	1810	2300	1660	2880	2230	1950	51
31	2850	---	987	161	---	1980	---	1650	---	2170	1840	---
TOTAL	77870	72199	27904	20363	54620	28043	64820	49870	69460	69720	71360	15769
MEAN	2512	2407	900	657	1951	905	2161	1609	2315	2249	2302	526
MAX	2880	2950	2940	2130	2990	1980	2890	2120	2980	2990	2600	1750
MIN	1980	97	82	33	149	143	1450	1310	1390	1360	1840	25
AC-FT	154500	143200	55350	40390	108300	55620	128600	98920	137800	138300	141500	31280

PLATTE RIVER BASIN

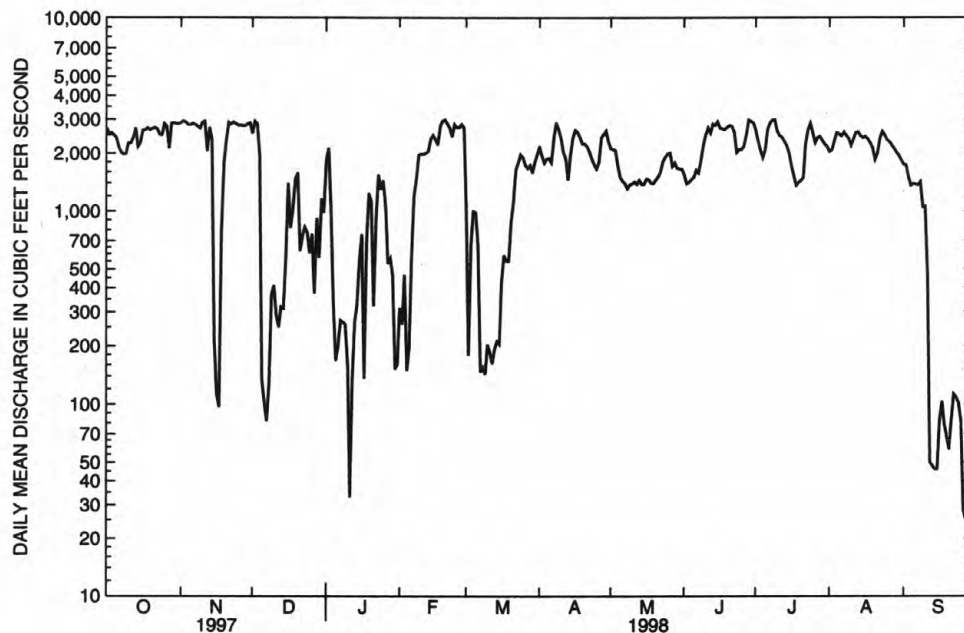
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06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1946	1824	976	1169	1540	1838	2140	1993	1938	1368	1244	1557
MAX	2730	2624	1886	2194	2375	2673	2778	2767	2944	2706	2382	2640
(WY)	1987	1985	1982	1983	1987	1990	1977	1957	1962	1962	1996	1951
MIN	544	508	155	129	438	506	537	378	534	309	417	526
(WY)	1938	1939	1975	1985	1958	1939	1939	1984	1938	1980	1971	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1938 - 1998
ANNUAL TOTAL	729047	621998	
ANNUAL MEAN	1997	1704	1626
HIGHEST ANNUAL MEAN			1986
LOWEST ANNUAL MEAN			585
HIGHEST DAILY MEAN	2960 May 31	2990 Feb 20	3560 Nov 3 1994
LOWEST DAILY MEAN	82 Dec 7	25 Sep 27	.00 Aug 16 1966
ANNUAL SEVEN-DAY MINIMUM	217 Dec 5	59 Sep 24	11 Dec 3 1978
ANNUAL RUNOFF (AC-FT)	1446000	1234000	1178000
10 PERCENT EXCEEDS	2800	2820	2580
50 PERCENT EXCEEDS	2150	1940	1740
90 PERCENT EXCEEDS	883	166	517



LOUP RIVER POWER CANAL NEAR GENOA

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE

LOCATION.--Lat 41°25'05", long 97°43'25", in SW¹/₄ NE¹/₄ sec.25, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on right bank 12 ft downstream from bridge on State Highway 39, 2 mi south of Genoa, 3 mi upstream from Beaver Creek, 6 mi downstream from diversion dam of Loup River Public Power District and at mile 26.8.

DRAINAGE AREA.--14,320 mi², of which about 5,620 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1928 to June 1932, October 1943 to current year (October 1953 to April 1955, monthly discharge only).

REVISED RECORDS.--WDR NE-94-1: Drainage area; 1993 (maximum stage).

GAGE.--Water-stage recorder. Datum of gage is 1,540.13 ft above sea level. Aug. 17, 1928, to June 30, 1932, nonrecording gage at present site at datum 1.49 ft higher. Oct. 1, 1943, to Sept. 16, 1974, (Apr. 26 to Dec. 22, 1949, wire-weight gage only), at present site and datum. Sept. 17, 1974, to Nov. 21, 1977, at site 300 ft upstream at present datum.

REMARKS.--Records fair except for period of estimated record, which is poor. Natural flow of stream affected by power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records do not include flow of Loup River power canal (station 06792500), which diverts at point 6 mi upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	682	612	1330	3700	2620	2620	599	221	116	41	117
2	57	636	375	1020	3430	3350	2440	461	274	82	54	98
3	54	683	316	1920	3140	2560	2410	431	281	71	93	108
4	49	474	969	2950	3160	2210	2050	517	190	69	213	121
5	48	246	2710	3180	2910	2430	1590	480	355	74	172	113
6	46	297	2810	3060	2310	2920	1830	465	568	1330	96	123
7	43	238	2600	2720	1950	3490	2630	429	380	3940	145	120
8	40	254	2510	2860	1780	3260	4360	490	681	921	127	112
9	37	315	2650	2640	1480	2860	4160	494	1470	767	81	594
10	39	311	2930	1850	1610	2850	3190	619	3480	827	99	770
11	39	232	2870	1030	1450	1160	2820	872	2530	161	64	1500
12	61	765	3100	810	1620	621	2440	1410	2350	116	245	2660
13	2110	119	2930	598	1350	1790	2820	1360	1550	68	342	2710
14	2250	324	2960	990	865	2760	2510	981	2600	54	233	2830
15	1050	2750	3130	1370	803	4640	2990	1110	3940	55	174	2990
16	538	2650	2730	1620	940	3680	2930	1160	4100	53	199	3590
17	363	2010	3160	3000	962	3490	2340	1020	2940	53	172	3730
18	228	1480	2770	2650	799	3480	1650	1370	6710	56	87	3790
19	92	888	2540	2880	611	3650	1190	799	6310	70	63	3480
20	159	736	2020	2790	565	3260	1210	751	3480	52	76	3370
21	106	192	2960	e2500	657	3110	1220	940	1450	51	118	2920
22	74.0	131	3090	e2300	701	2220	824	1000	964	412	349	2490
23	74	196	2880	2120	1150	1720	834	2230	1590	1850	610	2770
24	62	106	2950	2110	577	1590	521	2300	3050	1580	542	2740
25	388	104	3280	1890	570	1830	510	2370	3180	143	287	3120
26	1140	76	2940	2300	545	2150	602	1480	1960	65	239	3030
27	1130	72	3180	3950	911	2870	2330	1180	1210	91	136	2970
28	555	200	2710	3770	1580	4760	1270	703	403	108	115	2950
29	611	339	3080	4240	---	4020	651	715	285	57	109	3060
30	838	466	2360	4170	---	2900	520	408	215	46	96	2670
31	819	---	2410	4030	---	2720	---	322	---	44	107	---
TOTAL	13168.0	17972	78532	74648	42126	86971	59462	29466	58717	13382	5484	61646
MEAN	425	599	2533	2408	1505	2806	1982	951	1957	432	177	2055
MAX	2250	2750	3280	4240	3700	4760	4360	2370	6710	3940	610	3790
MIN	37	72	316	598	545	621	510	322	190	44	41	98
AC-FT	26120	35650	155800	148100	83560	172500	117900	58450	116500	26540	10880	122300

e Estimated

PLATTE RIVER BASIN

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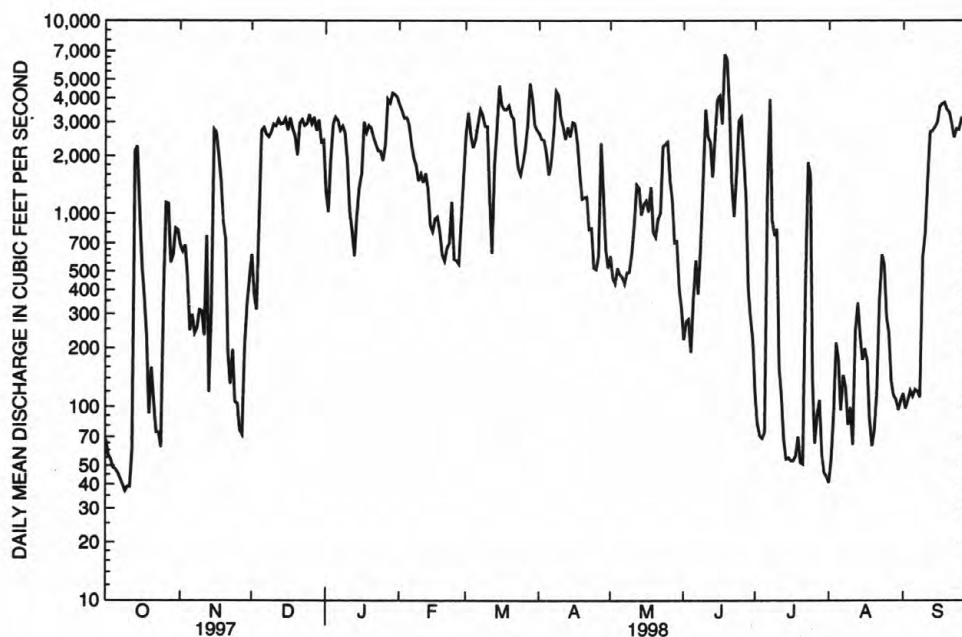
06793000 LOUP RIVER NEAR GENOA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEARS (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	133	433	1069	952	1353	1667	656	626	904	375	263	239
MAX	934	1650	2533	2632	4763	5650	3745	4777	7365	6214	4253	2055
(WY)	1947	1992	1998	1990	1997	1978	1984	1984	1947	1993	1966	1998
MIN	3.76	41.1	177	67.5	72.4	95.0	18.5	8.18	7.54	.17	1.15	.000
(WY)	1977	1953	1956	1982	1955	1981	1981	1963	1981	1963	1970	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1944 - 1998
ANNUAL TOTAL	408760.0	541574.0	
ANNUAL MEAN	1120	1484	719
HIGHEST ANNUAL MEAN			1993
LOWEST ANNUAL MEAN			182
HIGHEST DAILY MEAN	25000 Feb 21	6710 Jun 18	70800 Aug 13 1966
LOWEST DAILY MEAN	18 May 19	37 Oct 9	.00 Aug 20 1956
ANNUAL SEVEN-DAY MINIMUM	24 May 16	42 Oct 5	.00 Aug 20 1956
INSTANTANEOUS PEAK FLOW		13300 Jun 18	129000 Aug 13 1966
INSTANTANEOUS PEAK STAGE		8.03 Jun 18	*13.93 Aug 13 1966
ANNUAL RUNOFF (AC-FT)	810800	1074000	521200
10 PERCENT EXCEEDS	2720	3180	2100
50 PERCENT EXCEEDS	490	1030	117
90 PERCENT EXCEEDS	55	75	13

* Based on rating curve extended above 28,000 ft³/s and velocity.



LOUP RIVER NEAR GENOA

PLATTE RIVER BASIN

06794000 BEAVER CREEK AT GENOA, NE

LOCATION.--Lat 41°26'32", long 97°44'11", in NE¹/₄ SE¹/₄ sec.14, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on left bank in city park at southwest corner of Genoa, 0.2 mi downstream from Union Pacific Railroad bridge, 0.2 mi upstream from bridge on State Highway 39, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--677 mi², of which about 429 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1310: 1942(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,542.13 ft above sea level. October 1940 to Nov. 5, 1942, nonrecording gage and Nov. 6, 1942, to Nov. 1, 1955, water-stage recorder, at site 0.4 mi upstream at datum 4.62 ft higher.

REMARKS.--Records fair except for periods of estimated record, which are poor. Natural flow affected slightly by ground-water and surface-water withdrawals for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	148	93	97	133	109	270	152	134	179	47	62
2	82	138	94	96	129	100	256	145	126	164	58	54
3	82	125	92	95	123	93	269	136	127	157	68	49
4	80	118	89	e90	117	e90	269	133	129	186	94	48
5	80	113	88	e86	115	e86	244	131	141	308	85	49
6	79	106	e84	e82	114	e84	220	128	142	498	82	48
7	78	104	e78	e80	110	e82	255	123	151	506	77	50
8	78	105	e74	e78	109	e78	288	119	215	404	71	49
9	73	104	e78	e76	107	e74	448	119	379	410	63	49
10	76	102	e82	e70	111	e70	501	119	361	403	61	49
11	78	102	e88	e68	115	e68	447	120	365	296	53	49
12	93	101	e90	e64	116	e66	366	119	435	264	48	49
13	121	99	e94	e62	116	e62	293	129	338	238	43	52
14	141	99	e98	e60	115	e58	239	146	433	216	33	55
15	149	e90	e100	e64	117	e50	224	139	652	196	38	48
16	124	e82	e104	e72	124	e60	301	141	323	168	36	51
17	111	e80	108	e76	132	e96	435	135	293	144	33	58
18	104	e86	111	e78	146	142	421	137	905	123	29	58
19	100	e90	107	e82	142	147	356	128	1800	106	25	56
20	95	e94	106	e86	136	147	300	127	983	84	27	58
21	91	99	103	e90	133	147	241	126	640	81	83	56
22	91	98	108	e94	134	164	204	153	470	471	108	58
23	96	98	102	e96	133	225	188	220	407	142	163	58
24	93	97	100	e98	134	269	176	281	364	95	104	66
25	114	96	100	e100	134	263	164	251	332	78	87	67
26	125	96	98	e106	127	273	154	236	294	76	79	69
27	144	100	97	e110	130	294	152	218	265	76	79	69
28	129	99	99	e118	117	287	154	256	240	78	79	77
29	127	100	98	e120	---	414	154	184	217	76	77	69
30	142	95	100	e122	---	415	149	164	199	59	70	65
31	156	---	97	e128	---	327	---	147	---	49	68	---
TOTAL	3213	3064	2960	2744	3469	4840	8138	4862	11860	6331	2068	1695
MEAN	104	102	95.5	88.5	124	156	271	157	395	204	66.7	56.5
MAX	156	148	111	128	146	415	501	281	1800	506	163	77
MIN	73	80	74	60	107	50	149	119	126	49	25	48
AC-FT	6370	6080	5870	5440	6880	9600	16140	9640	23520	12560	4100	3360

e Estimated

PLATTE RIVER BASIN

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06794000 BEAVER CREEK AT GENOA, NE--Continued

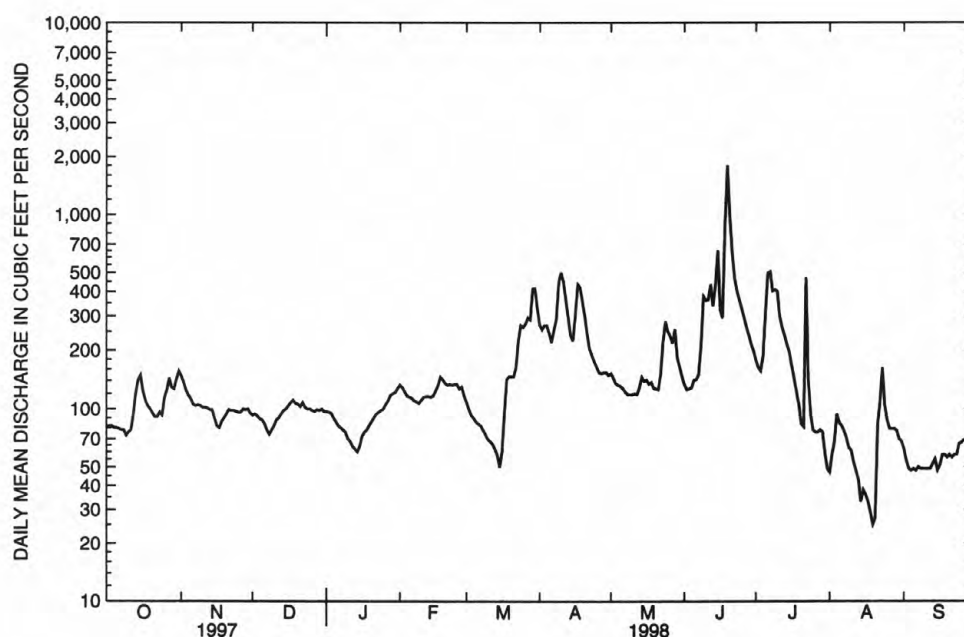
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.2	86.9	84.7	83.4	136	199	166	177	233	141	96.0	81.9
MAX	184	173	150	197	537	688	519	432	808	1248	601	216
(WY)	1987	1983	1973	1973	1971	1993	1984	1984	1967	1950	1966	1993
MIN	43.4	47.6	42.2	48.0	57.4	78.0	74.2	67.3	64.0	12.9	8.72	29.8
(WY)	1981	1941	1977	1957	1979	1981	1981	1981	1980	1980	1976	1976

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1941 - 1998

ANNUAL TOTAL	43502.2	55244	
ANNUAL MEAN	119	151	130
HIGHEST ANNUAL MEAN			268
LOWEST ANNUAL MEAN			70.9
HIGHEST DAILY MEAN	903 Feb 19	1800 Jun 19	10000 Jul 19 1950
LOWEST DAILY MEAN	4.8 Aug 9	25 Aug 19	.41 Jul 25 1974
ANNUAL SEVEN-DAY MINIMUM	12 Aug 4	32 Aug 14	.90 Jul 24 1974
INSTANTANEOUS PEAK FLOW		2010 Jun 19	21200 Jul 19 1950
INSTANTANEOUS PEAK STAGE		11.09 Jun 19	*18.70 Jul 19 1950
ANNUAL RUNOFF (AC-FT)	86290	109600	94400
10 PERCENT EXCEEDS	172	295	209
50 PERCENT EXCEEDS	106	106	89
90 PERCENT EXCEEDS	54	58	49

* Site and datum then in use.



BEAVER CREEK AT GENOA

PLATTE RIVER BASIN

06794650 CLEAR CREEK 1.75 MILE WEST OF POLK COUNTY LINE, NE

LOCATION.--Lat 41°21'07", long 097°24'11", in SE¹/₄ SW¹/₄, sec. 14, T. 16 N., R. 1 W., Polk County, Hydrologic Unit 10200103, on right bank of the upstream side of bridge, 1.75 mi west of Polk County line.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to current year.

GAGE.--Water-stage recorder.

REMARKS.-- Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	19	17	16	e17	e22	69	39	21	31	11	e5.4
2	5.2	18	16	19	e16	e18	71	39	20	29	12	e5.8
3	6.2	16	17	19	e16	e10	56	36	22	26	12	e6.6
4	6.3	15	17	17	e17	e8.4	48	36	22	26	12	e7.2
5	6.1	15	16	17	e19	e7.4	44	35	21	27	11	e7.8
6	6.4	15	16	18	e20	e7.2	41	33	21	27	11	e7.4
7	6.3	14	16	18	e20	e6.8	120	32	21	27	11	e7.0
8	6.4	14	16	18	e20	e6.4	560	31	40	25	11	e6.2
9	6.7	15	17	17	e20	e6.0	468	30	91	24	11	e5.4
10	6.3	15	17	15	e20	e5.6	291	29	146	23	10	e5.2
11	6.2	15	16	13	e21	e5.4	174	29	169	22	10	e5.0
12	7.2	15	17	e13	e21	e5.6	122	29	145	21	9.8	e5.0
13	7.1	15	15	e13	e21	e6.0	95	27	110	20	9.1	e5.0
14	6.9	15	16	e12	e21	e6.2	80	27	117	18	9.1	e5.2
15	6.9	14	17	e11	e20	e6.4	119	30	192	16	8.8	e5.2
16	7.2	14	17	e8.6	e20	e6.4	202	31	294	15	8.7	e5.0
17	6.9	13	17	e6.6	e20	e6.6	143	28	248	14	8.0	e4.8
18	7.1	15	18	e6.4	e20	e6.8	95	27	180	13	8.1	e5.0
19	7.2	15	18	e6.6	e20	e7.4	77	26	118	12	e9.0	e5.2
20	7.4	16	18	e6.8	e20	e9.0	66	28	88	12	e10	e4.8
21	7.7	16	17	e7.0	e20	e12	59	28	71	11	e12	e4.8
22	7.5	16	17	e7.0	e20	e16	54	31	59	24	e14	e4.6
23	7.7	16	18	e7.0	e21	e20	50	31	57	18	e16	e4.8
24	8.5	16	18	e7.0	e21	e24	48	32	55	16	e14	e5.0
25	12	16	18	e7.4	e21	31	46	31	49	15	e13	e5.0
26	11	16	18	e7.6	e21	29	44	29	45	15	e12	e4.9
27	11	15	17	e10	e22	32	42	29	41	14	e11	e4.6
28	9.9	16	18	e11	e22	50	41	26	38	13	e10	e4.3
29	11	17	18	e16	---	115	41	24	36	13	e8.4	e4.3
30	12	18	18	e19	---	99	40	23	34	12	e7.2	e4.2
31	17	---	18	e18	---	65	---	22	---	12	e6.0	---
TOTAL	247.3	465	529	388.0	557	656.6	3406	928	2571	591	326.2	160.7
MEAN	7.98	15.5	17.1	12.5	19.9	21.2	114	29.9	85.7	19.1	10.5	5.36
MAX	17	19	18	19	22	115	560	39	294	31	16	7.8
MIN	5.2	13	15	6.4	16	5.4	40	22	20	11	6.0	4.2
AC-FT	491	922	1050	770	1100	1300	6760	1840	5100	1170	647	319

e Estimated

PLATTE RIVER BASIN

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06794650 CLEAR CREEK 1.75 MILE WEST OF POLK COUNTY LINE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.6	20.8	21.0	15.1	20.3	23.1	54.0	38.7	57.0	15.8	13.1	8.44
MAX	13.2	26.0	25.0	17.6	20.7	25.0	114	49.4	85.7	19.1	25.8	15.2
(WY)	1997	1997	1997	1997	1997	1997	1998	1996	1998	1998	1996	1996
MIN	7.98	15.5	17.1	12.5	19.9	21.2	18.2	29.9	30.6	10.7	2.97	4.78
(WY)	1998	1998	1998	1998	1998	1998	1996	1998	1997	1997	1997	1997

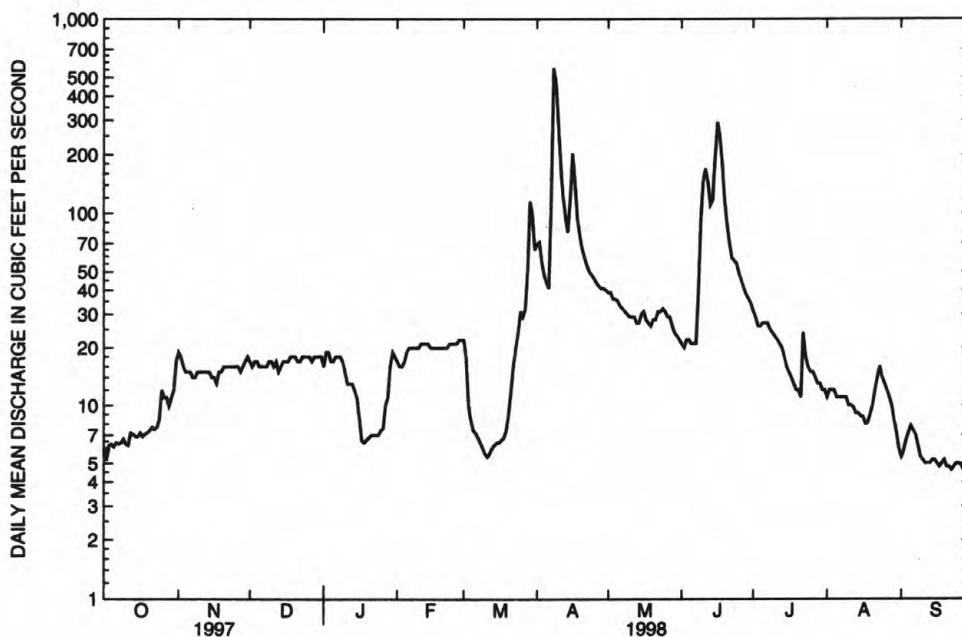
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	6675.9	10825.8	
ANNUAL MEAN	18.3	29.7	25.0
HIGHEST ANNUAL MEAN			29.7
LOWEST ANNUAL MEAN			20.3
HIGHEST DAILY MEAN	72	May 28	560
LOWEST DAILY MEAN	2.5	Aug 23	4.2
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 21	4.6
INSTANTANEOUS PEAK FLOW			629
INSTANTANEOUS PEAK STAGE			7.78
ANNUAL RUNOFF (AC-FT)	13240	21470	18090
10 PERCENT EXCEEDS	32	55	41
50 PERCENT EXCEEDS	17	16	18
90 PERCENT EXCEEDS	3.4	6.2	6.0



CLEAR CREEK 1.75 MILE WEST OF POLK COUNTY LINE

PLATTE RIVER BASIN

06794650 CLEAR CREEK 1.75 MILE WEST OF POLK COUNTY LINE, NE--Continued

WATER-QUALITY RECORDS
Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR ($^{\circ}$ C) (00020)	TEMPER- ATURE WATER ($^{\circ}$ C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
03-25-98	1200	4.68	33	709	7.4	11.5	8.5	719	9.5
04-23-98	1600	4.86	49	664	8.2	25.0	17.8	722	10.4
05-18-98	1630	4.38	26	614	8.1	37.0	24.8	722	10.6
06-08-98	1230	4.54	32	582	7.8	18.0	15.0	720	8.8
06-09-98	1100	5.36	84	527	7.7	21.0	16.0	726	7.0
06-24-98	1430	4.96	55	656	7.8	33.0	25.0	719	8.0
07-21-98	1600	4.01	11	547	7.4	34.0	27.0	723	9.0
08-18-98	1730	3.87	7.8	529	8.1	35.0	28.0	727	9.0

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
03-25-98	86	3.41	.045	3.46	.059	.82	.50	.88	.55	4.0	4.3
04-23-98	116	5.33	.032	5.36	.042	.41	.28	.45	.32	5.7	5.8
05-18-98	135	--	<.010	<.050	.039	2.2	.29	2.2	.33	--	--
06-08-98	93	7.33	.196	7.52	.886	2.5	1.3	3.4	2.2	9.7	11
06-09-98	75	4.63	.502	5.13	.644	2.1	1.2	2.7	1.9	7.0	7.9
06-24-98	103	5.41	.063	5.47	.047	1.1	.45	1.1	.50	6.0	6.6
07-21-98	120	5.81	.070	5.88	.040	1.1	.29	1.2	.33	6.2	7.1
08-18-98	121	5.76	.072	5.83	.047	.69	.36	.74	.41	6.2	6.6

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄) (00660)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82680)
03-25-98	.218	.148	.145	.44	<.0020	<.0020	<.002	.060	<.0020	<.0020	<.0030
04-23-98	.146	.142	.048	.15	--	--	--	--	--	--	--
05-18-98	.250	<.010	<.010	--	--	--	--	--	--	--	--
06-08-98	.942	.693	.641	2.0	--	--	--	--	--	--	--
06-09-98	1.60	1.18	1.16	3.5	--	--	--	--	--	--	--
06-24-98	.251	.280	.277	.85	--	--	--	--	--	--	--
07-21-98	.120	.059	.055	.17	--	--	--	--	--	--	--
08-18-98	.146	.083	.086	.26	--	--	--	--	--	--	--

WATER-QUALITY RECORDS

[illegible][illegible][illegible]

06794650 CLEAR CREEK 1.75 MILE WEST OF POLK COUNTY LINE, NE--Continued

WATER-QUALITY RECORDS

Platte River Tributaries Study

WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PLATTE RIVER BASIN

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06795500 SHELL CREEK NEAR COLUMBUS, NE

LOCATION.--Lat 41°31'33", long 097°16'55", in NE¹/₄ NW¹/₄ sec.23, T.18 N., R.1 E., Platte County, Hydrologic Unit 10200201, on right bank 80 ft upstream from county road bridge, 1 mi upstream from Loseke Creek, 7 mi northeast of Columbus, and at mile 32.2.

DRAINAGE AREA.--294 mi².

PERIOD OF RECORD.--August 1947 to September 1975, October 1977 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,435 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	33	22	e24	e30	e20	70	45	28	90	40	29
2	14	30	22	e21	e31	e20	62	42	28	82	42	27
3	14	26	22	e20	e32	e21	53	41	29	83	55	26
4	16	25	23	e19	e30	e22	50	39	89	97	55	25
5	18	24	e21	e19	e26	e22	48	39	36	432	53	24
6	15	25	e20	e20	e23	e23	46	39	36	259	45	23
7	14	25	e21	e19	e23	e23	144	37	32	420	45	22
8	15	25	e20	e18	e22	e24	368	36	194	260	45	21
9	17	25	e21	e18	e22	e23	205	33	568	147	40	21
10	17	24	e21	e18	e21	e20	122	32	220	73	38	21
11	17	24	e19	e17	e21	e15	86	29	83	75	37	21
12	18	24	e20	e17	e22	e16	70	30	159	64	36	21
13	23	24	e22	e18	e22	e20	63	30	238	67	35	21
14	41	25	e25	e18	e23	e23	57	55	144	68	34	21
15	25	e23	e25	e19	e23	e28	238	39	443	68	35	21
16	23	e21	e26	e20	e25	e31	218	35	454	61	32	21
17	20	e19	e26	e21	e27	e34	102	33	112	57	29	21
18	20	e18	e24	e21	e28	e38	77	30	385	55	29	21
19	20	e21	e23	e20	e28	e36	68	29	836	55	26	21
20	17	e23	e22	e19	e27	e34	63	40	1290	77	24	21
21	16	24	e20	e19	e27	e32	60	70	372	60	231	21
22	18	25	e19	e20	e26	e30	56	52	117	134	1430	21
23	21	24	e19	e21	e26	e33	53	74	95	214	694	22
24	22	23	e19	e22	e26	e35	52	41	367	64	101	22
25	38	23	e19	e22	e24	e40	51	42	253	56	47	22
26	75	24	e20	e23	e23	e45	51	36	178	52	40	21
27	48	24	e21	e24	e21	e60	49	34	136	52	36	22
28	36	23	e21	e25	e20	286	46	45	117	52	34	21
29	34	24	e22	e26	---	155	44	36	106	52	33	20
30	39	23	e24	e27	---	83	45	31	99	47	31	20
31	35	---	e26	e28	---	69	---	30	---	43	30	---
TOTAL	760	721	675	643	699	1361	2717	1224	7244	3416	3482	661
MEAN	24.5	24.0	21.8	20.7	25.0	43.9	90.6	39.5	241	110	112	22.0
MAX	75	33	26	28	32	286	368	74	1290	432	1430	29
MIN	14	18	19	17	20	15	44	29	28	43	24	20
AC-FT	1510	1430	1340	1280	1390	2700	5390	2430	14370	6780	6910	1310

e Estimated

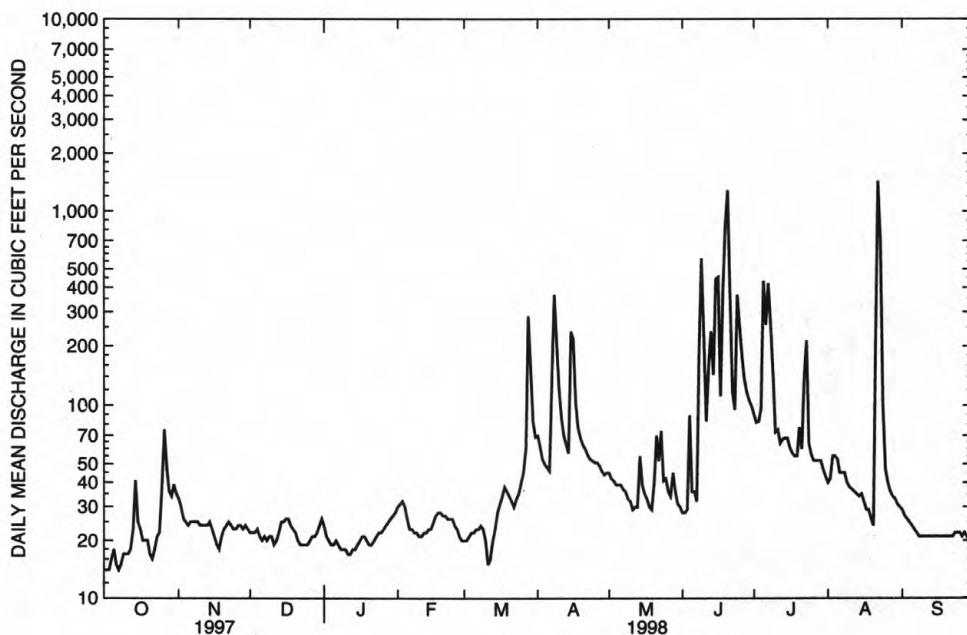
PLATTE RIVER BASIN

06795500 SHELL CREEK NEAR COLUMBUS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.7	16.5	15.1	18.5	52.6	96.8	41.8	68.8	118	65.3	40.0	24.8
MAX	74.6	59.9	42.2	84.7	322	469	210	552	702	515	202	195
(WY)	1983	1983	1994	1973	1971	1993	1984	1982	1990	1993	1951	1989
MIN	2.90	5.21	5.38	6.03	3.00	13.1	8.14	8.59	9.25	3.77	3.03	3.23
(WY)	1959	1959	1981	1957	1950	1981	1981	1981	1980	1974	1955	1980

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1948 - 1998	
ANNUAL TOTAL	16374.3		23603			
ANNUAL MEAN	44.9		64.7		48.0	
HIGHEST ANNUAL MEAN					136	
LOWEST ANNUAL MEAN					13.6	
HIGHEST DAILY MEAN	1000	Feb 20	1430	Aug 22	4900	Jun 17 1990
LOWEST DAILY MEAN	8.1	Sep 6	14	Oct 1	.40	Jul 27 1954
ANNUAL SEVEN-DAY MINIMUM	9.0	Aug 23	15	Oct 1	.86	Jul 22 1954
INSTANTANEOUS PEAK FLOW			1570	Jun 20	8000	Jun 17 1990
INSTANTANEOUS PEAK STAGE			12.53	Jun 20	22.76	Jun 17 1990
ANNUAL RUNOFF (AC-FT)	32480		46820		34750	
10 PERCENT EXCEEDS	69		114		66	
50 PERCENT EXCEEDS	30		28		16	
90 PERCENT EXCEEDS	14		19		5.9	



SHELL CREEK NEAR COLUMBUS

PLATTE RIVER BASIN

187

06796000 PLATTE RIVER AT NORTH BEND, NE

LOCATION.--Lat 41°27'10", long 96°45'50", in SE¹/₄ sec.7, T.17 N., R.6 E., Dodge County, Hydrologic Unit 10200201, on left bank 80 ft upstream from bridge on State Highway 79, 1 mi south of North Bend, 5 mi downstream from Shell Creek, and at mile 73.0.

DRAINAGE AREA.--70,400 mi², of which about 57,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1949 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,262.32 ft above sea level. Prior to Sept. 12, 1951, nonrecording gage and Sept. 12, 1951, to Sept. 30, 1970, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Records fair except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5650	7880	7950	7550	e8700	7140	12700	7230	4430	4910	4900	2690
2	5040	8460	7880	7550	e8800	7290	11900	6030	3900	3870	4370	2500
3	4770	7870	7060	7540	e9000	6740	10500	5210	4010	3000	4990	2990
4	4120	7020	6460	7180	e9000	6260	9150	6090	3610	3430	5580	3260
5	4030	7250	5050	6970	8800	6100	9510	5280	4580	3290	6260	3110
6	4450	7180	5980	6350	8410	6150	11300	4640	4610	3010	6010	3590
7	4500	8220	5330	6360	8680	6100	12800	4620	4490	5650	6020	3110
8	5270	7680	4550	e5600	7990	5620	18700	5220	6880	7640	5760	3490
9	5250	7970	4910	e4500	8960	4600	18900	3650	11300	4980	5260	3550
10	4760	8490	5660	e3000	8260	4030	17200	4830	9930	5180	4420	3360
11	5140	7790	6160	e1500	7980	3750	15400	4230	11300	4860	3610	3560
12	5530	7550	6940	e900	7230	1710	13600	4740	9540	4120	4220	3340
13	5950	6590	6640	e600	7960	e2300	11700	5500	9550	3980	4520	3500
14	9550	7350	6500	e420	7850	e3500	10700	5010	11800	3850	4080	3740
15	8360	5710	6330	e630	7130	e4500	11400	5210	13500	4110	4140	3560
16	6320	6860	7140	e1550	7860	e4700	12800	4310	15100	3880	3740	3700
17	6100	6210	5360	e1100	7870	e5000	11500	5610	12800	2580	3250	3950
18	6560	5660	7000	e3000	6930	e5600	11100	5180	11200	2590	3390	4140
19	6290	6470	7200	e7800	7430	e6000	9460	4540	21500	2560	2790	4200
20	5760	6610	6060	e8200	7420	e6600	8810	4540	15700	2280	2530	4310
21	6380	7200	6060	e8400	6670	e8000	7220	5820	11800	1810	e6000	4200
22	5070	7150	6200	e8400	7220	7650	7680	3680	9420	3450	e5600	4250
23	5880	6930	6640	e8000	6020	7990	6940	4880	6290	4880	e4400	4040
24	4120	7980	6710	e8000	7540	8250	6650	5860	7660	4750	3690	4120
25	6380	6180	6210	e7800	7140	7510	5370	8550	8350	5750	3530	4020
26	7410	6400	6500	e7800	7670	7460	5020	9260	7820	3480	2840	4050
27	8290	6820	6540	e8000	6670	8080	5980	8550	5980	3270	2930	4050
28	7130	5950	6560	e8200	7720	10600	7970	7850	5870	3630	2650	4210
29	7110	7070	6780	e8300	---	e13000	6120	7040	4650	3650	2200	4240
30	7460	7000	7070	e8600	---	14400	8120	5820	4630	4270	2810	4290
31	9260	---	7020	e8600	---	12700	---	4870	---	3740	2710	---
TOTAL	187890	213500	198450	178400	218910	209330	316200	173850	262200	122450	129200	111120
MEAN	6061	7117	6402	5755	7818	6753	10540	5608	8740	3950	4168	3704
MAX	9550	8490	7950	8600	9000	14400	18900	9260	21500	7640	6260	4310
MIN	4030	5660	4550	420	6020	1710	5020	3650	3610	1810	2200	2500
AC-FT	372700	423500	393600	353900	434200	415200	627200	344800	520100	242900	256300	220400

e Estimated

PLATTE RIVER BASIN

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3796	4119	3584	3432	5392	7535	6095	5948	6656	3735	2519	3088
MAX	10130	9462	8581	7361	11850	16870	19400	21770	25340	17070	8021	9022
(WY)	1974	1985	1985	1984	1984	1993	1984	1984	1983	1993	1983	1986
MIN	1624	1938	1413	1206	2689	3685	2881	1952	1932	381	442	936
(WY)	1980	1956	1956	1957	1979	1957	1967	1955	1981	1974	1955	1955

SUMMARY STATISTICS

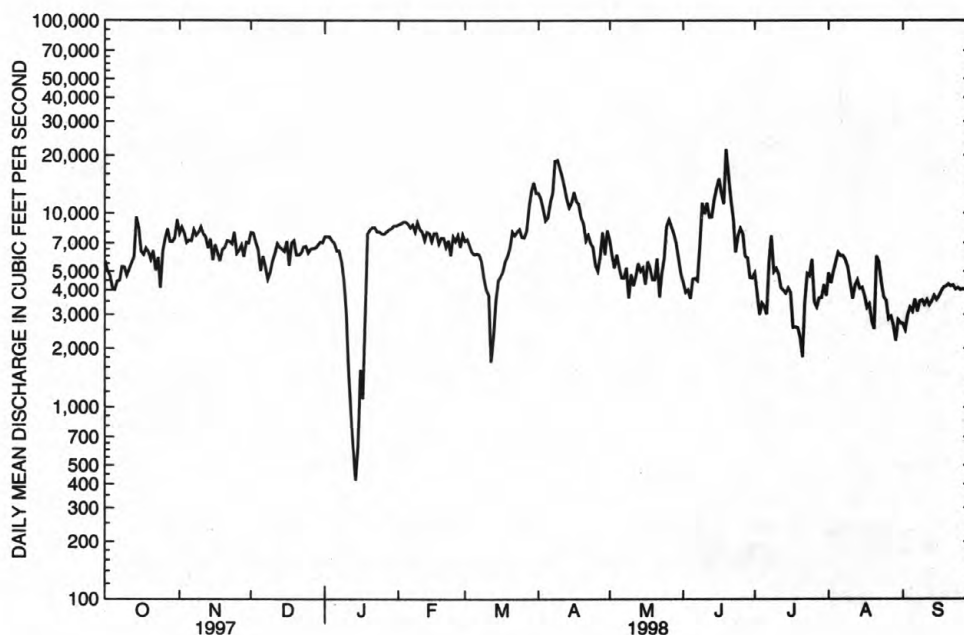
FOR 1997 CALENDAR

FOR 1998 WATER YEAR

WATER YEARS 1949 - 1998

ANNUAL TOTAL	2124135	2321500	
ANNUAL MEAN	5820	6360	4640
HIGHEST ANNUAL MEAN			10070
LOWEST ANNUAL MEAN			2168
HIGHEST DAILY MEAN	22000 Feb 21	21500 Jun 19	82300 Mar 10 1993
LOWEST DAILY MEAN	533 Jul 30	420 Jan 14	36 Jul 29 1974
ANNUAL SEVEN-DAY MINIMUM	1060 Jul 25	957 Jan 11	146 Jul 24 1974
INSTANTANEOUS PEAK FLOW (STAGE)		27400 Jun 19	112000 (10.04) Mar 29 1960
INSTANTANEOUS PEAK STAGE		6.92 Jun 19	*15.55 Mar 19 1978
ANNUAL RUNOFF (AC-FT)	4213000	4605000	3361000
10 PERCENT EXCEEDS	7960	9440	8450
50 PERCENT EXCEEDS	5800	6100	3760
90 PERCENT EXCEEDS	3400	3350	1420

* Ice jam.



PLATTE RIVER AT NORTH BEND

PLATTE RIVER BASIN

189

06796500 PLATTE RIVER NEAR LESHARA

LOCATION.--Lat 41°19'12", long 96°24'14", in NW¹/₄ sec.34., T. 16 N., R. 9 E., Douglas County, Hydrologic Unit 10200202, on left bank 250 ft downstream from bridge on Nebraska Highway 64, 1.0 mi southeast of Leshara, NE.

PERIOD OF RECORD.--June 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,143.86 ft above sea level.

REMARKS.-- Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6480	9870	e7600	7740	e9400	7240	12800	7830	6020	4960	4970	2810
2	6220	9970	e8400	7970	e9400	5820	12800	7340	5310	5560	5330	2540
3	6010	9600	e7600	8050	e9600	6650	12100	7340	5300	3740	5000	2920
4	5360	9210	6570	7530	e9600	6270	11200	6990	4780	3940	6150	3560
5	4940	8700	5000	8110	e9600	6170	10900	6690	5650	5310	6250	3290
6	5020	8430	5270	7500	e9200	6500	11600	6380	5740	4930	6760	4320
7	5560	8010	5590	e7000	e9200	6510	12500	6260	5890	6360	6710	3680
8	5570	7560	4820	e6400	e9000	6760	19100	6170	7010	8360	7160	3630
9	5580	8760	5220	e5800	e9200	6360	20700	6350	11300	6810	6900	3670
10	5130	7510	5650	e5200	e9400	5500	17500	5770	11000	5500	6310	3150
11	5250	7880	6250	e4400	e9600	e5400	15200	5820	12100	5980	5760	3170
12	6050	7400	6580	e3900	9950	e5200	13100	7140	10100	4420	4930	3150
13	6030	6660	7020	e3700	8380	e5400	11900	6500	9440	4620	6060	2640
14	8480	7220	6660	e3800	8230	e5600	11700	6660	12800	3880	6080	3280
15	9400	6830	6910	e5000	8300	e5800	11700	7180	13600	4180	5660	3230
16	7680	6450	7320	e7000	7930	e6000	12800	6260	16900	4500	5670	3430
17	6680	7280	6860	e8800	8360	e6400	12100	6460	14200	3010	5230	3840
18	6580	6400	7030	e9000	8300	e7000	11500	6740	11900	2450	4660	4480
19	6560	6520	7440	e9000	8190	e7600	10100	6640	18000	2670	4630	4570
20	5950	7300	7390	e9000	7780	e8600	9790	6100	16000	2740	3840	4700
21	5820	7090	7010	e9000	7400	e9800	8330	6870	11900	1930	7060	4510
22	5510	7550	5830	e9400	7380	9700	8620	5890	9660	3480	7370	4500
23	6290	7670	7640	e9000	7330	8500	8590	6300	6930	4830	e6400	4380
24	5710	7840	6980	e8800	6450	9440	8070	e7200	7820	4940	e5200	4160
25	6960	7320	6930	e8800	5610	9340	7610	e10000	8280	6040	4590	4260
26	7920	7300	7280	e8800	6270	9210	6720	e10300	8140	4940	4630	3810
27	10100	e7400	7630	e8800	7280	9190	6630	e9800	6450	4110	3520	3780
28	9230	e7600	7020	e9000	6260	10800	8120	8690	6130	3520	3610	4000
29	8660	e7800	7530	e9200	---	15500	7140	7940	6020	4120	3050	4160
30	8520	e8400	7050	e9200	---	15300	8120	6520	4290	3600	3110	4350
31	9480	---	7550	e9200	---	13200	---	5850	---	3820	3190	---
TOTAL	208730	233530	209630	234100	232600	246760	339040	217980	278660	139250	165790	111970
MEAN	6733	7784	6762	7552	8307	7960	11300	7032	9289	4492	5348	3732
MAX	10100	9970	8400	9400	9950	15500	20700	10300	18000	8360	7370	4700
MIN	4940	6400	4820	3700	5610	5200	6630	5770	4290	1930	3050	2540
AC-FT	414000	463200	415800	464300	461400	489400	672500	432400	552700	276200	328800	222100

e Estimated

PLATTE RIVER BASIN

06796500 PLATTE RIVER AT LESHARA, NE--Continued

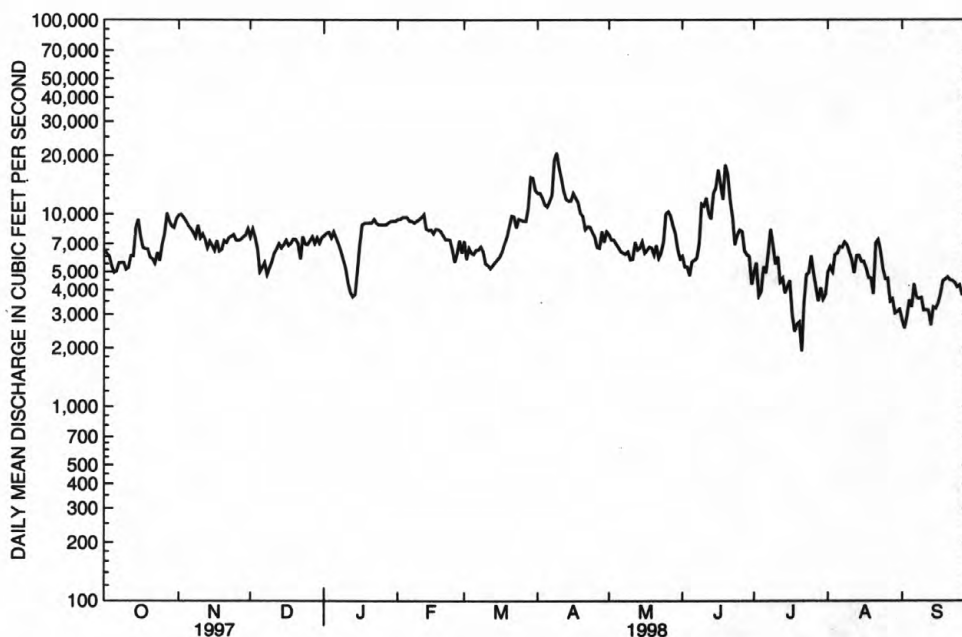
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5762	6107	5690	5236	7690	6841	8023	7778	11130	5690	4690	4566
MAX	6733	7784	6762	7552	10040	7960	11300	10650	17460	10540	7163	6793
(WY)	1998	1998	1998	1998	1997	1998	1998	1995	1995	1995	1996	1996
MIN	4022	4611	4487	3413	5648	5823	5752	5768	8077	3706	3000	3093
(WY)	1995	1995	1996	1996	1995	1996	1996	1997	1997	1997	1994	1994

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1994 - 1998	
ANNUAL TOTAL	2355660		2618040			
ANNUAL MEAN	6454		7173		6644	
HIGHEST ANNUAL MEAN					7173	
LOWEST ANNUAL MEAN					6113	
HIGHEST DAILY MEAN	22800	Feb 22	20700	Apr 9	24300	May 29 1995
LOWEST DAILY MEAN	1060	Jul 31	1930	Jul 21	900	Dec 19 1996
ANNUAL SEVEN-DAY MINIMUM	1280	Jul 25	2970	Jul 16	1280	Jul 25 1997
INSTANTANEOUS PEAK FLOW (STAGE)			25300	Jun 19	e32500(*8.30)	Feb 22 1997
INSTANTANEOUS PEAK STAGE			7.04	Jun 19	*11.84	Feb 9 1996
ANNUAL RUNOFF (AC-FT)	4672000		5193000		4813000	
10 PERCENT EXCEEDS	8810		10100		10000	
50 PERCENT EXCEEDS	6340		6830		5910	
90 PERCENT EXCEEDS	3690		3860		3020	

e Estimated.

* Backwater from ice.



PLATTE RIVER NEAR LESHARA

PLATTE RIVER BASIN

191

06797500 ELKHORN RIVER AT EWING, NE

LOCATION.--Lat 42°16'03", long 98°20'11", in NW¹/₄ SW¹/₄ sec.35, T.27 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 800 ft downstream from bridge on State. Highway L-45B, 0.8 mi north of Ewing, 1.5 mi upstream from South Fork Elkhorn River, and at mile 199.

DRAINAGE AREA.--1,400 mi², approximately, of which about 740 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,836.24 ft above sea level, levels by Nebraska Department of Roads. Prior to Oct. 22, 1952, at site 300 ft upstream at same datum.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	104	101	128	194	e140	652	601	204	436	76	63
2	62	106	103	125	191	e145	734	427	186	379	88	63
3	61	99	101	e96	189	e135	1000	340	167	359	100	62
4	58	100	103	e86	e185	e135	1090	295	159	347	109	59
5	60	99	80	e86	e170	e130	1290	266	163	327	112	58
6	60	97	86	e83	e165	e130	1320	241	164	317	116	56
7	59	97	92	e86	e160	e125	1250	218	168	297	120	51
8	61	98	99	e86	e155	e106	1280	199	214	276	115	48
9	61	99	106	e82	151	e90	1370	184	733	245	110	46
10	59	98	110	e82	156	e78	1400	177	1110	227	104	47
11	63	e90	116	e84	150	e70	1470	187	1210	207	100	47
12	81	e92	126	e76	145	e92	1190	227	1360	186	98	47
13	101	e92	127	e80	150	e100	796	271	1570	168	92	47
14	113	e88	125	e90	149	e108	483	252	1550	150	91	46
15	109	e84	127	e100	156	e125	1030	232	1550	136	91	54
16	99	e86	131	e100	172	e130	997	232	1580	123	89	61
17	95	e92	133	e96	171	e140	952	242	1390	114	89	65
18	93	e98	135	e98	171	e140	1050	253	1580	103	83	66
19	90	e110	128	e100	171	e150	938	242	1170	101	78	66
20	85	122	126	e96	170	e190	801	244	923	92	79	62
21	84	110	124	e98	172	e240	679	279	734	85	91	56
22	83	115	124	e110	174	301	561	572	668	82	92	56
23	83	111	117	e108	173	436	455	577	637	78	84	56
24	84	110	118	e120	172	548	371	576	681	78	80	59
25	93	113	120	e150	172	641	377	554	712	77	72	60
26	87	110	128	e190	170	635	920	495	735	77	69	61
27	85	109	123	214	152	697	1400	415	754	77	71	58
28	93	107	122	222	e140	1080	1470	352	739	76	70	57
29	100	105	122	240	---	1010	1320	298	651	77	69	56
30	103	105	119	227	---	817	954	257	528	74	67	53
31	103	---	130	207	---	695	---	226	---	76	63	---
TOTAL	2528	3046	3602	3746	4646	9559	29600	9931	23990	5447	2768	1686
MEAN	81.5	102	116	121	166	308	987	320	800	176	89.3	56.2
MAX	113	122	135	240	194	1080	1470	601	1580	436	120	66
MIN	58	84	80	76	140	70	371	177	159	74	63	46
AC-FT	5010	6040	7140	7430	9220	18960	58710	19700	47580	10800	5490	3340

e Estimated

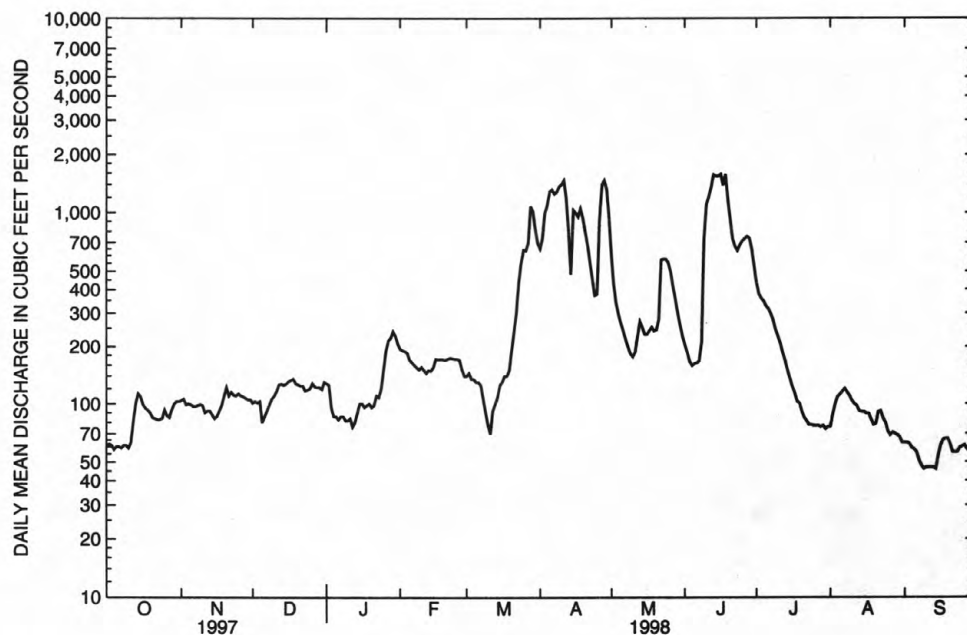
PLATTE RIVER BASIN

06797500 ELKHORN RIVER AT EWING, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.1	89.0	79.8	69.5	140	359	495	407	328	168	78.9	80.0
MAX	671	374	250	226	1172	2144	2081	2243	2690	1993	444	882
(WY)	1952	1952	1952	1995	1952	1987	1987	1995	1962	1993	1993	1986
MIN	19.4	27.0	27.3	19.4	26.0	61.1	59.7	51.8	45.8	19.5	12.0	9.33
(WY)	1976	1977	1956	1977	1975	1981	1981	1981	1976	1976	1976	1975

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1947 - 1998	
ANNUAL TOTAL	73178		100549			
ANNUAL MEAN	200		275		199	
MEDIAN OF ANNUAL MEANS					140	
HIGHEST ANNUAL MEAN					543	
LOWEST ANNUAL MEAN					42.8	
HIGHEST DAILY MEAN	1230	Apr 18	1580	Jun 16	8480	May 30 1995
LOWEST DAILY MEAN	40	Sep 1	46	Sep 9	5.2	Sep 6 1976
ANNUAL SEVEN-DAY MINIMUM	42	Aug 31	47	Sep 8	6.5	Aug 24 1976
INSTANTANEOUS PEAK FLOW			1740	Jun 14	9050	May 29 1995
INSTANTANEOUS PEAK STAGE			6.46	Jun 14	11.09	May 29 1995
ANNUAL RUNOFF (AC-FT)	145100		199400		143900	
10 PERCENT EXCEEDS	494		771		420	
50 PERCENT EXCEEDS	109		122		78	
90 PERCENT EXCEEDS	59		63		31	



ELKHORN RIVER AT EWING

PLATTE RIVER BASIN

193

06799000 ELKHORN RIVER AT NORFOLK, NE

LOCATION.--Lat 42°00'14", long 97°25'31", in SW¹/₄ SW¹/₄ sec.34, T.24 N., R.1 W., Madison County, Hydrologic Unit 10220001, on left bank 200 ft downstream from U.S. Highway 81 bridge, 1 mi south of intersection of U.S. Highways 81 275, and 3.6 mi upstream from North Fork Elkhorn River, and at mile 129.

DRAINAGE AREA.--2,790 mi², approximately, of which about 1,790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1896 to November 1903 (no winter records), October 1945 to current year. Gage height records collected at site 200 ft upstream from May 10, 1941 to Sept. 26, 1945 are contained in reports of U.S. Weather Bureau. Published as "near Norfolk" from October 1957 to September 1977.

REVISED RECORDS.--WSP 1390: 1898-1900. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,500.95 ft above sea level. See WSP 1918 for history of changes prior to Aug. 30, 1958. Aug. 30, 1958, to July 27, 1978, water-stage recorder at site 3.2 mi upstream at datum 19.88 ft higher and July 28, 1978 to Mar. 18, 1987, present site at datum 2.00 ft higher. Mar. 19, 1987, to Mar. 31, 1995, present site at datum 2.00 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	400	343	e330	638	376	1110	1270	631	1410	301	313
2	220	410	342	e330	421	330	1060	1180	585	1310	342	294
3	216	398	344	e310	419	304	1250	1060	566	2910	391	280
4	207	387	348	e290	395	280	1460	1070	543	1880	449	267
5	208	373	314	e300	402	321	1560	982	524	1640	438	254
6	213	368	302	e300	397	367	1720	909	496	1740	450	245
7	201	370	246	e300	391	392	1900	835	495	1990	452	233
8	200	373	285	e300	400	405	2190	780	631	1370	457	223
9	204	377	e290	e280	389	e280	2290	736	778	1210	451	223
10	208	366	e290	e280	403	e250	2440	711	1320	1110	429	227
11	219	351	e250	e290	406	e220	2250	684	2180	992	402	219
12	247	335	e280	e260	396	e260	1950	689	2220	910	377	214
13	308	342	e320	e270	397	e310	1640	739	2020	833	361	205
14	338	329	e340	e300	394	e360	1420	764	2250	765	366	201
15	353	316	e365	e300	401	e410	1690	806	2630	684	339	203
16	337	277	e350	e320	419	461	2080	806	2700	612	318	202
17	332	288	e340	e310	443	471	2090	787	2930	564	306	218
18	321	284	e350	e300	457	473	1850	741	6480	511	291	233
19	323	318	e350	e300	456	494	1660	718	3800	458	284	227
20	309	362	e330	e300	469	497	1470	708	2250	408	284	202
21	308	373	e320	e290	471	501	1310	725	1770	381	1400	190
22	307	365	e330	e300	475	598	1120	936	1600	374	1100	198
23	313	353	e310	e300	481	818	1050	1060	1560	353	777	201
24	316	343	e320	e290	474	898	1100	1220	1700	340	555	220
25	373	334	e320	e350	466	915	1140	1120	1750	326	505	224
26	421	337	e310	e380	459	954	1080	1080	1770	323	433	244
27	399	351	e310	e430	454	934	1410	1040	1720	320	509	235
28	366	353	e310	e470	419	1210	1770	965	1710	310	427	232
29	369	358	e310	e500	---	1450	1780	857	1690	304	386	222
30	386	350	e320	e560	---	1350	1540	766	1600	283	348	218
31	396	---	e320	e600	---	1160	---	694	---	293	322	---
TOTAL	9139	10541	9859	10440	12192	18049	48380	27438	52899	26914	14250	6867
MEAN	295	351	318	337	435	582	1613	885	1763	868	460	229
MAX	421	410	365	600	638	1450	2440	1270	6480	2910	1400	313
MIN	200	277	246	260	389	220	1050	684	495	283	284	190
AC-FT	18130	20910	19560	20710	24180	35800	95960	54420	104900	53380	28260	13620

e Estimated

PLATTE RIVER BASIN

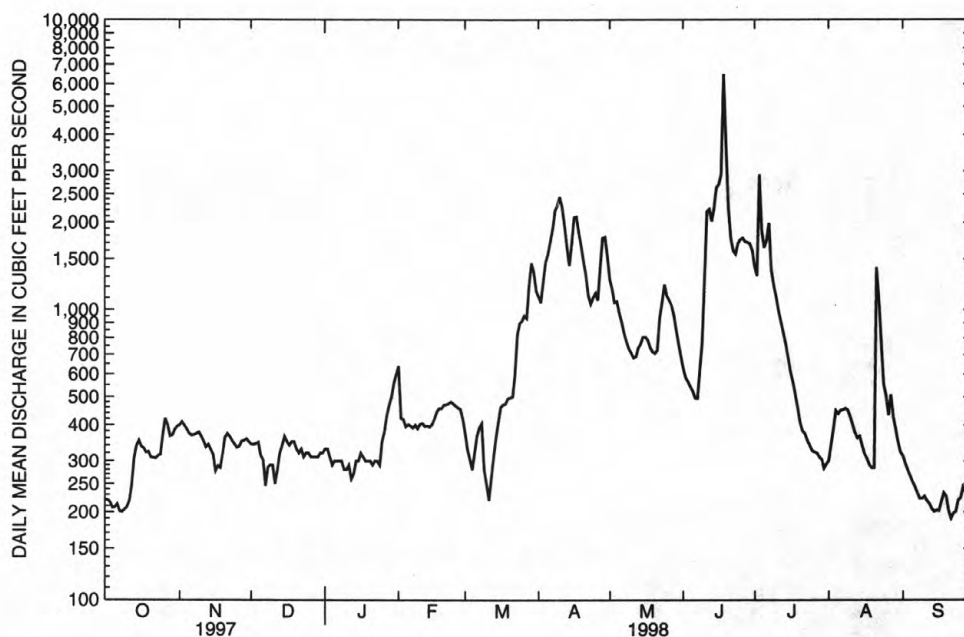
06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	322	326	300	287	496	903	1042	879	942	489	321	280
MAX	1418	847	609	624	1862	3819	3715	4615	4673	3663	1398	1444
(WY)	1952	1952	1996	1983	1952	1987	1984	1995	1962	1993	1951	1986
MIN	125	163	151	146	129	298	254	228	201	99.1	61.9	87.3
(WY)	1981	1979	1977	1977	1978	1981	1981	1981	1989	1980	1976	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1946 - 1998	
ANNUAL TOTAL	203895		246968			
ANNUAL MEAN	559		677		548	
MEDIAN OF ANNUAL MEANS					454	
HIGHEST ANNUAL MEAN					1355	1995
LOWEST ANNUAL MEAN					224	1981
HIGHEST DAILY MEAN	2780	Feb 20	6480	Jun 18	17500	May 31 1995
LOWEST DAILY MEAN	149	Aug 26	190	Sep 21	33	Aug 3 1980
ANNUAL SEVEN-DAY MINIMUM	156	Aug 31	206	Oct 4	40	Aug 24 1976
INSTANTANEOUS PEAK FLOW (STAGE)			9090	Jun 18	16900(13.05)	Jun 14 1967
INSTANTANEOUS PEAK STAGE			9.53	Jun 18	*15.63	Mar 11 1949
ANNUAL RUNOFF (AC-FT)	404400		489900		397200	
10 PERCENT EXCEEDS	1080		1640		1080	
50 PERCENT EXCEEDS	380		392		313	
90 PERCENT EXCEEDS	204		245		163	

** Backwater from ice.



ELKHORN RIVER AT NORFOLK

PLATTE RIVER BASIN

195

06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

LOCATION (REVISED).--Lat 42°08'57", long 97°28'41", in NW¹/₄ sec.18, T.25 N., R.1 W., Pierce County, Hydrologic Unit 10220002, on right bank 4 ft downstream and 25 ft from end of bridge, 4.5 mi southeast of Pierce, and at mile 20.8.

DRAINAGE AREA.--701 mi², of which 671 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1960 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,542.88 ft (revised) above sea level (U.S. Weather Bureau levels). Aug. 19, 1960, to Oct. 7, 1997, water-stage recorder at site 2 mi upstream at datum 10.19 ft higher.

REMARKS.--Record good except for periods of estimated record, which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	86	85	89	90	e86	545	189	187	404	64	57
2	41	83	87	89	88	e80	589	178	119	190	68	54
3	39	80	87	e80	86	e80	545	173	102	167	116	52
4	38	75	e76	e56	79	e78	412	167	99	184	211	49
5	38	76	e56	e58	82	e78	350	158	107	178	157	47
6	38	78	e70	e58	82	e74	311	147	114	159	115	45
7	38	78	e78	e58	84	e76	303	140	116	464	102	43
8	40	78	82	e58	86	e74	714	133	139	487	100	42
9	46	78	82	e56	88	e72	987	129	216	288	94	41
10	46	78	82	e56	94	e68	699	125	259	197	83	41
11	62	77	e74	e60	95	e68	517	122	227	250	77	40
12	68	76	e62	e66	92	e78	427	134	382	190	73	40
13	105	81	e74	e70	91	89	365	148	466	150	82	40
14	141	83	e80	78	93	99	312	139	270	136	69	38
15	116	72	84	75	97	87	591	129	330	121	64	39
16	89	e62	85	75	112	89	924	136	369	106	121	40
17	79	e72	85	74	124	90	600	137	286	96	82	40
18	75	e80	89	72	122	94	466	125	485	88	61	40
19	71	85	90	71	117	95	399	112	521	80	52	39
20	67	87	90	70	115	102	356	106	384	73	48	39
21	67	88	82	70	115	119	340	114	299	66	77	38
22	67	88	88	70	118	161	298	336	263	63	112	39
23	69	85	83	71	123	196	266	223	242	59	87	40
24	68	83	89	68	125	213	246	200	231	58	71	41
25	76	86	89	68	126	269	225	162	345	56	63	43
26	87	91	87	67	127	527	226	147	285	56	61	47
27	88	91	81	69	124	623	253	138	195	55	72	44
28	89	92	92	73	e100	646	257	131	167	52	70	43
29	90	90	83	79	---	724	222	121	149	55	65	43
30	91	87	91	79	---	491	201	114	353	63	64	41
31	89	---	86	87	---	431	---	112	---	70	60	---
TOTAL	2159	2446	2549	2170	2875	6057	12946	4625	7707	4661	2641	1285
MEAN	69.6	81.5	82.2	70.0	103	195	432	149	257	150	85.2	42.8
MAX	141	92	92	89	127	724	987	336	521	487	211	57
MIN	38	62	56	56	79	68	201	106	99	52	48	38
AC-FT	4280	4850	5060	4300	5700	12010	25680	9170	15290	9250	5240	2550

e Estimated

PLATTE RIVER BASIN

06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.7	56.9	50.7	47.4	118	208	190	162	183	98.3	56.8	48.6
MAX	241	208	141	111	834	1120	1004	663	799	834	226	191
(WY)	1996	1996	1996	1973	1971	1962	1984	1995	1967	1993	1996	1992
MIN	13.5	14.7	14.6	15.6	24.2	30.3	28.7	27.7	21.8	11.7	7.41	9.53
(WY)	1992	1992	1992	1992	1978	1990	1990	1981	1989	1989	1990	1990

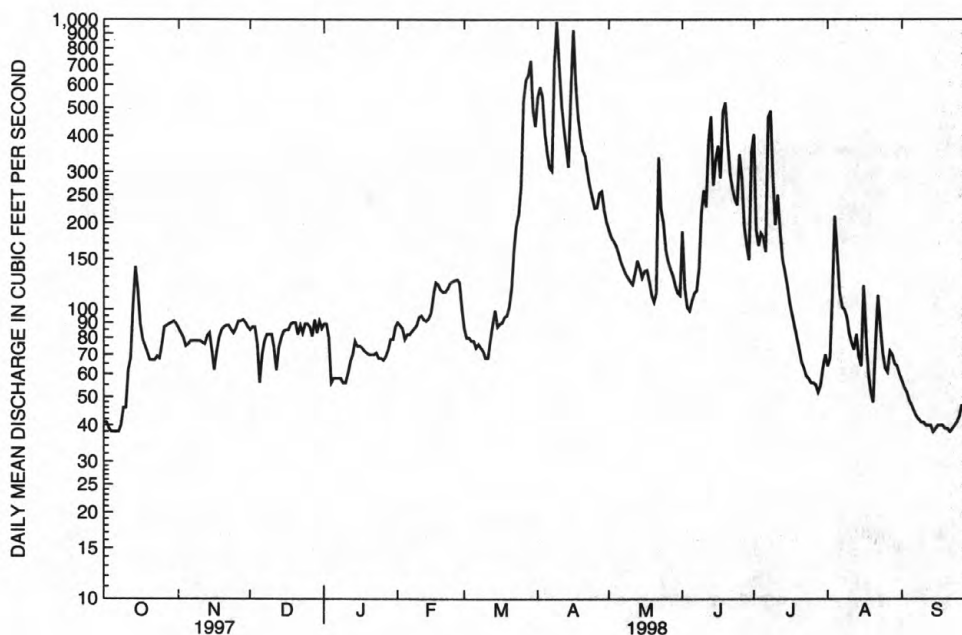
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1960 - 1998

ANNUAL TOTAL	65339	52121	
ANNUAL MEAN	179	143	106
MEDIAN OF ANNUAL MEANS			80
HIGHEST ANNUAL MEAN			287
LOWEST ANNUAL MEAN			21.5
HIGHEST DAILY MEAN	2300 Feb 21	987 Apr 9	10400 Mar 28 1962
LOWEST DAILY MEAN	32 Sep 6	38 Oct 4	2.7 Jul 29 1989
ANNUAL SEVEN-DAY MINIMUM	33 Sep 2	39 Oct 2	3.7 Aug 15 1990
INSTANTANEOUS PEAK FLOW		1020 Apr 9	15200 Feb 19 1971
INSTANTANEOUS PEAK STAGE		7.92 Apr 9	15.10 Feb 19 1971
ANNUAL RUNOFF (AC-FT)	129600	103400	76470
10 PERCENT EXCEEDS	360	332	200
50 PERCENT EXCEEDS	92	88	47
90 PERCENT EXCEEDS	41	48	21



NORTH FORK ELKHORN RIVER NEAR PIERCE

PLATTE RIVER BASIN

197

06799350 ELKHORN RIVER AT WEST POINT, NE

LOCATION.--Lat 41°50'22", long 96°43'38", in SW¹/₄NW¹/₄ sec.34, T.22 N., R.6 E., Cuming County, Hydrologic Unit 10220003, on right bank near right downstream wingwall of bridge on State Highway 32, 1 mi west of West Point, and at mile 79.8.

DRAINAGE AREA.--5,100 mi², approximately, of which about 4,100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1972 to current year. March 1960 to September 1972 (no winter records 1960-68) in files of Corps of Engineers. Gage-height records collected since 1940 are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,291.26 ft above sea level. Prior to May 18, 1976, at site on left bank 50 ft upstream from bridge at same datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Some small diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	471	836	656	709	1030	786	2740	2010	1510	1910	e700	700
2	462	811	670	713	999	771	2560	1670	1420	2190	e760	653
3	443	753	674	697	869	756	2600	1380	1430	3380	e850	612
4	421	717	e660	712	957	754	2860	1400	1410	4570	955	563
5	413	e680	e620	687	821	759	2870	1580	1390	3960	1090	538
6	411	623	e580	674	811	756	2980	1570	1380	2420	1100	519
7	411	616	e500	676	819	766	3430	1490	1360	4880	e1000	484
8	427	597	e540	665	810	782	4290	1380	1900	2790	e980	454
9	414	611	e560	e660	803	e760	4700	1310	3520	1930	e960	434
10	413	636	e540	e640	797	e640	4530	1240	3430	1490	940	416
11	449	632	e520	e600	794	e580	4450	1190	4640	1310	886	399
12	537	617	e460	e560	797	e620	3830	1290	3500	1320	839	378
13	718	599	e500	e500	784	e620	3150	1250	2350	1480	810	376
14	805	e580	e560	e580	775	e540	2280	1290	2680	1410	767	362
15	796	e560	e580	e640	775	e620	3490	1410	3400	1300	1230	359
16	820	e520	e620	e680	786	e800	4360	2530	e3200	1160	1220	370
17	747	e460	e640	e700	791	e900	4210	1620	4600	1060	900	367
18	701	e480	e660	e760	801	e1100	3800	1420	6950	983	928	367
19	649	e560	683	e800	810	e1250	3240	1370	7000	914	818	382
20	615	e620	694	e780	816	1350	2750	1290	3860	838	792	403
21	607	666	696	e760	807	960	2220	1500	2670	760	3800	385
22	603	659	684	e720	806	987	1840	3300	2070	753	6640	382
23	605	672	717	e660	804	1250	1530	2560	1760	e720	4480	377
24	605	658	693	e700	802	2130	1320	2850	1910	e700	1970	389
25	751	661	711	e800	809	2290	1350	2960	1620	e680	1410	406
26	843	662	705	e820	818	2460	1580	2700	1790	e670	1180	435
27	892	660	712	e840	817	3230	1230	2510	1780	e660	1020	467
28	932	652	692	e900	804	4170	1950	2390	1830	e650	1020	467
29	859	662	703	e1400	---	4140	2350	2170	1850	e650	1020	448
30	877	666	704	1870	---	3290	2200	1910	1900	e640	848	419
31	861	---	719	1750	---	3060	---	1700	---	e660	741	---
TOTAL	19558	19126	19653	24653	23112	43877	86690	56240	80110	48838	42654	13311
MEAN	631	638	634	795	825	1415	2890	1814	2670	1575	1376	444
MAX	932	836	719	1870	1030	4170	4700	3300	7000	4880	6640	700
MIN	411	460	460	500	775	540	1230	1190	1360	640	700	359
AC-FT	38790	37940	38980	48900	45840	87030	171900	111600	158900	96870	84600	26400

e Estimated

PLATTE RIVER BASIN

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	552	601	563	527	1067	1874	1834	1619	1573	1001	623	501
MAX	1606	1239	1314	1106	2744	5256	6171	5618	3844	6945	1994	1646
(WY)	1987	1987	1994	1995	1983	1987	1984	1995	1995	1993	1993	1986
MIN	174	241	203	168	201	411	378	325	339	154	90.0	137
(WY)	1977	1979	1977	1977	1979	1981	1981	1981	1976	1976	1976	1976

SUMMARY STATISTICS

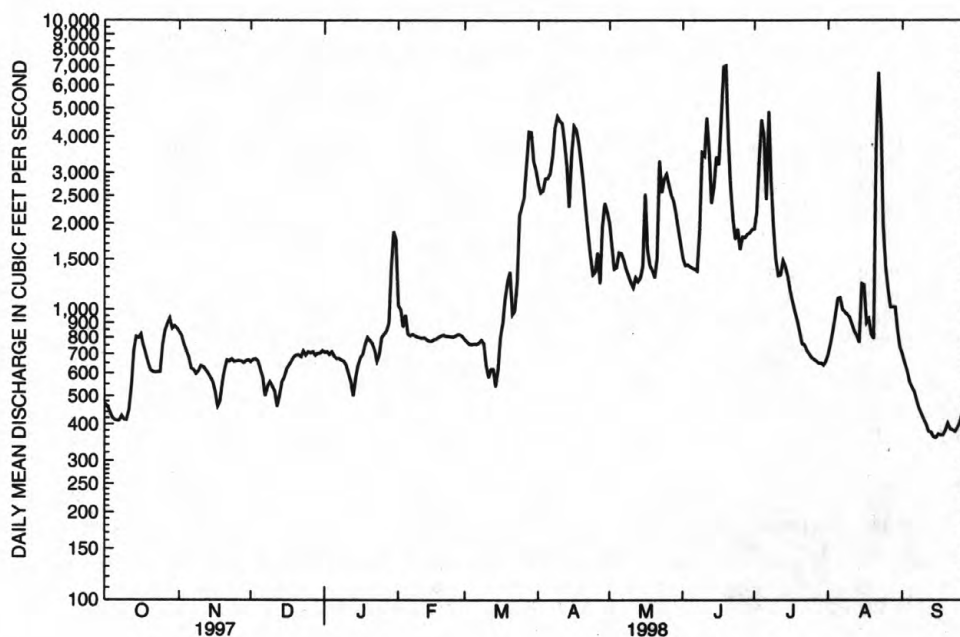
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1973 - 1998

ANNUAL TOTAL	431307	477822	
ANNUAL MEAN	1182	1309	1027
MEDIAN OF ANNUAL MEANS			887
HIGHEST ANNUAL MEAN			2253
LOWEST ANNUAL MEAN			332
HIGHEST DAILY MEAN	9000	Feb 24	7000
LOWEST DAILY MEAN	242	Aug 29	359
ANNUAL SEVEN-DAY MINIMUM	265	Aug 24	368
INSTANTANEOUS PEAK FLOW (STAGE)			9920
INSTANTANEOUS PEAK STAGE			10.89
ANNUAL RUNOFF (AC-FT)	855500	947800	743800
10 PERCENT EXCEEDS	2190	2970	2070
50 PERCENT EXCEEDS	805	805	600
90 PERCENT EXCEEDS	376	476	230

* From floodmark; ice jam.



ELKHORN RIVER AT WEST POINT

PLATTE RIVER BASIN

199

06799500 LOGAN CREEK NEAR UEHLING, NE

LOCATION.--Lat 41°42'46", long 96°31'18", in SE¹/₄SE¹/₄ sec.9, T.20 N., R.8 E., Dodge County, Hydrologic Unit 10220004, near left bank on upstream side of bridge on county road, 2 mi southwest of Uehling and 8.8 mi upstream from mouth.

DRAINAGE AREA.--1,015 mi².

PERIOD OF RECORD.--March 1941 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft above sea level. See WSP 1918 for history of changes prior to July 15, 1963. July 16, 1963 to Mar. 27, 1989, near right bank on downstream side of bridge at present site and datum. Mar. 28, 1989 to Mar. 22, 1990, 250 ft upstream on left bank at same datum.

REMARKS.--Records good except for periods of estimated record, which are poor.

COOPERATION.--Records provided by Nebraska Department of Water Resources and reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	197	188	197	e280	e190	467	462	339	912	289	280
2	167	196	188	198	e270	e170	501	444	326	529	277	271
3	168	189	188	198	e260	e160	447	423	345	1160	302	261
4	168	185	185	e180	e250	e150	409	409	336	946	364	254
5	166	186	e175	e160	e245	e140	378	397	338	2750	403	245
6	166	186	e160	e150	e240	e130	367	381	343	1700	421	240
7	166	186	e150	e150	e235	e120	592	369	343	2490	368	233
8	168	186	e160	e144	e240	e110	934	356	670	1660	351	228
9	170	185	e180	e140	e235	e100	1260	344	1420	1060	328	223
10	167	184	e175	e136	211	e91	1080	341	899	1300	309	218
11	171	182	e160	e132	207	e92	698	340	715	998	295	214
12	186	178	e160	e130	196	e100	563	385	1760	632	287	210
13	213	e175	e175	e148	193	e110	519	366	1450	561	285	207
14	240	e170	e195	e155	192	e125	495	351	867	523	278	204
15	225	e160	e210	e165	195	e150	723	387	1070	488	319	204
16	202	e165	e215	e180	204	e180	1550	466	1330	459	585	201
17	192	e167	e210	e175	212	e200	1150	520	1340	438	427	200
18	188	e180	e205	e170	217	e240	734	373	1270	423	336	201
19	184	e185	e205	e170	214	e220	625	398	1190	405	285	199
20	180	188	202	e165	211	e250	572	418	798	389	270	201
21	179	187	189	e165	208	264	535	399	600	370	424	203
22	177	189	196	e165	211	274	506	944	541	373	611	205
23	178	187	204	e180	214	304	474	815	517	350	423	202
24	181	182	200	e190	218	321	450	536	1600	336	333	205
25	212	186	e190	e200	221	336	431	483	1330	327	302	206
26	222	193	e185	e210	223	416	604	427	800	319	283	207
27	214	193	e180	e220	218	644	877	408	571	314	277	208
28	208	193	e185	e230	213	816	643	388	501	308	281	204
29	205	191	e190	e250	---	912	522	367	467	297	281	200
30	205	191	e195	e274	---	523	484	354	931	290	273	200
31	202	---	e200	e280	---	450	---	344	---	297	268	---
TOTAL	5836	5522	5800	5607	6233	8288	19590	13395	25007	23404	10535	6534
MEAN	188	184	187	181	223	267	653	432	834	755	340	218
MAX	240	197	215	280	280	912	1550	944	1760	2750	611	280
MIN	166	160	150	130	192	91	367	340	326	290	268	199
AC-FT	11580	10950	11500	11120	12360	16440	38860	26570	49600	46420	20900	12960

e Estimated

PLATTE RIVER BASIN

06799500 LOGAN CREEK NEAR UEHLING, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	107	94.4	104	266	413	280	314	490	255	163	127
MAX	499	327	337	583	2177	2388	1742	1417	2766	1843	1056	613
(WY)	1993	1994	1994	1973	1971	1962	1984	1984	1984	1993	1951	1993
MIN	32.8	38.2	31.9	34.1	38.1	57.4	42.8	39.9	56.6	17.3	15.0	31.6
(WY)	1944	1949	1944	1957	1979	1943	1957	1943	1976	1976	1976	1943

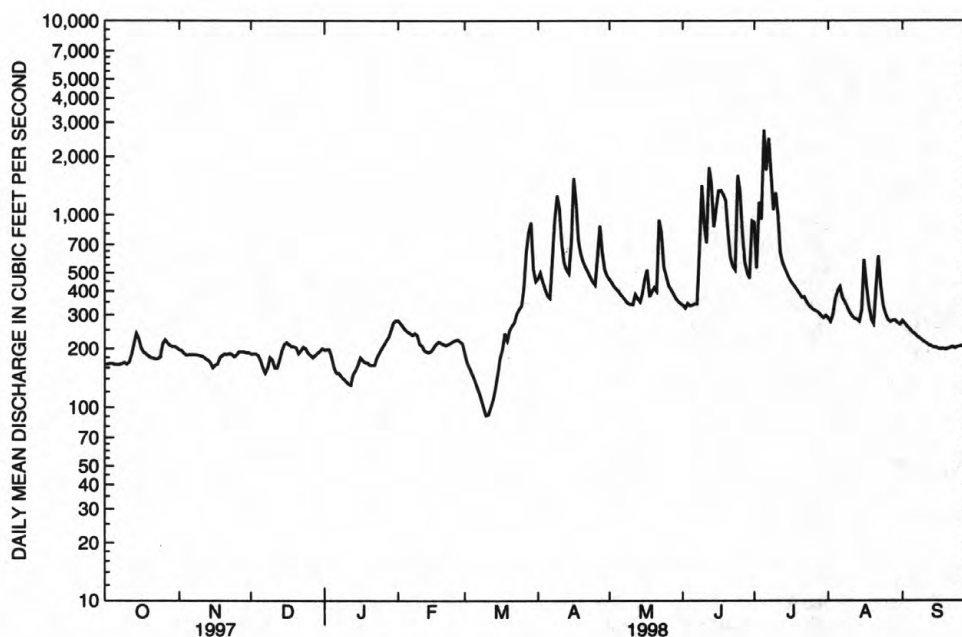
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1942-1998

ANNUAL TOTAL	137242	135751	
ANNUAL MEAN	376	372	227
MEDIAN OF ANNUAL MEANS			188
HIGHEST ANNUAL MEAN			710
LOWEST ANNUAL MEAN			66.4
HIGHEST DAILY MEAN	7670 Feb 20	2750 Jul 5	20100 Feb 20 1971
LOWEST DAILY MEAN	146 Sep 7	91 Mar 10	6.1 Jul 26 1976
ANNUAL SEVEN-DAY MINIMUM	153 Sep 14	103 Mar 7	8.8 Jul 12 1976
INSTANTANEOUS PEAK FLOW (STAGE)		5090 Jul 5	25200 (20.15) Feb 20 1971
INSTANTANEOUS PEAK STAGE		13.01 Jul 5	20.86 Feb 20 1997
ANNUAL RUNOFF (AC-FT)	272200	269300	164500
10 PERCENT EXCEEDS	583	727	400
50 PERCENT EXCEEDS	277	240	96
90 PERCENT EXCEEDS	166	166	44



PLATTE RIVER BASIN

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06800000 MAPLE CREEK NEAR NICKERSON, NE
(National Water-Quality Assessment, NAWQA, station)

LOCATION.--Lat 41°33'39", long 96°32'27", in SW¹/₄NW¹/₄ sec.4, T.18 N., R.8 E., Dodge County, Hydrologic Unit 10220003, on right bank 8 ft downstream from county road bridge 2 mi upstream from U.S. Highways 77 and 275, 5 mi northwest of Nickerson, and 4 mi upstream from mouth.

DRAINAGE AREA (REVISED).--369 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1630: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 1,211.62 ft above sea level. Prior to July 28, 1960, nonrecording gage at highway bridge, July 28, 1960 to July 28, 1987, water-stage recorder 180 ft upstream from highway bridge and July 29, 1987 to July 23, 1991 water-stage recorder 30 ft downstream from highway bridge. All at/near U.S. Highway 77 bridge, 2 mi downstream from present gage, at datum 17.06 ft lower.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	85	65	55	100	60	172	142	111	100	113	98
2	51	85	65	60	74	53	154	139	105	95	113	92
3	51	75	65	59	71	67	126	133	112	104	153	94
4	51	72	61	e28	68	60	116	130	192	492	195	e94
5	49	70	e30	e20	63	55	113	128	135	1270	141	e90
6	48	70	e34	53	67	65	106	126	131	434	133	e87
7	49	70	64	57	69	65	196	122	129	1340	129	e83
8	50	69	68	56	68	45	724	118	705	355	142	77
9	50	69	65	56	72	e38	472	115	1820	206	125	75
10	49	69	62	48	75	e36	340	115	503	179	119	71
11	52	68	61	e48	76	e34	252	112	415	166	113	70
12	59	67	61	e46	72	e32	219	117	389	155	109	66
13	71	66	59	e44	68	e40	205	115	246	152	106	62
14	89	66	65	e42	71	e44	177	108	289	142	105	61
15	67	64	65	e40	68	48	354	126	421	139	119	60
16	60	49	67	e40	67	58	576	119	238	135	215	60
17	59	57	62	e38	73	77	272	135	235	130	129	59
18	56	70	67	e46	81	76	229	109	694	129	116	57
19	54	75	67	52	81	66	217	117	318	124	109	58
20	54	79	65	51	76	68	205	145	175	121	107	68
21	54	75	49	50	76	85	188	208	153	115	1740	79
22	51	70	53	49	74	110	175	168	144	565	1590	65
23	51	69	68	48	74	131	169	186	144	243	286	62
24	54	64	62	49	74	114	162	144	1800	136	180	61
25	74	64	57	52	74	114	159	312	345	126	166	61
26	133	64	51	49	72	189	153	148	193	123	145	60
27	104	63	45	48	72	257	146	125	141	122	128	57
28	88	62	52	48	70	422	140	160	123	123	125	53
29	85	63	53	143	---	393	136	130	110	121	118	51
30	94	65	54	161	---	211	139	120	104	117	110	50
31	92	---	52	115	---	164	---	117	---	113	102	---
TOTAL	2002	2054	1814	1751	2046	3277	6792	4289	10620	7872	7281	2081
MEAN	64.6	68.5	58.5	56.5	73.1	106	226	138	354	254	235	69.4
MAX	133	85	68	161	100	422	724	312	1820	1340	1740	98
MIN	48	49	30	20	63	32	106	108	104	95	102	50
AC-FT	3970	4070	3600	3470	4060	6500	13470	8510	21060	15610	14440	4130

e Estimated

PLATTE RIVER BASIN

06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.7	25.8	21.0	21.9	71.3	135	91.2	116	216	96.9	66.5	46.6
MAX	323	139	89.9	77.7	446	674	590	642	1252	1023	762	383
(WY)	1983	1983	1994	1984	1971	1962	1984	1984	1960	1993	1996	1965
MIN	.38	.66	.50	.42	.55	1.36	1.01	.72	3.00	1.19	.59	.26
(WY)	1982	1982	1981	1982	1979	1957	1981	1981	1956	1976	1976	1981

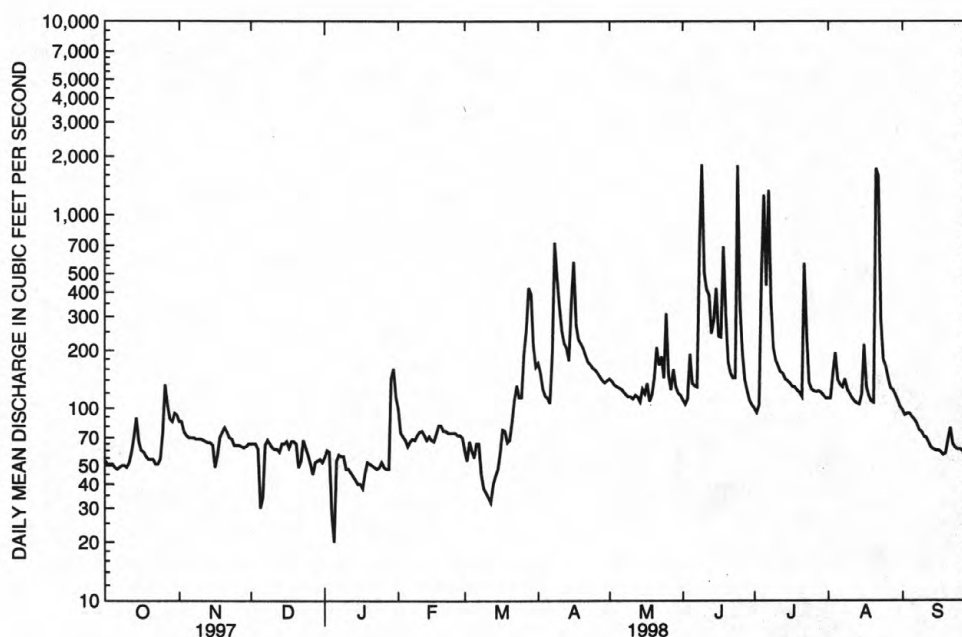
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1952 - 1998

ANNUAL TOTAL	36635	51879	
ANNUAL MEAN	100	142	78.6
MEDIAN OF ANNUAL MEANS	61.7		
HIGHEST ANNUAL MEAN			264
LOWEST ANNUAL MEAN			5.19
HIGHEST DAILY MEAN	3800 Sep 2	1820 Jun 9	10400 Aug 6 1996
LOWEST DAILY MEAN	28 Sep 12	20 Jan 5	.10 Jan 15 1956
ANNUAL SEVEN-DAY MINIMUM	33 Sep 7	38 Mar 8	.19 Sep 17 1981
INSTANTANEOUS PEAK FLOW		5090 Aug 21	13700 Aug 6 1996
INSTANTANEOUS PEAK STAGE		12.83 Aug 21	17.65 Jun 17 1984
ANNUAL RUNOFF (AC-FT)	72670	102900	56920
10 PERCENT EXCEEDS	113	223	125
50 PERCENT EXCEEDS	65	85	21
90 PERCENT EXCEEDS	44	50	1.3



MAPLE CREEK NEAR NICKERSON

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (° C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	NONCARB DISSOLV FLD. AS CaCO ₃ (MG/L) (00904)		
10-22-97	1100	51	772	8.1	7.0	728	13.8	350	8		
11-20-97	1100	79	788	7.9	2.0	737	15.8	340	--		
12-10-97	1130	62	801	7.6	.5	724	8.5	390	27		
01-22-98	1130	50	793	7.9	.5	732	12.2	390	29		
02-25-98	1200	74	767	8.2	9.0	732	11.2	360	36		
03-19-98	1100	67	689	7.9	1.0	737	13.4	350	36		
04-07-98	1030	124	744	8.2	10.0	716	10.1	340	12		
04-21-98	1215	191	859	8.2	11.5	737	10.6	--	--		
05-12-98	1030	115	648	7.8	18.0	723	8.8	310	7		
05-21-98	1230	243	657	7.9	21.0	728	6.8	--	--		
05-28-98	1100	193	770	8.2	23.5	728	7.5	--	--		
06-11-98	1100	411	666	7.8	19.0	720	7.4	280	10		
06-23-98	1130	144	792	8.2	23.5	727	7.2	--	--		
07-09-98	1230	199	635	7.8	25.0	731	6.4	280	6		
07-20-98	1200	121	731	8.3	29.0	725	7.3	--	--		
08-12-98	1400	108	694	8.0	24.5	739	8.2	350	32		
08-27-98	1300	128	705	8.0	23.5	727	7.2	--	--		
09-14-98	1100	62	621	7.9	22.0	726	7.8	280	--		
09-28-98	1130	53	665	8.0	20.0	730	8.1	--	--		
DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CaCO ₃ (39086)	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO ₃ CO ₃ (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO ₃ (00452)
10-22-97	347	490	472	.67	67.5	95	29	29	9.1	423	0
11-20-97	354	514	470	.70	110	95	26	27	7.1	432	0
12-10-97	364	519	509	.71	86.9	110	30	31	6.9	444	0
01-22-98	360	543	505	.74	73.3	110	29	29	5.9	439	0
02-25-98	327	499	461	.68	99.7	98	29	29	7.6	399	0
03-19-98	318	496	457	.67	89.7	97	27	28	8.3	388	0
04-07-98	326	472	449	.64	158	93	26	28	7.7	398	0
04-21-98	363	--	--	--	--	--	--	--	--	451	0
05-12-98	292	437	406	.59	136	75	29	29	6.7	364	0
05-21-98	--	--	--	--	--	--	--	--	--	--	--
05-28-98	344	--	--	--	--	--	--	--	--	--	--
06-11-98	267	402	391	.55	446	76	21	24	13	326	0
06-23-98	338	--	--	--	--	--	--	--	--	412	0
07-09-98	274	417	388	.57	224	79	20	22	12	334	0
07-20-98	--	--	--	--	--	--	--	--	--	--	--
08-12-98	315	476	459	.65	139	93	28	30	8.7	384	0
08-27-98	313	--	--	--	--	--	--	--	--	382	0
09-14-98	--	420	400	.57	70.3	69	26	28	8.6	--	--
09-28-98	--	--	--	--	--	--	--	--	--	--	--

PLATTE RIVER BASIN

06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY RECORDS

DATE	CHLO-SULFATE DIS-SOLVED (MG/L AS SO ₄) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, RIDE, DIS-SOLVED (MG/L AS F) (00950)	NITRO-GEN, DIS-SOLVED (MG/L AS SiO ₂) (00955)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO ₂ +NO ₃ DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHORUS DIS-SOLVED (MG/L AS P) (00666)
10-22-97	55	10	.35	16	.017	4.70	.016	.54	.24	.265	.209
11-20-97	51	12	.32	16	.029	4.67	.418	1.0	.44	.368	.180
12-10-97	58	10	.28	18	.017	6.22	.104	.47	.47	.179	.143
01-22-98	56	10	.37	20	.052	6.61	.133	.47	.40	.174	.139
02-25-98	55	11	.33	14	.038	4.46	<.020	.50	.39	.208	.177
03-19-98	53	10	.32	18	.053	5.38	.358	.96	.74	.265	.179
04-07-98	53	9.6	.32	14	.078	4.74	.100	.63	.52	.286	.239
04-21-98	--	--	--	--	--	--	--	--	--	--	--
05-12-98	54	9.6	.33	5.0	.023	4.20	.065	.89	.33	.239	.087
05-21-98	--	--	--	--	.403	5.52	.402	--	1.3	--	.261
05-28-98	--	--	--	--	--	--	--	--	--	--	--
06-11-98	47	7.2	.40	14	.165	6.23	.324	1.3	.77	.333	.249
06-23-98	--	--	--	--	--	--	--	--	--	--	--
07-09-98	42	8.0	.47	16	.103	5.38	.025	1.8	.60	.703	.269
07-20-98	--	--	--	--	--	--	--	--	--	--	--
08-12-98	53	9.0	.45	20	.019	6.39	.081	1.1	.29	.370	.232
08-27-98	--	--	--	--	--	--	--	--	--	--	--
09-14-98	53	9.1	.35	12	.027	5.24	<.020	.75	.29	.215	.121
09-28-98	--	--	--	--	--	--	--	--	--	--	--

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (μ G/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (μ G/L AS MN) (01056)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ACETO-CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (μ G/L) (46342)	DEETHYL ATRA-ZINE, WATER, DISS, REC (μ G/L) (04040)	ATRA-ZINE, WATER, DISS, REC (μ G/L) (39632)	METHYL AZIN-THAL, PHOS WATFLT 0.7U GF, REC (μ G/L) (82686)
10-22-97	.188	4.6	108	280	39	15	<.0020	<.002	E.0211	.065	<.0010
11-20-97	.196	<3.0	159	416	89	62	<.0020	<.002	E.0064	.046	<.0010
12-10-97	.164	<10	308	284	48	38	<.0020	<.002	E.0110	.034	<.0010
01-22-98	.169	<10	348	93	13	33	<.0020	<.002	E.0112	.033	<.0010
02-25-98	.164	<10	62	258	52	82	<.0020	<.002	E.0088	.026	<.0010
03-19-98	.172	<10	159	186	34	54	<.0020	<.002	E.0077	.022	<.0010
04-07-98	.241	<10	23	1070	358	87	<.0020	<.002	E.0097	.033	<.0010
04-21-98	--	--	--	--	--	--	.0111	.004	E.0145	.042	<.0010
05-12-98	.097	<10	15	382	119	74	.0862	.015	E.0112	.163	<.0010
05-21-98	.240	--	--	--	--	--	E25.1	10.9	E.465	E30.0	<.0010
05-28-98	--	--	--	--	--	--	1.42	.064	E.110	4.15	<.0010
06-11-98	.167	<10	<4.0	4080	4530	76	1.10	.185	E.275	4.32	<.0010
06-23-98	--	--	--	--	--	--	.0785	.016	E.0816	.935	<.0010
07-09-98	.237	<10	<4.0	4360	2340	28	.0892	.053	E.174	1.00	<.0010
07-20-98	--	--	--	--	--	--	.0139	.012	E.0277	.197	<.0010
08-12-98	.238	<10	17	255	74	85	<.0020	<.002	E.0217	.117	<.0010
08-27-98	--	--	--	--	--	--	.0069	.008	E.0341	.119	<.0010
09-14-98	.120	<10	26	128	21	69	<.0020	<.002	E.0273	.067	<.0010
09-28-98	--	--	--	--	--	--	<.0020	<.002	E.0215	.056	<.0010

PLATTE RIVER BASIN

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06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY RECORDS

DATE	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µ G/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µ G/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µ G/L) (38933)	CYANA- ZINE, WATER, DISS, REC GF, (µ G/L) (04041)	DCPA WATER FLTRD 0.7 µ REC (µ G/L) (82682)	P,P' DDE DISSOLV (µ G/L) (34653)	DI- AZINON, DIS- SOLVED (µ G/L) (39572)	DI- ELDRIN DIS- SOLVED (µ G/L) (39381)	2,6-DI- ETHYL ANILINE WATFLT 0.7U GF, REC (µ G/L) (82660)
10-22-97	<.0020	<.0020	<.0080	<.0070	<.0040	E.0351	<.0020	<.0060	<.002	<.001	<.0030
11-20-97	<.0020	<.0020	<.0030	<.0030	<.0040	.0099	<.0020	<.0060	<.002	<.001	<.0030
12-10-97	<.0020	<.0020	<.0030	<.0030	<.0040	.0100	<.0020	<.0060	<.002	<.001	<.0030
01-22-98	<.0020	<.0020	E.583	<.0030	<.0040	<.0040	<.0020	<.0060	<.002	<.001	<.0030
02-25-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0106	<.0020	<.0060	<.002	<.001	<.0030
03-19-98	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	<.0060	<.002	<.001	<.0030
04-07-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0194	<.0020	<.0060	<.002	<.001	<.0030
04-21-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0215	<.0020	<.0060	<.002	<.001	<.0030
05-12-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0609	<.0020	E.0008	<.002	<.001	<.0030
05-21-98	<.0020	<.0020	<.0030	<.0030	<.0040	3.57	<.0020	<.0060	<.002	<.001	<.0030
05-28-98	<.0020	<.0020	<.0030	<.0030	E.0843	1.72	<.0020	<.0060	<.002	<.001	<.0030
06-11-98	<.0020	<.0020	<.0030	<.0030	<.0040	.933	<.0020	<.0060	<.002	<.001	<.0030
06-23-98	<.0020	<.0020	<.0030	<.0030	E.0093	.268	<.0020	<.0060	<.002	E.002	<.0030
07-09-98	<.0020	<.0020	<.0030	E.0134	E.0130	.329	<.0020	<.0060	<.002	<.001	<.0030
07-20-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0942	<.0020	<.0060	<.002	<.001	<.0030
08-12-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0616	<.0020	<.0060	<.002	<.001	<.0030
08-27-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0780	<.0020	<.0060	<.002	<.001	<.0030
09-14-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0492	<.0020	<.0060	<.002	<.001	<.0030
09-28-98	<.0020	<.0020	<.0030	<.0030	<.0040	.0348	<.0020	<.0060	<.002	<.001	<.0030
DATE	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µ G/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µ G/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µ G/L) (82672)	FONOFOS WATER DISS REC (µ G/L) (04095)	ALPHA BHC DIS- SOLVED (µ G/L) (34253)	LINDANE DIS- SOLVED (µ G/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82666)	MALA- THION, DIS- SOLVED (µ G/L) (39532)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µ G/L) (82667)	METO- LACHLOR WATER DISSOLV (µ G/L) (39415)
10-22-97	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.027
11-20-97	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.013
12-10-97	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.012
01-22-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.011
02-25-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.009
03-19-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.008
04-07-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.012
04-21-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0050	<.004	<.0020	<.005	<.0060	.016
05-12-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.118
05-21-98	<.0170	<.0020	<.0040	<.0030	.0629	<.0020	<.004	<.0020	<.005	<.0060	17.9
05-28-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	2.15
06-11-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	2.02
06-23-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.305
07-09-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.501
07-20-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.106
08-12-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.051
08-27-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.061
09-14-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.026
09-28-98	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020	<.004	<.0020	<.005	<.0060	.020

PLATTE RIVER BASIN

06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY RECORDS

DATE	METRI- BUZIN SENCOR WATER DISSOLV (μ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82684)	PARA- THION, DIS- SOLVED (μ G/L) (39542)	PEB- ULATE WATER FILTRD 0.7 μ GF, REC (μ G/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 μ GF, REC (μ G/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 μ GF, REC (μ G/L) (82687)	PHORATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82676)	PRO- METON, WATER, DISS, REC (μ G/L) (04037)
10-22-97	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
11-20-97	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	E.0119
12-10-97	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
01-22-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
02-25-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
03-19-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
04-07-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
04-21-98	<.004	<.0040	<.0030	<.004	<.0040	.0059	<.0050	<.0020	<.0030	E.0037
05-12-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
05-21-98	.200	<.0040	<.0030	<.004	<.0040	.0667	<.0050	<.0020	<.0030	.0520
05-28-98	.011	<.0040	<.0030	<.004	<.0040	.0347	<.0050	<.0020	<.0030	E.0061
06-11-98	.036	<.0040	<.0030	<.004	<.0040	<.0300	<.0050	<.0020	<.0030	E.0117
06-23-98	.008	<.0040	<.0030	<.004	<.0040	.0151	<.0050	<.0020	<.0030	E.0063
07-09-98	.017	<.0040	<.0030	<.004	<.0040	.0206	<.0050	<.0020	<.0030	E.0072
07-20-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	E.0077
08-12-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
08-27-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
09-14-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
09-28-98	<.004	<.0040	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0030	<.0180
DATE	PROP- CHLOR, WATER, DISS, REC (μ G/L) (04024)	PRO- PANIL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82685)	SI- MAZINE, WATER, DISS, REC (μ G/L) (04035)	THIO- BENCARB WATER FLTRD 0.7 μ GF, REC (μ G/L) (82681)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82670)	TER- BACIL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82665)	TER- BUFOS WATER FLTRD 0.7 μ GF, REC (μ G/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 μ GF, REC (μ G/L) (82661)
10-22-97	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
11-20-97	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
12-10-97	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
01-22-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
02-25-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
03-19-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
04-07-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
04-21-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
05-12-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	.0063
05-21-98	<.0070	<.0040	<.0130	.0510	<.0020	<.0100	<.0070	<.0130	<.0010	.0188
05-28-98	<.0070	<.0040	<.0130	.0169	<.0020	<.0100	<.0070	<.0130	<.0010	.0113
06-11-98	.0271	<.0040	<.0130	.0178	<.0020	<.0100	<.0070	<.0130	<.0010	.0156
06-23-98	<.0070	<.0040	<.0130	.0078	<.0020	<.0100	<.0070	<.0130	<.0010	.0071
07-09-98	<.0070	<.0040	<.0130	.0078	<.0020	<.0100	<.0070	<.0130	<.0010	.0068
07-20-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
08-12-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
08-27-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
09-14-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020
09-28-98	<.0070	<.0040	<.0130	<.0050	<.0020	<.0100	<.0070	<.0130	<.0010	<.0020

PLATTE RIVER BASIN

207

06800500 ELKHORN RIVER AT WATERLOO, NE

LOCATION.--Lat 41°17'37", long 96°17'00", in SW¹/₄ sec.3, T.15 N., R.10 E., Douglas County, Hydrologic Unit 10220003, on right bank at Nebraska Highway 64 bridge at north edge of Waterloo, 3.5 mi downstream from Rawhide Creek, and at mile 13.8.

DRAINAGE AREA.--6,900 mi², approximately, of which about 5,870 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1899 to November 1903, May 1911 to September 1915, August 1928 to current year. Published as "at Arlington" 1899-1903, July 1913 to September 1915. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1914 (M), 1915, 1936, 1943(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,104.73 ft above sea level. Oct. 1, 1960, to July 27, 1978, at datum 2.00 ft higher. See WSP 1918 for history of changes prior to Oct. 1, 1960. July 28, 1978 to Nov. 17, 1993, at site 800 ft downstream at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Some small diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	924	1370	1310	1150	2020	1460	4230	3710	2250	3760	1440	1600
2	901	1330	1270	e1100	1660	1400	3990	3610	2100	3200	1370	1560
3	889	1290	1260	e1020	1470	1380	3620	3440	2100	3530	1370	1510
4	877	1260	1260	e960	1410	1370	3950	3190	2640	8010	1580	1430
5	869	1220	1170	e928	e1300	1330	4070	3140	2320	13800	1790	1370
6	854	1200	e1000	e860	e1200	1320	4100	3070	2100	23100	1880	1320
7	849	1200	e1050	e780	e1160	e1200	5020	2910	2030	18300	2050	1290
8	844	1190	e1100	e760	e1200	e1000	7080	2790	4030	9990	2110	1230
9	841	1200	e1120	e700	e1200	e800	6970	2630	13000	5700	1870	1190
10	837	1200	e1140	e660	e1300	e660	6290	2630	6800	4910	1690	1150
11	840	1200	e1160	e680	1570	e600	5500	2470	7530	4280	1590	1110
12	886	1190	e1180	e700	1470	e660	5030	2480	9980	3650	1530	1100
13	1170	1190	e1200	e740	1450	e740	4540	2590	e8200	3270	1460	1070
14	1170	1200	e1200	e780	1420	e800	3940	2450	e7400	3170	1440	1060
15	1250	1200	1240	e840	1340	e860	4430	2540	7620	2900	1440	1060
16	1210	1180	1240	e900	1340	e920	6700	4010	8280	2670	1960	1050
17	1180	1180	1270	e1000	1410	e1000	5990	4020	7020	2460	2460	1050
18	1140	1180	e1250	e1020	1480	e1180	5040	3950	10200	2340	1750	1050
19	1090	1200	e1200	e1000	1520	e1300	4520	2540	11900	2210	1580	1040
20	1050	1230	e1200	e1040	1530	e1400	4160	2870	8880	2090	1460	1070
21	1020	1230	e1200	e1060	1520	e1600	3800	3180	5440	1950	3680	1100
22	1000	1200	1220	e1100	1500	e1800	3540	3790	4530	2980	13100	1110
23	988	1210	1230	e1140	1490	2040	3210	4830	3960	3640	8030	1080
24	1030	1230	e1220	e1180	1520	2290	3030	3610	8400	2040	5900	1070
25	1190	1220	e1220	e1200	1520	3150	3020	4470	6730	1730	3360	1080
26	1650	1210	1210	e1240	1510	3980	3030	3670	4310	1620	2520	1090
27	1740	1220	1180	e1300	1510	4400	3500	3180	3660	1540	2180	1100
28	1490	1220	1140	e1400	1490	5560	3310	3020	3450	1500	1960	1100
29	1460	1280	1150	e1500	---	5660	4040	3280	3250	1470	1850	1110
30	1470	1340	1170	1990	---	5000	4020	2660	3120	1640	1820	1090
31	1430	---	1160	2060	---	4350	---	2440	---	1470	1680	---
TOTAL	34139	36770	36920	32788	40510	61210	133670	99170	173230	144920	79900	35240
MEAN	1101	1226	1191	1058	1447	1975	4456	3199	5774	4675	2577	1175
MAX	1740	1370	1310	2060	2020	5660	7080	4830	13000	23100	13100	1600
MIN	837	1180	1000	660	1160	600	3020	2440	2030	1470	1370	1040
AC-FT	67710	72930	73230	65040	80350	121400	265100	196700	343600	287400	158500	69900

e Estimated

PLATTE RIVER BASIN

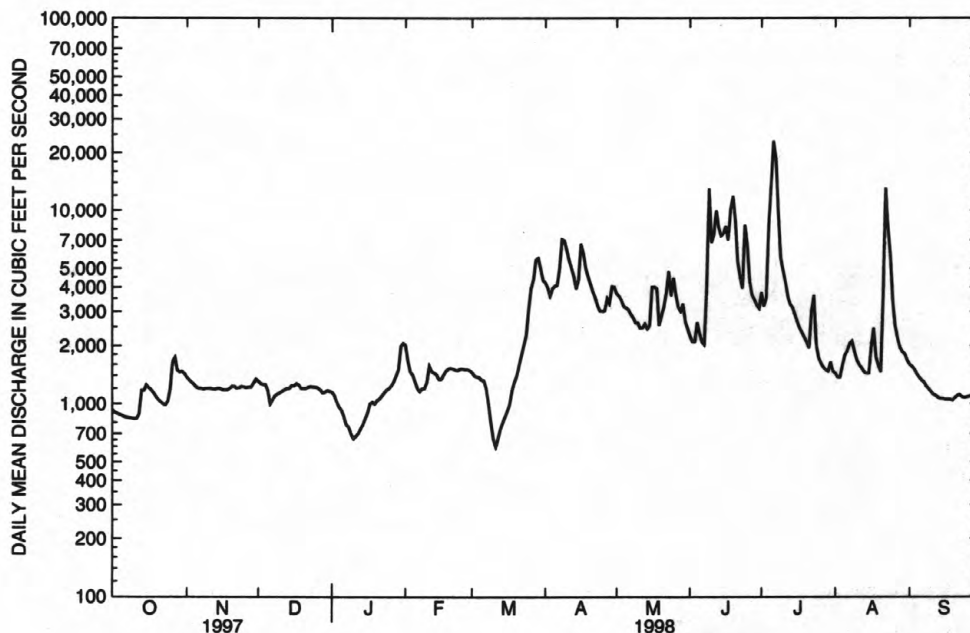
06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	714	717	630	593	1184	2278	2018	2004	2799	1389	933	731
MAX	2780	2156	1803	1650	6439	8082	10450	7565	11950	11470	4755	2705
(WY)	1987	1987	1994	1973	1971	1993	1984	1995	1984	1993	1951	1951
MIN	150	240	150	180	256	489	512	327	405	173	117	87.8
(WY)	1940	1940	1930	1977	1940	1981	1981	1934	1933	1936	1976	1939

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998	
ANNUAL TOTAL	727711		908467			
ANNUAL MEAN	1994		2489		1331	
MEDIAN OF ANNUAL MEANS					1080	
HIGHEST ANNUAL MEAN					3870	
LOWEST ANNUAL MEAN					417	
HIGHEST DAILY MEAN	14000 Feb 21		23100 Jul 6		93800 Jun 12 1944	
LOWEST DAILY MEAN	596 Aug 27		600 Mar 11		64 Sep 16 1939	
ANNUAL SEVEN-DAY MINIMUM	617 Aug 24		717 Jan 7		66 Sep 15 1939	
INSTANTANEOUS PEAK FLOW			26300 Jul 6		100000 Jun 12 1944	
INSTANTANEOUS PEAK STAGE			13.56 Jul 6		*16.60 Jun 12 1944	
ANNUAL RUNOFF (AC-FT)	1443000		1802000		964300	
10 PERCENT EXCEEDS	3860		4950		2650	
50 PERCENT EXCEEDS	1300		1470		708	
90 PERCENT EXCEEDS	843		1000		300	

* From floodmark, site and datum then in use.



ELKHORN RIVER AT WATERLOO

PLATTE RIVER BASIN

209

06801000 PLATTE RIVER NEAR ASHLAND, NE

LOCATION.--Lat 41°03'44", long 96°19'28", in SE¹/₄ SW¹/₄ sec.29, T.13 N., R.10 E., Sarpy County, Hydrologic Unit 10200202, on left bank upstream side and 35 ft northeast of Highway 6 bridge, 3 mi northeast of Ashland, 2 mi upstream from Salt Creek, and at mile 27.9.

DRAINAGE AREA.--84,200 mi² from state base maps, scale 1:1,000,000.

PERIOD OF RECORD.--August 1928 to May 1953, July 1988 to current year.

REVISED RECORDS.--WDR NE-94-1: 1993 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,040.00 ft above sea level. Prior to Oct. 1, 1929, chain gage at former highway bridge 1/2 mi upstream at datum 15.83 ft higher. Oct. 1, 1929 to Oct. 7, 1933, staff or chain gage at former bridge datum 14.79 ft higher. Oct. 14, 1933 to Dec. 10, 1938, water-stage recorder at site 950 ft upstream from former bridge at datum 14.79 ft higher. Dec. 11, 1938 to June 16, 1948, water-stage recorder at site of former bridge 1/2 mi upstream at datum 14.79 ft higher. June 17, 1948 to May 11, 1953, 1/2 mi downstream on Highway 6 bridge at datum 12.51 ft higher.

REMARKS.--Records fair except for periods of estimated record which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6410	13200	8940	9470	e10800	9930	17000	10300	7940	8010	5850	4700
2	7020	11900	9850	9910	e10400	8550	15900	9960	7720	7960	6850	4160
3	6630	11600	9620	10100	e10000	8360	14500	9750	7530	7170	6460	3760
4	6280	11000	9140	9450	e10000	8190	13800	9020	7740	10400	7040	3880
5	5800	9870	8190	9430	e10000	8040	14000	9390	7550	e14000	7590	3880
6	5700	10000	7520	8070	e9800	8080	15400	8940	8020	e27000	8000	3810
7	6050	9260	7900	7660	e9600	8340	15600	8300	8030	e20000	7840	4160
8	6130	9350	7210	e7000	e9800	8740	25400	8220	8870	e15000	7940	3760
9	6720	9730	6990	e6800	e10200	e8000	30700	8780	25500	e12000	7600	3820
10	6690	9060	7400	e6000	e10600	e8000	27600	7400	21000	9930	7180	3820
11	6600	9830	7910	e5400	e11000	e7600	23400	8430	20500	9390	6620	3450
12	7270	8940	8100	e5000	e11600	e7200	20600	8030	22700	8660	6030	3690
13	8030	8580	8820	e4800	e12000	e7400	17800	8300	20100	7660	6520	3560
14	9000	8390	8430	e5400	12000	e7600	14800	8930	22600	7150	6750	3580
15	13400	8630	8730	e7000	11500	e8000	14300	9010	24900	6750	6420	3950
16	10800	7490	8780	e10000	10200	e8200	19100	9210	e24000	6700	6560	3840
17	8640	8650	8930	e10200	10800	e9000	18400	9090	e22000	6410	6920	4010
18	8280	7940	8380	e10000	10900	e10000	16300	9080	e22600	5210	6110	4380
19	8500	7700	9590	e10000	10500	e11000	14100	8950	e24000	5090	6090	4470
20	7910	8390	9880	e10000	10600	e12000	13300	8530	e26000	4840	5530	4860
21	7580	8300	9130	e10400	10400	11200	11200	9170	e19000	4450	9050	4770
22	7740	8870	8580	e10800	9980	10400	10400	9640	e16000	5090	23200	4720
23	7070	8760	9180	e10200	10300	9550	10400	10200	e14000	7430	14900	4710
24	7790	8600	9190	e10200	8980	10600	10000	11000	e16000	7370	9500	4600
25	7340	9140	9510	e10400	10100	11000	10000	13400	e18000	7060	7430	4800
26	9990	8250	9080	e10800	9750	11300	9440	13600	e13000	7590	6580	4620
27	12200	8310	9200	e11000	9970	10900	10000	11400	9310	5830	6070	4550
28	12700	8400	9460	e11000	8820	15100	10200	10500	8590	5510	5600	4520
29	10800	8510	9490	e11000	---	22200	10200	10800	8470	5630	5330	4580
30	11300	9720	9430	e11200	---	21500	10300	8910	7770	5780	4780	4170
31	11700	---	9550	e11000	---	17900	---	8140	---	6250	4870	---
TOTAL	258070	276370	272110	279690	290600	323880	464140	294380	469440	267320	233210	125580
MEAN	8325	9212	8778	9022	10380	10450	15470	9496	15650	8623	7523	4186
MAX	13400	13200	9880	11200	12000	22200	30700	13600	26000	27000	23200	4860
MIN	5700	7490	6990	4800	8820	7200	9440	7400	7530	4450	4780	3450
AC-FT	511900	548200	539700	554800	576400	642400	920600	583900	931100	530200	462600	249100

e Estimated

PLATTE RIVER BASIN

06801000 PLATTE RIVER NEAR ASHLAND, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5525	5850	5533	5292	7169	9938	8657	8769	11830	8546	5599	5189
MAX	8325	9212	8778	9022	11390	23190	15470	19330	23270	31980	10730	9825
(WY)	1998	1998	1998	1998	1997	1993	1998	1995	1995	1993	1996	1993
MIN	2433	3620	2879	2939	5128	5233	4618	2969	2928	2448	1288	1533
(WY)	1992	1989	1990	1991	1990	1991	1989	1989	1989	1991	1991	1991

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1989 - 1998

(SINCE STORAGE IN LAKE McCONAUGHY)

ANNUAL TOTAL	2999390	3554790	
ANNUAL MEAN	8218	9739	^a 7320
HIGHEST ANNUAL MEAN			11820
LOWEST ANNUAL MEAN			4612
HIGHEST DAILY MEAN	31000	Feb 20	30700
LOWEST DAILY MEAN	2030	Jul 31	3450
ANNUAL SEVEN-DAY MINIMUM	2330	Aug 4	3670
INSTANTANEOUS PEAK FLOW (STAGE)			^e 41000
INSTANTANEOUS PEAK STAGE			19.48
ANNUAL RUNOFF (AC-FT)	5949000	7051000	5303000
10 PERCENT EXCEEDS	11700	15000	12000
50 PERCENT EXCEEDS	7780	8940	6050
90 PERCENT EXCEEDS	4550	5050	2670

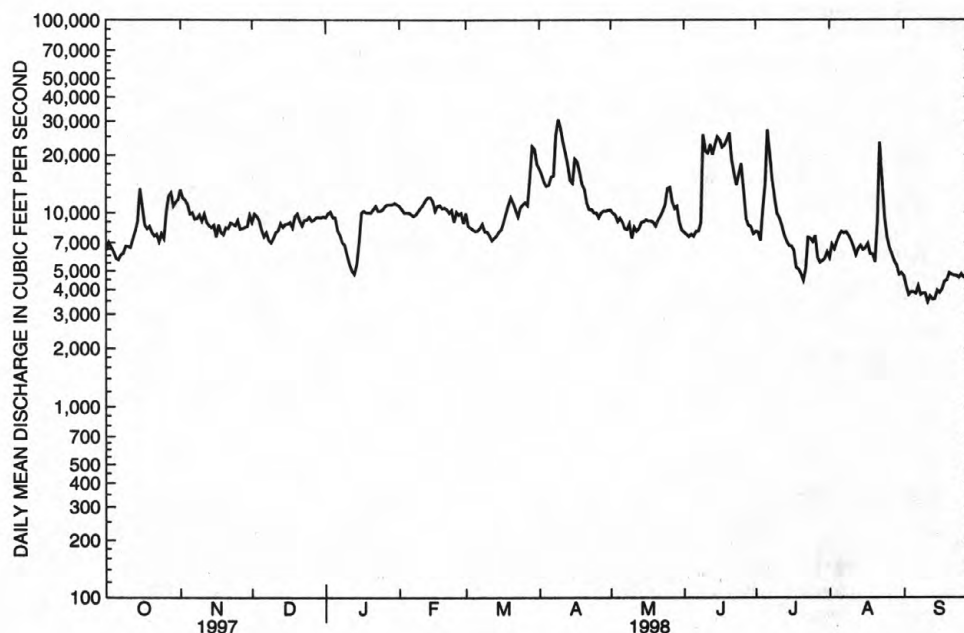
a Average discharge for water years 1942-52, 5961 ft³/s

e Estimated, indefinite stage-discharge relationship.

* Estimated; discharge includes overbank flow.

** Backwater from ice.

*** Ice jam.



PLATTE RIVER NEAR ASHLAND

PLATTE RIVER BASIN

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06801180 OLIVE BRANCH NEAR HALLAM, NE

LOCATION.--Lat 40°35'44", long 096°47'42", in NE¹/₄ NW¹/₄ sec.7, T.7 N., R.6 E., Lancaster County, Hydrologic Unit 10200203, on right bank, 4.75 mi west of U.S. Highway 77 on West Panama Road, south of Lincoln, and at mile 3.5.

DRAINAGE AREA.--37.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1997.

GAGE.--Water-stage recorder, water temperature, and specific conductance sensors. Datum of gage is 1,273.75 ft above sea level.

REMARKS.--Record good except for periods of estimated record which are poor.

COOPERATION.--Station operated in cooperation with the Nebraska Public Power District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.0	e6.2	27	5.6	167	4.4	31	7.7	22	3.7	4.7	4.7
2	e1.1	e5.6	18	9.2	52	4.8	24	6.9	22	3.3	4.5	4.5
3	e1.2	e5.2	15	8.4	30	4.5	20	6.1	21	2.9	36	4.6
4	e1.3	e5.4	11	5.0	20	4.5	17	6.0	18	2.8	8.9	4.5
5	e1.2	e5.4	8.2	4.8	16	4.4	15	5.7	15	3.8	8.5	4.7
6	e1.3	e5.2	7.0	4.7	13	4.5	15	5.7	12	3.7	5.9	4.4
7	e1.6	e5.0	6.0	4.4	11	4.7	142	6.6	9.6	7.9	19	4.3
8	e1.5	e4.5	5.9	4.3	9.7	13	128	5.5	13	3.7	12	4.2
9	e1.4	e3.7	5.4	3.7	9.0	9.6	137	5.4	11	3.4	9.7	3.9
10	e2.1	e3.0	4.8	3.2	23	5.4	58	5.5	13	35	8.1	3.6
11	e2.0	e2.4	4.1	2.9	20	3.9	40	5.2	41	11	7.0	3.4
12	e1.7	e2.4	3.8	3.0	15	3.1	31	5.8	28	6.9	6.5	3.2
13	e1.8	e2.4	3.9	2.2	13	5.4	25	4.8	20	5.4	6.3	2.6
14	e2.0	e2.5	3.8	2.3	11	6.6	20	4.9	248	4.4	6.3	2.6
15	e2.0	e2.5	3.9	2.6	10	6.3	17	7.2	79	5.0	5.7	3.7
16	e1.9	e2.6	4.6	3.0	9.8	6.5	15	6.8	42	4.5	5.3	3.2
17	e1.7	e2.7	5.0	2.9	9.2	10	13	4.9	30	4.0	4.8	3.6
18	e1.6	e2.8	4.9	2.5	8.3	14	12	4.6	21	3.4	3.5	3.7
19	e1.5	e3.0	4.4	2.5	7.3	16	12	3.8	17	3.6	3.6	4.0
20	e1.7	e3.2	3.9	2.6	6.8	18	11	3.6	15	2.9	4.0	100
21	e2.0	e3.0	3.6	2.5	6.3	41	11	3.3	18	2.5	5.0	17
22	e2.5	e3.0	4.1	2.4	6.3	71	10	6.9	11	4.7	5.5	11
23	e3.5	e3.0	4.0	2.5	5.8	63	9.2	4.4	12	2.9	5.9	6.4
24	e6.0	e3.2	4.4	2.2	5.4	44	8.6	3.3	9.6	2.9	6.4	5.7
25	e10	e3.4	4.6	2.3	5.5	61	8.1	3.7	7.4	3.9	6.2	5.4
26	e9.0	e3.5	4.3	2.8	5.3	68	6.8	17	6.3	3.5	6.1	4.7
27	e8.0	e4.0	3.8	5.9	4.9	141	6.5	37	5.1	3.3	6.9	5.7
28	e7.4	e5.0	4.3	8.0	5.1	110	7.5	34	5.4	2.1	12	6.2
29	e7.0	179	3.8	7.8	---	55	8.8	32	4.7	2.1	5.5	5.7
30	e40	69	3.9	4.9	---	41	8.2	29	4.4	74	4.9	5.2
31	e7.0	---	3.5	9.5	---	41	---	25	---	8.2	4.8	---
TOTAL	134.0	351.8	194.9	130.6	505.7	885.6	867.7	308.3	781.5	231.4	239.5	246.4
MEAN	4.32	11.7	6.29	4.21	18.1	28.6	28.9	9.95	26.0	7.46	7.73	8.21
MAX	40	179	27	9.5	167	141	142	37	248	74	36	100
MIN	1.0	2.4	3.5	2.2	4.9	3.1	6.5	3.3	4.4	2.1	3.5	2.6
AC-FT	266	698	387	259	1000	1760	1720	612	1550	459	475	489

e Estimated

PLATTE RIVER BASIN

06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

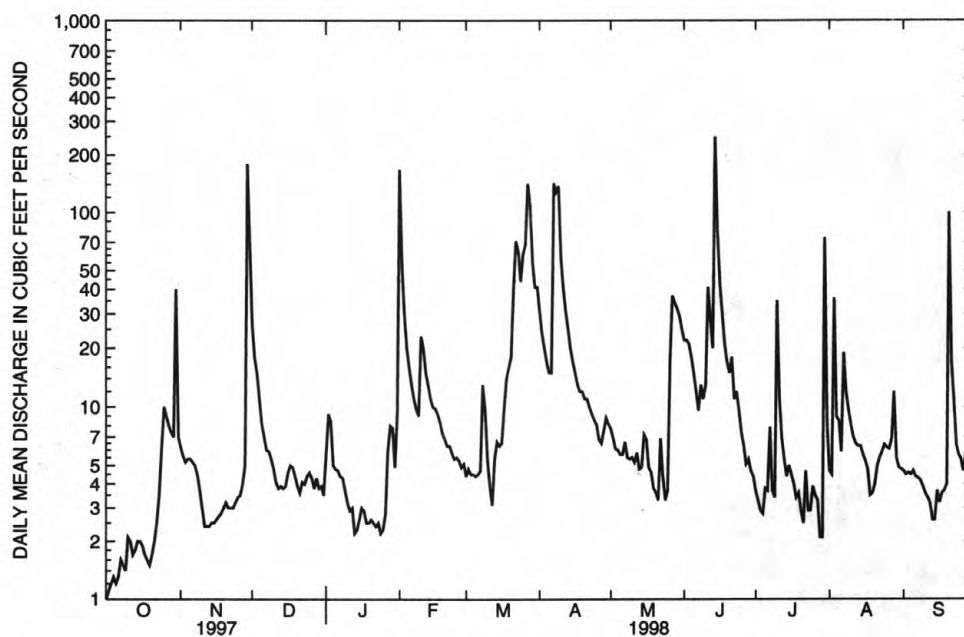
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.32	11.7	6.29	4.21	18.1	28.6	28.9	9.95	16.7	7.07	4.98	5.07
MAX	4.32	11.7	6.29	4.21	18.1	28.6	28.9	9.95	26.0	7.46	7.73	8.21
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	4.32	11.7	6.29	4.21	18.1	28.6	28.9	9.95	7.43	6.68	2.24	1.93
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1997 - 1998

ANNUAL TOTAL	4877.4	
ANNUAL MEAN	13.4	13.4
HIGHEST ANNUAL MEAN		13.4 1998
LOWEST ANNUAL MEAN		13.4 1998
HIGHEST DAILY MEAN	248 Jun 14	248 Jun 14 1998
LOWEST DAILY MEAN	1.0 Oct 1	1.0 Oct 1 1997
ANNUAL SEVEN-DAY MINIMUM	1.2 Oct 1	1.2 Sep 30 1997
INSTANTANEOUS PEAK FLOW	406 Jun 14	406 Jun 14 1998
INSTANTANEOUS PEAK STAGE	6.88 Jun 14	6.88 Jun 14 1998
ANNUAL RUNOFF (AC-FT)	9670	9680
10 PERCENT EXCEEDS	29	22
50 PERCENT EXCEEDS	5.4	4.6
90 PERCENT EXCEEDS	2.5	1.7



OLIVE BRANCH NEAR HALLAM

PLATTE RIVER BASIN

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06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1997 to current year

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1997 to current year.

WATER TEMPERATURES: May 1997 to current year.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	17.9	23.8	21.1	18.7
2	---	---	---	---	---	---	---	---	18.4	22.6	22.6	18.0
3	---	---	---	---	---	---	---	---	17.2	19.4	22.8	16.8
4	---	---	---	---	---	---	---	---	18.3	18.6	22.0	16.2
5	---	---	---	---	---	---	---	---	19.0	18.7	20.0	16.0
6	---	---	---	---	---	---	---	---	19.5	20.0	19.0	17.0
7	---	---	---	---	---	---	---	---	18.7	20.6	18.8	17.5
8	---	---	---	---	---	---	---	---	18.8	21.5	18.5	17.5
9	---	---	---	---	---	---	---	---	16.9	21.5	18.0	17.0
10	---	---	---	---	---	---	---	---	17.0	21.8	18.0	15.2
11	---	---	---	---	---	---	---	---	16.8	24.6	16.8	15.1
12	---	---	---	---	---	---	---	---	18.0	24.9	17.5	---
13	---	---	---	---	---	---	---	12.2	18.4	25.1	17.6	16.2
14	---	---	---	---	---	---	---	13.8	18.9	23.2	18.2	16.4
15	---	---	---	---	---	---	---	13.5	18.6	22.4	17.9	---
16	---	---	---	---	---	---	---	14.7	18.8	23.1	18.6	---
17	---	---	---	---	---	---	---	16.8	19.0	23.0	18.8	17.1
18	---	---	---	---	---	---	---	17.7	19.7	22.6	17.0	18.1
19	---	---	---	---	---	---	---	15.0	20.7	22.4	19.5	17.1
20	---	---	---	---	---	---	---	14.2	21.6	22.2	18.3	14.3
21	---	---	---	---	---	---	---	14.9	21.4	23.6	17.9	13.9
22	---	---	---	---	---	---	---	15.1	21.2	24.0	18.0	14.3
23	---	---	---	---	---	---	---	15.1	20.7	23.9	17.9	14.5
24	---	---	---	---	---	---	---	17.0	21.4	23.9	18.8	14.5
25	---	---	---	---	---	---	---	15.4	22.4	23.7	19.3	14.6
26	---	---	---	---	---	---	---	15.1	23.1	23.6	19.7	14.4
27	---	---	---	---	---	---	---	12.9	23.5	23.2	20.1	15.2
28	---	---	---	---	---	---	---	13.0	24.7	22.8	21.3	14.5
29	---	---	---	---	---	---	---	14.0	23.5	21.8	20.5	13.9
30	---	---	---	---	---	---	---	14.9	22.8	20.9	20.4	14.1
31	---	---	---	---	---	---	---	16.7	---	20.4	19.6	---
MEAN	---	---	---	---	---	---	---	---	19.9	22.4	19.2	---
MAX	---	---	---	---	---	---	---	---	24.7	25.1	22.8	---
MIN	---	---	---	---	---	---	---	---	16.8	18.6	16.8	---

PLATTE RIVER BASIN

06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.6	9.6	4.5	3.8	1.5	3.5	8.8	13.7	22.2	21.7	20.1	24.5
2	15.5	8.7	4.9	4.7	2.7	3.6	9.4	13.9	22.4	21.7	20.5	23.8
3	16.3	7.9	3.5	4.1	2.8	4.3	8.6	14.5	19.1	22.3	21.3	24.0
4	15.2	8.4	2.5	2.4	1.5	4.0	9.1	16.3	16.0	21.8	21.7	23.5
5	16.2	8.3	1.6	2.8	2.7	4.3	9.7	16.5	15.2	21.9	20.8	23.6
6	17.0	7.7	1.9	3.2	3.0	4.3	10.9	16.1	16.2	23.5	19.6	23.7
7	16.7	7.6	2.1	3.0	3.0	3.3	10.9	15.9	16.4	24.2	20.2	22.5
8	16.8	7.7	2.7	3.0	3.4	1.3	8.8	15.3	16.1	23.3	21.2	19.3
9	14.4	7.7	3.6	2.5	4.3	1.3	8.8	15.1	16.6	21.8	23.4	18.0
10	14.8	6.4	3.1	2.5	3.8	2.0	10.3	16.0	17.7	22.7	23.1	18.5
11	17.0	6.3	2.9	2.8	2.9	1.9	12.9	17.1	19.8	22.5	21.6	18.5
12	16.6	6.2	2.7	2.5	3.6	2.2	14.0	17.7	21.2	23.1	21.1	19.4
13	13.3	6.5	2.9	2.7	4.6	2.7	14.6	17.7	20.7	24.2	21.4	19.9
14	12.9	5.4	3.0	3.2	5.0	2.2	13.2	18.6	18.9	24.4	22.1	20.0
15	13.5	4.7	3.6	3.2	6.5	2.2	11.0	18.5	19.7	23.2	22.3	19.9
16	13.2	4.7	4.0	3.1	6.4	2.5	10.3	18.1	20.1	23.2	22.6	19.2
17	12.7	5.2	4.0	2.9	5.2	1.8	11.2	18.0	22.4	23.5	23.5	18.9
18	13.0	5.4	4.6	3.0	5.0	1.4	12.2	20.2	22.5	23.4	23.7	19.7
19	13.1	5.8	4.8	3.3	5.1	1.2	13.3	20.9	21.3	23.5	23.9	20.1
20	11.9	6.3	4.4	3.0	5.6	2.2	11.7	20.5	22.8	23.8	24.4	19.8
21	11.5	6.0	3.2	3.1	6.4	2.8	11.7	18.7	22.1	23.3	24.1	16.9
22	11.4	6.1	3.9	3.3	7.9	2.9	12.6	17.6	22.6	22.6	23.9	14.7
23	11.7	6.3	4.3	3.3	8.6	3.7	13.9	16.9	23.1	20.6	24.1	14.5
24	12.3	6.5	3.7	3.1	7.8	4.9	14.2	16.7	23.8	20.0	24.2	17.0
25	10.1	7.2	3.7	3.5	9.8	6.3	15.7	16.8	23.8	18.9	23.2	19.3
26	5.5	7.3	3.3	3.4	8.1	10.3	14.6	17.2	24.2	17.9	20.2	20.7
27	5.1	8.1	2.9	2.3	6.2	12.1	12.2	21.2	24.2	19.6	22.4	19.1
28	6.2	8.4	3.1	2.1	4.3	11.2	9.4	23.0	23.9	21.1	24.2	19.3
29	6.0	6.2	3.2	2.1	---	13.4	9.4	23.8	23.5	21.0	23.3	19.5
30	6.5	4.9	3.4	2.8	---	11.9	11.1	24.7	22.2	22.4	23.9	18.5
31	8.7	---	3.5	3.2	---	9.3	---	23.8	---	20.6	24.4	---
MEAN	12.6	6.8	3.4	3.0	4.9	4.5	11.5	18.1	20.7	22.2	22.5	19.9
MAX	17.0	9.6	4.9	4.7	9.8	13.4	15.7	24.7	24.2	24.4	24.4	24.5
MIN	5.1	4.7	1.6	2.1	1.5	1.2	8.6	13.7	15.2	17.9	19.6	14.5

PLATTE RIVER BASIN

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06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG C) WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	647	398	914	1070
2	---	---	---	---	---	---	---	---	676	530	905	1070
3	---	---	---	---	---	---	---	---	698	613	923	1080
4	---	---	---	---	---	---	---	---	717	675	929	1050
5	---	---	---	---	---	---	---	---	737	718	958	1070
6	---	---	---	---	---	---	---	---	758	755	975	1090
7	---	---	---	---	---	---	---	---	782	797	978	1090
8	---	---	---	---	---	---	---	---	804	819	966	1090
9	---	---	---	---	---	---	---	---	817	843	987	1080
10	---	---	---	---	---	---	---	---	821	551	991	1070
11	---	---	---	---	---	---	---	---	823	454	946	1070
12	---	---	---	---	---	---	---	---	816	578	926	---
13	---	---	---	---	---	---	---	814	842	672	956	1060
14	---	---	---	---	---	---	---	829	882	750	951	1050
15	---	---	---	---	---	---	---	840	893	809	944	---
16	---	---	---	---	---	---	---	836	900	848	953	---
17	---	---	---	---	---	---	---	843	918	870	956	1020
18	---	---	---	---	---	---	---	855	923	895	974	1040
19	---	---	---	---	---	---	---	879	936	905	869	1040
20	---	---	---	---	---	---	---	887	912	910	880	1050
21	---	---	---	---	---	---	---	888	744	526	897	1030
22	---	---	---	---	---	---	---	893	782	619	896	982
23	---	---	---	---	---	---	---	878	964	799	908	868
24	---	---	---	---	---	---	---	835	662	863	917	756
25	---	---	---	---	---	---	---	847	330	904	918	783
26	---	---	---	---	---	---	---	481	470	922	929	941
27	---	---	---	---	---	---	---	473	524	927	953	967
28	---	---	---	---	---	---	---	511	564	877	976	968
29	---	---	---	---	---	---	---	570	604	904	1010	983
30	---	---	---	---	---	---	---	598	649	924	1050	997
31	---	---	---	---	---	---	---	620	---	925	1060	---
MEAN	---	---	---	---	---	---	---	---	753	761	948	---
MAX	---	---	---	---	---	---	---	---	964	927	1060	---
MIN	---	---	---	---	---	---	---	---	330	398	869	---

PLATTE RIVER BASIN

06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG C) WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	979	629	493	843	574	749	510	790	483	789	543	628
2	994	751	541	798	495	754	526	788	485	723	582	662
3	996	820	580	809	529	755	540	790	482	738	571	700
4	1020	858	616	804	557	754	557	795	489	781	557	681
5	1010	881	656	803	584	754	575	789	502	776	559	655
6	1000	888	685	801	603	755	589	794	518	773	586	703
7	1000	894	717	803	623	755	522	791	536	630	611	734
8	998	901	724	807	642	753	448	786	554	695	615	732
9	1000	902	744	803	661	752	437	781	570	711	614	678
10	999	905	758	797	601	751	468	782	587	437	590	654
11	989	910	774	799	560	751	500	782	571	508	584	634
12	923	912	789	811	595	749	525	792	492	611	605	609
13	910	911	809	823	617	748	554	801	510	658	644	597
14	968	916	812	850	635	744	591	805	368	690	670	585
15	964	921	816	906	651	742	622	809	407	716	690	545
16	954	931	809	907	663	741	637	801	439	741	689	536
17	961	938	809	908	678	725	658	793	465	762	680	543
18	960	927	793	912	691	672	681	788	486	778	682	556
19	965	919	804	921	704	638	702	765	501	778	663	567
20	978	904	818	912	714	603	711	746	515	804	614	572
21	971	900	840	905	723	525	718	749	466	822	641	563
22	969	906	846	901	731	438	729	757	542	741	678	557
23	970	909	848	895	736	457	740	764	540	761	679	564
24	942	911	847	901	739	494	756	771	614	777	587	580
25	816	908	841	897	747	469	766	787	654	737	598	604
26	724	913	843	888	747	464	767	730	671	694	664	635
27	686	918	879	791	747	458	769	468	697	708	697	609
28	697	921	869	717	750	456	768	473	873	738	647	605
29	659	523	881	723	---	495	774	485	944	714	650	638
30	405	392	851	736	---	505	782	488	979	368	678	666
31	416	---	843	771	---	504	---	494	---	473	632	---
MEAN	898	861	772	837	653	642	631	733	565	698	629	620
MAX	1020	938	881	921	750	755	782	809	979	822	697	734
MIN	405	392	493	717	495	438	437	468	368	368	543	536

PLATTE RIVER BASIN

217

06803000 SALT CREEK AT ROCA, NE

LOCATION.--Lat 40°39'29", long 96°39'55", in NW¹/₄ SW¹/₄ sec.17, T.8 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 15 ft downstream from highway bridge at west edge of Roca, and at mile 54.2.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.50 ft above sea level, Kansas City supplementary adjustment of 1943. Prior to May 16, 1956, nonrecording gage at present site and datum.

REMARKS.--Records good. Flood flow affected by several detention dams.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	95	283	53	1150	50	328	57	65	38	34	15
2	15	50	164	82	481	48	231	49	60	31	35	14
3	14	38	125	83	256	48	189	45	53	27	69	14
4	14	33	78	70	166	42	149	41	49	24	106	14
5	14	29	61	62	140	44	126	37	44	23	78	14
6	14	28	73	59	130	30	197	37	39	23	64	14
7	13	26	66	43	118	20	1170	39	34	44	60	14
8	13	24	67	43	111	18	1170	37	90	28	63	13
9	13	23	76	41	108	19	1000	33	100	23	45	13
10	12	22	68	34	212	21	547	34	148	919	38	13
11	13	22	78	22	251	20	394	34	366	357	34	13
12	18	22	59	20	163	27	300	38	270	218	32	23
13	20	24	67	23	130	50	230	33	129	139	30	26
14	14	23	56	29	119	69	184	33	1970	95	23	24
15	13	20	52	32	112	61	153	470	966	69	20	27
16	13	20	62	35	105	58	132	208	463	55	20	27
17	14	20	67	31	102	75	111	125	303	44	20	27
18	14	19	69	26	93	143	96	95	233	36	20	26
19	13	18	66	26	86	141	87	81	184	30	17	25
20	13	17	62	29	79	138	81	72	254	27	15	149
21	14	17	49	30	75	293	73	66	262	23	16	106
22	14	17	54	33	73	483	64	159	173	25	17	49
23	14	17	54	33	71	419	60	98	165	27	15	24
24	15	16	56	34	68	304	104	82	119	24	14	20
25	36	16	59	36	65	405	103	77	82	23	14	18
26	94	16	57	36	62	452	95	66	66	24	19	16
27	66	16	56	52	56	672	88	84	52	23	29	17
28	53	16	58	91	54	976	91	87	45	22	28	22
29	97	729	49	111	---	464	66	80	45	20	24	29
30	422	1060	47	91	---	413	59	79	60	109	16	34
31	350	---	46	114	---	436	---	72	---	51	15	---
TOTAL	1456	2493	2284	1504	4636	6439	7678	2548	6889	2621	1030	840
MEAN	47.0	83.1	73.7	48.5	166	208	256	82.2	230	84.5	33.2	28.0
MAX	422	1060	283	114	1150	976	1170	470	1970	919	106	149
MIN	12	16	46	20	54	18	59	33	34	20	14	13
AC-FT	2890	4940	4530	2980	9200	12770	15230	5050	13660	5200	2040	1670

PLATTE RIVER BASIN

06803000 SALT CREEK AT ROCA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.7	18.5	16.3	19.0	38.9	88.4	67.0	93.6	91.8	83.0	32.1	24.0
MAX	617	135	108	140	180	641	356	587	666	789	496	220
(WY)	1974	1997	1987	1973	1958	1979	1987	1995	1984	1993	1954	1989
MIN	1.36	3.11	3.19	3.25	5.37	5.59	5.23	5.23	2.98	2.19	1.18	1.66
(WY)	1956	1956	1965	1954	1956	1956	1956	1955	1981	1955	1955	1991

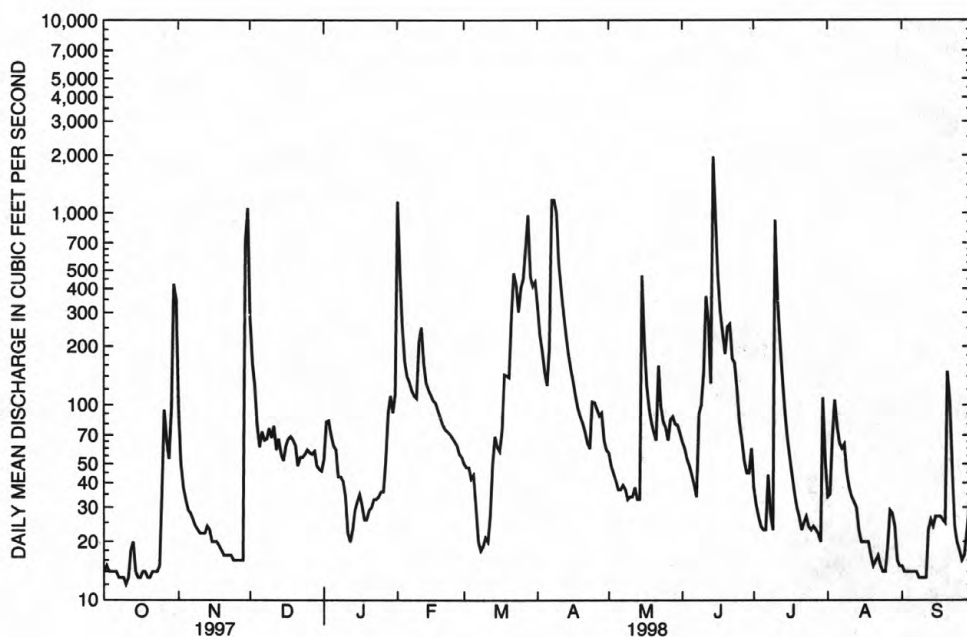
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1952 - 1998

ANNUAL TOTAL	19686	40418	
ANNUAL MEAN	53.9	111	51.2
HIGHEST ANNUAL MEAN			200
LOWEST ANNUAL MEAN			6.15
HIGHEST DAILY MEAN	1240	Jun 25	6070
LOWEST DAILY MEAN	12	Aug 28	.20
ANNUAL SEVEN-DAY MINIMUM	13	Aug 26	.61
INSTANTANEOUS PEAK FLOW		2530	16700
INSTANTANEOUS PEAK STAGE		14.99	22.70
ANNUAL RUNOFF (AC-FT)	39050	80170	37100
10 PERCENT EXCEEDS	85	255	78
50 PERCENT EXCEEDS	28	50	11
90 PERCENT EXCEEDS	15	15	4.0



SALT CREEK AT ROCA

PLATTE RIVER BASIN

219

06803080 SALT CREEK AT PIONEERS BOULEVARD AT LINCOLN, NE

LOCATION.--Lat 40°46'13", long 096°43'05", in SW¹/₄ SW¹/₄, sec. 2, R. 6 E., T. 9 N., Lancaster County, Hydrologic Unit 10200203, on left bank downstream from bridge.

DRAINAGE AREA.--220 mi².

PERIOD OF RECORD.--August 1994 to current year. Published as "above Beal Slough", August-September 1994.

GAGE.--Water-stage recorder. Elevation of gage is 1,140 ft above sea level.

REMARKS.-- Record good except for periods of estimated record which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	225	476	35	1040	54	316	82	72	65	46	26
2	7.3	92	286	51	694	52	229	77	66	52	43	25
3	6.9	56	223	68	355	54	196	71	60	44	49	23
4	5.9	44	176	56	266	52	172	66	54	38	98	22
5	5.9	37	107	42	213	50	156	63	52	34	84	21
6	5.7	35	110	45	170	49	145	59	46	68	67	21
7	5.9	31	251	40	144	51	895	58	42	82	61	21
8	5.6	29	183	37	129	50	1210	57	96	47	60	19
9	5.2	25	128	32	119	50	1050	55	140	33	54	18
10	5.7	21	107	33	182	e50	626	53	321	595	45	17
11	5.9	20	94	51	334	41	417	50	508	510	42	17
12	33	29	70	38	239	30	319	52	385	197	39	17
13	21	24	36	34	181	62	248	46	174	154	37	28
14	13	23	41	29	150	67	215	43	2050	116	36	27
15	6.4	20	46	33	131	66	193	454	1270	88	28	27
16	5.9	13	43	34	122	65	174	369	539	71	25	27
17	5.7	16	51	34	118	79	154	152	340	61	25	26
18	5.9	18	52	32	112	140	137	115	259	53	24	26
19	5.2	22	51	29	95	165	128	94	208	47	22	48
20	5.1	18	46	30	88	153	119	109	188	42	20	111
21	5.0	15	41	33	83	218	113	77	332	37	36	182
22	5.2	14	40	33	79	432	100	321	183	47	24	63
23	5.4	13	40	32	76	396	93	139	164	38	22	40
24	13	12	41	31	72	269	104	98	161	37	21	28
25	62	12	44	28	67	332	123	86	130	35	20	25
26	137	12	42	30	65	384	117	75	107	36	40	22
27	117	11	34	35	60	548	108	70	90	36	36	21
28	86	11	45	77	57	1040	112	86	89	34	140	22
29	113	285	36	127	---	504	108	353	69	45	44	23
30	258	1250	38	106	---	352	86	99	84	54	34	23
31	479	---	33	78	---	401	---	86	---	105	29	---
TOTAL	1449.1	2433	3011	1393	5441	6256	8163	3615	8279	2901	1351	1016
MEAN	46.7	81.1	97.1	44.9	194	202	272	117	276	93.6	43.6	33.9
MAX	479	1250	476	127	1040	1040	1210	454	2050	595	140	182
MIN	5.0	11	33	28	57	30	86	43	42	33	20	17
AC-FT	2870	4830	5970	2760	10790	12410	16190	7170	16420	5750	2680	2020

e Estimated

PLATTE RIVER BASIN

06803080 SALT CREEK AT PIONEERS BOULEVARD AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.3	69.4	48.9	35.8	80.3	85.6	115	397	189	106	43.6	35.2
MAX	46.7	160	97.1	49.5	194	202	272	689	276	220	90.6	55.8
(WY)	1998	1997	1998	1995	1998	1998	1998	1995	1998	1996	1996	1996
MIN	11.0	13.8	15.0	16.1	16.5	16.2	22.1	117	109	38.2	17.7	10.3
(WY)	1996	1996	1996	1996	1996	1996	1996	1998	1997	1995	1995	1995

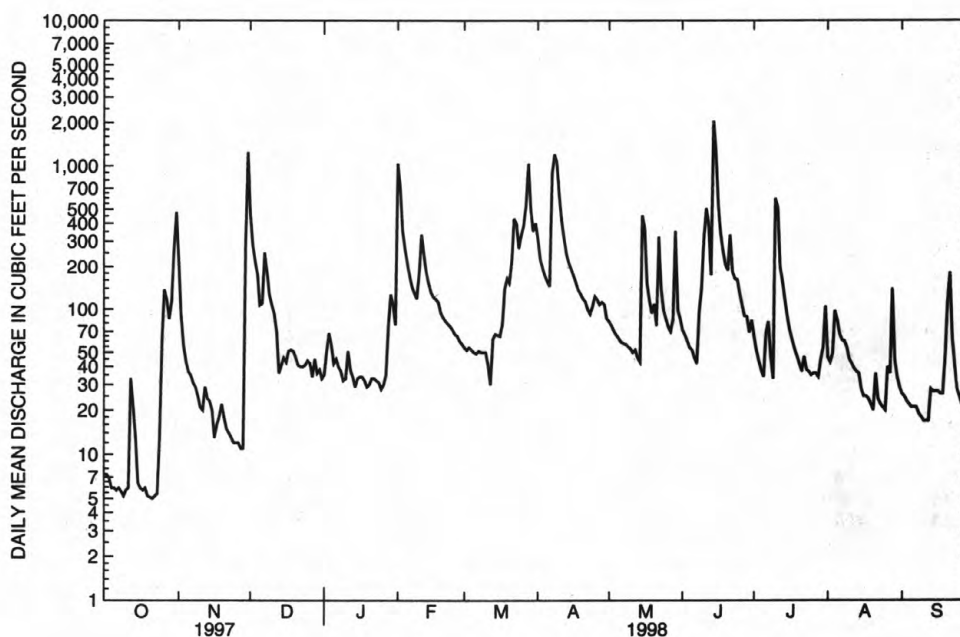
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1994 - 1998

ANNUAL TOTAL	24923.1	45308.1	
ANNUAL MEAN	68.3	124	103
HIGHEST ANNUAL MEAN			124
LOWEST ANNUAL MEAN			68.6
HIGHEST DAILY MEAN	1250	Nov 30	2050
LOWEST DAILY MEAN	5.0	Oct 21	5.0
ANNUAL SEVEN-DAY MINIMUM	5.4	Oct 17	5.4
INSTANTANEOUS PEAK FLOW			2580
INSTANTANEOUS PEAK STAGE			14.79
ANNUAL RUNOFF (AC-FT)	49430	89870	74280
10 PERCENT EXCEEDS	134	317	214
50 PERCENT EXCEEDS	37	54	34
90 PERCENT EXCEEDS	17	18	14



SALT CREEK AT PIONEERS BOULEVARD AT LINCOLN

PLATTE RIVER BASIN

221

06803093 HAINES BRANCH AT SW 56th ST. AT LINCOLN, NE

LOCATION.--Lat 40°45'59", long 096°47'48", in SE¹/₄ NE¹/₄, sec. 12, T. 9 N., R. 5 E., Lancaster County, Hydrologic Unit 10200203, on right upstream bank.

DRAINAGE AREA.--60 mi².

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,170 ft above sea level.

REMARKS.-- Records good except for periods of estimated record which are poor..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.9	22	6.3	172	9.3	41	19	38	13	12	9.0
2	.84	2.3	15	6.5	69	9.2	33	18	29	12	13	7.9
3	.78	2.2	13	e6.4	43	9.0	31	17	24	11	21	7.1
4	.73	2.4	12	6.3	33	8.8	28	16	21	11	30	6.5
5	1.4	2.6	10	6.8	28	8.7	27	15	19	10	38	6.2
6	2.9	2.3	8.9	6.6	23	8.9	27	15	17	37	30	6.2
7	2.3	2.3	7.9	e6.0	20	7.5	82	15	17	68	34	5.8
8	2.3	2.6	8.6	6.6	18	11	108	14	36	57	31	5.5
9	1.8	2.7	8.4	6.7	17	17	134	14	42	51	28	5.3
10	2.1	2.6	8.2	4.4	25	17	72	15	71	34	19	5.1
11	2.6	2.6	7.9	3.3	26	14	56	14	163	13	9.8	4.8
12	2.9	e2.6	7.2	3.3	21	14	50	18	95	13	8.9	4.5
13	2.1	e2.5	7.4	2.7	19	14	45	15	53	12	8.5	4.4
14	1.9	e2.4	7.6	3.0	17	14	35	13	784	13	8.1	4.4
15	1.6	2.3	8.0	3.2	16	13	33	14	208	12	7.9	5.3
16	1.7	2.1	7.8	3.6	17	13	30	14	126	12	7.5	4.7
17	1.6	2.6	9.6	4.0	17	17	26	12	92	12	7.0	4.8
18	1.7	2.6	6.7	4.4	16	26	24	11	70	11	7.0	4.7
19	1.8	2.6	6.5	5.1	14	26	23	10	49	11	6.4	5.4
20	1.8	3.1	6.2	5.1	13	28	23	14	40	11	6.2	11
21	1.8	2.9	5.7	5.4	13	51	21	13	35	8.3	6.8	14
22	1.9	3.1	e5.4	5.8	13	58	21	57	29	8.8	6.6	15
23	2.2	2.8	6.4	5.8	13	52	20	26	29	7.8	6.0	13
24	3.2	2.8	6.8	5.3	12	42	19	21	27	6.7	6.3	11
25	6.6	2.8	7.1	5.3	12	53	20	19	22	6.6	8.2	8.3
26	5.6	2.7	e7.4	5.2	11	64	18	16	20	7.7	12	7.5
27	5.6	3.0	8.0	6.0	10	110	16	15	17	7.9	17	7.9
28	4.5	3.3	7.7	24	9.9	118	17	13	15	7.0	141	9.6
29	3.7	72	7.3	29	---	62	21	306	15	6.8	29	9.1
30	4.1	75	e7.0	18	---	48	20	87	18	27	19	11
31	6.2	---	e6.8	18	---	47	---	53	---	14	11	---
TOTAL	81.85	221.7	264.5	228.1	717.9	990.4	1121	919	2221	532.6	596.2	225.0
MEAN	2.64	7.39	8.53	7.36	25.6	31.9	37.4	29.6	74.0	17.2	19.2	7.50
MAX	6.6	75	22	29	172	118	134	306	784	68	141	15
MIN	.73	2.1	5.4	2.7	9.9	7.5	16	10	15	6.6	6.0	4.4
AC-FT	162	440	525	452	1420	1960	2220	1820	4410	1060	1180	446

e Estimated

PLATTE RIVER BASIN

06803093 HAINES BRANCH AT SW 56th ST. AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.87	6.68	5.39	5.36	12.5	13.5	18.0	66.0	38.3	12.7	8.26	5.11
MAX	3.64	12.3	8.53	7.36	25.6	31.9	37.4	139	74.0	17.2	19.2	9.46
(WY)	1996	1997	1998	1998	1998	1998	1998	1995	1998	1998	1998	1996
MIN	1.67	2.73	3.88	3.46	3.75	3.23	4.51	13.4	19.5	7.95	2.22	1.25
(WY)	1995	1995	1996	1996	1996	1996	1996	1997	1997	1995	1997	1997

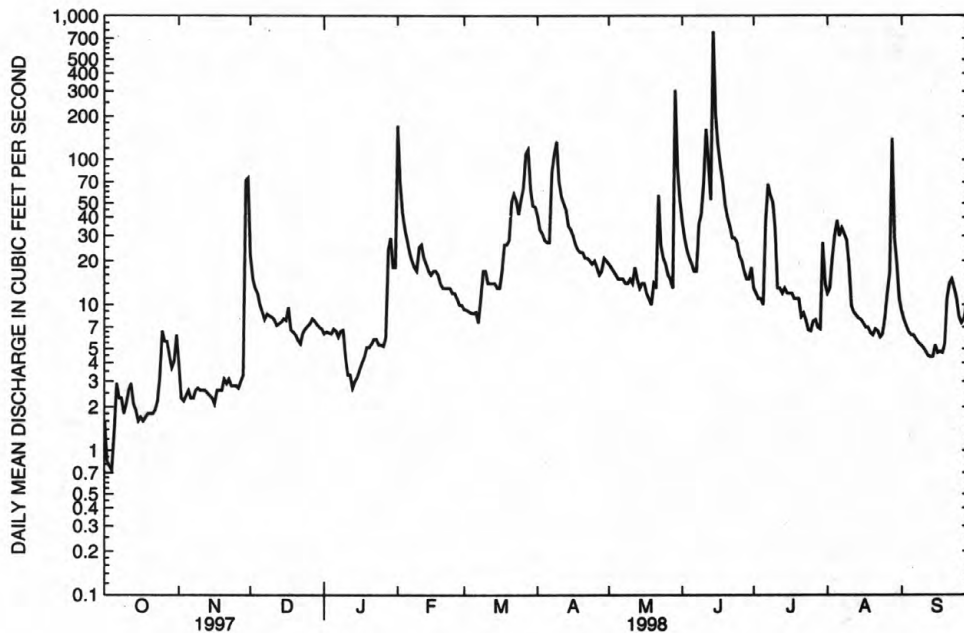
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1994 - 1998

ANNUAL TOTAL	3160.47	8119.25	
ANNUAL MEAN	8.66	22.2	16.2
HIGHEST ANNUAL MEAN			22.2 1998
LOWEST ANNUAL MEAN			8.86 1997
HIGHEST DAILY MEAN	251 Jun 25	784 Jun 14	786 May 8 1995
LOWEST DAILY MEAN	.58 Sep 18	.73 Oct 4	.58 Sep 18 1997
ANNUAL SEVEN-DAY MINIMUM	.60 Sep 15	1.5 Oct 1	.60 Sep 15 1997
INSTANTANEOUS PEAK FLOW		1350 Jun 14	1780 May 7 1995
INSTANTANEOUS PEAK STAGE		10.44 Jun 14	12.06 May 7 1995
ANNUAL RUNOFF (AC-FT)	6270	16100	11770
10 PERCENT EXCEEDS	15	48	32
50 PERCENT EXCEEDS	5.9	11	5.7
90 PERCENT EXCEEDS	1.6	2.6	1.9



HAINES BRANCH AT SW 56th ST AT LINCOLN

PLATTE RIVER BASIN

223

06803170 MIDDLE CREEK AT SW 40th ST. AT LINCOLN, NE

LOCATION.--Lat 40°48'20", long 096°46'39", in NW¹/₄ SW¹/₄ , sec. 29, T. 10 N., R. 6 E., Lancaster County, Hydrologic Unit 10200203, on right downstream side of bridge.

DRAINAGE AREA.--94 mi².

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft above sea level.

REMARKS.-- Records good except for periods of estimated record which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	9.2	e50	9.5	230	3.8	46	18	101	21	15	5.2
2	4.3	6.7	e28	8.6	32	4.9	24	18	71	19	15	5.0
3	4.4	5.8	e22	8.7	10	5.2	20	17	53	18	23	5.1
4	4.2	5.5	e19	7.1	8.4	5.0	18	16	44	17	43	5.3
5	4.3	5.6	e18	8.2	6.5	5.5	17	15	38	17	45	4.6
6	4.5	5.8	e17	8.3	5.7	5.5	17	15	33	18	38	4.9
7	4.5	5.6	e16	7.6	5.1	8.6	91	15	30	26	39	4.8
8	4.8	5.5	e17	7.8	5.0	18	118	14	71	20	37	4.5
9	4.7	5.6	e25	9.5	5.3	11	128	13	84	18	35	4.5
10	4.7	5.6	e45	9.1	7.2	6.1	69	14	62	19	34	4.8
11	5.2	5.5	e43	7.5	6.8	6.3	58	13	205	18	33	4.4
12	5.7	5.5	29	e6.8	5.3	6.3	51	14	104	17	32	4.5
13	6.0	5.6	29	e6.2	4.8	6.3	60	14	60	17	24	4.5
14	5.1	5.5	28	e6.0	4.7	11	51	12	1840	15	7.5	4.6
15	5.0	5.4	28	e6.4	4.8	7.5	41	13	505	14	7.1	4.9
16	4.9	5.3	25	e6.6	5.2	7.4	36	14	322	13	6.7	5.0
17	4.9	5.3	16	e6.2	5.2	8.8	29	12	212	12	6.5	4.9
18	4.8	5.1	16	e5.8	5.0	10	25	11	143	11	6.1	4.9
19	4.6	4.9	15	e5.6	4.6	11	24	11	101	11	5.9	5.5
20	4.7	5.1	16	e5.2	4.4	10	23	16	77	10	5.8	9.3
21	4.6	5.1	14	e5.0	4.3	17	21	16	62	9.0	7.9	6.9
22	4.5	5.2	14	4.7	4.3	32	19	157	51	23	7.3	5.6
23	4.7	5.0	8.4	4.8	4.4	25	18	72	45	19	6.1	5.4
24	5.7	5.3	9.3	5.3	4.5	17	17	54	42	15	5.4	5.5
25	9.7	5.8	11	4.5	4.4	29	17	43	36	13	5.3	5.5
26	11	17	8.8	4.7	4.1	59	17	35	32	14	6.3	5.6
27	8.0	12	10	5.9	4.0	105	15	29	28	13	7.7	5.5
28	7.4	e13	10	26	3.9	121	16	25	25	12	7.4	5.4
29	7.7	e80	8.9	27	---	57	18	1280	24	13	5.6	5.5
30	11	e90	9.5	9.5	---	47	18	262	24	133	5.3	5.5
31	19	---	7.8	7.8	---	50	---	159	---	25	5.2	---
TOTAL	188.8	352.5	613.7	251.9	399.9	717.2	1122	2417	4525	620.0	528.1	157.6
MEAN	6.09	11.8	19.8	8.13	14.3	23.1	37.4	78.0	151	20.0	17.0	5.25
MAX	19	90	50	27	230	121	128	1280	1840	133	45	9.3
MIN	4.2	4.9	7.8	4.5	3.9	3.8	15	11	24	9.0	5.2	4.4
AC-FT	374	699	1220	500	793	1420	2230	4790	8980	1230	1050	313

e Estimated

PLATTE RIVER BASIN

06803170 MIDDLE CREEK AT SW 40th ST. AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.19	9.30	9.46	6.95	10.6	12.3	16.7	89.1	69.7	15.4	9.19	9.85
MAX	13.0	16.0	19.8	8.13	14.3	23.1	37.4	136	151	24.6	17.0	16.4
(WY)	1997	1997	1998	1998	1998	1998	1998	1995	1998	1997	1998	1996
MIN	5.12	3.98	4.05	4.03	5.66	3.40	1.98	9.25	28.2	7.29	3.63	5.25
(WY)	1995	1996	1996	1996	1996	1996	1996	1997	1995	1995	1997	1998

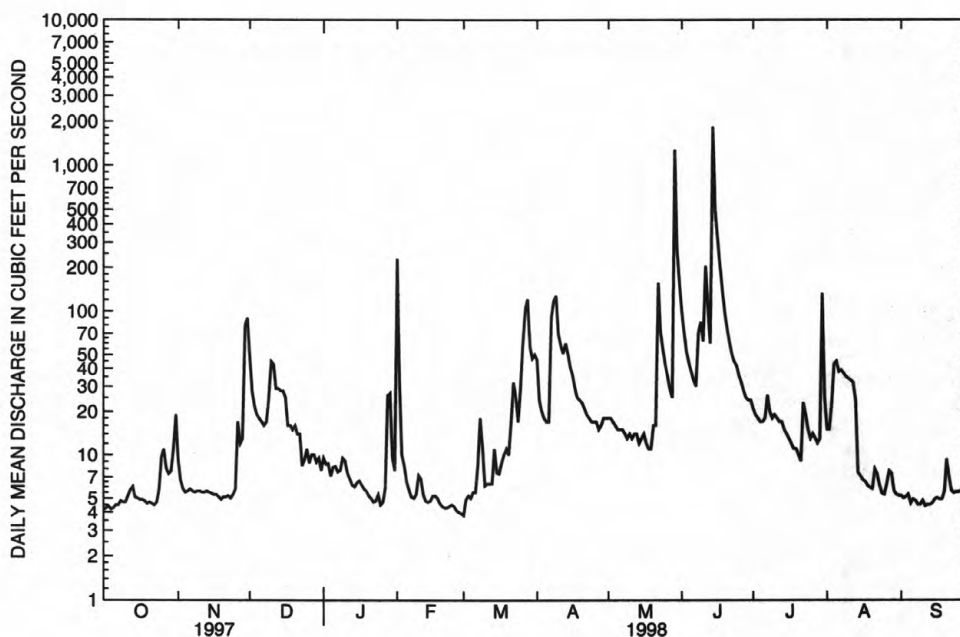
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1994 - 1998

ANNUAL TOTAL	4883.3	11893.7	
ANNUAL MEAN	13.4	32.6	22.3
HIGHEST ANNUAL MEAN			32.6 1998
LOWEST ANNUAL MEAN			13.2 1997
HIGHEST DAILY MEAN	564 Jun 25	1840 Jun 14	1840 Jun 14 1998
LOWEST DAILY MEAN	2.8 Aug 15	3.8 Mar 1	.92 Aug 29 1995
ANNUAL SEVEN-DAY MINIMUM	3.0 Aug 22	4.2 Feb 23	1.2 Apr 21 1996
INSTANTANEOUS PEAK FLOW		4030 Jun 14	4030 Jun 14 1998
INSTANTANEOUS PEAK STAGE		16.25 Jun 14	16.25 Jun 14 1998
ANNUAL RUNOFF (AC-FT)	9690	23590	16130
10 PERCENT EXCEEDS	19	53	38
50 PERCENT EXCEEDS	7.7	11	7.6
90 PERCENT EXCEEDS	4.4	4.8	3.6



MIDDLE CREEK AT SW 40th ST AT LINCOLN

PLATTE RIVER BASIN

225

06803500 SALT CREEK AT LINCOLN, NE

LOCATION.--Lat 40°50'49", long 96°40'54", in NW¹/₄ SW¹/₄ sec.7, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203 on right bank 135 ft downstream from bridge on North 27th Street at north edge of Lincoln, 1 mi downstream from Oak Creek and at mile 31.0.

DRAINAGE AREA.--685 mi².

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,113.90 ft above sea level. Prior to July 27, 1979, water-stage recorder for stages above 6.2 ft on downstream side of bridge pier, 135 ft upstream at same datum, and nonrecording gage read twice daily.

REMARKS.--Records good. Flood flow affected by several detention dams.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	316	606	137	1800	163	627	270	470	307	214	164
2	71	198	343	144	984	165	508	260	394	304	229	161
3	68	154	297	163	488	163	436	246	338	298	254	155
4	60	139	241	144	355	160	398	238	313	283	275	152
5	61	130	184	145	325	164	371	235	306	283	294	151
6	66	124	202	153	284	158	382	226	270	323	263	145
7	61	119	233	140	260	161	1360	218	256	484	265	144
8	62	114	259	141	245	99	2280	211	603	381	252	137
9	57	110	234	121	239	123	1770	203	1000	333	242	137
10	60	106	216	90	334	170	1080	209	738	910	228	133
11	59	105	208	124	424	154	786	218	1580	915	211	129
12	171	107	180	115	346	152	658	248	1230	467	206	128
13	113	112	144	108	286	200	588	207	638	401	195	137
14	94	104	144	107	260	212	533	192	9740	347	168	140
15	74	105	165	112	244	205	470	733	4210	317	152	132
16	68	90	162	117	246	197	497	680	1880	298	136	132
17	67	96	153	118	256	306	426	335	1300	252	136	131
18	68	102	153	117	242	315	383	280	1060	214	134	126
19	66	101	151	117	219	343	362	255	808	207	126	214
20	65	100	148	117	210	341	343	404	736	194	123	479
21	69	96	137	116	203	431	331	267	768	183	290	331
22	71	96	151	122	199	659	306	2780	582	355	260	211
23	71	91	135	121	197	654	295	1010	564	234	190	176
24	167	91	138	116	190	526	291	699	513	203	158	159
25	390	91	146	121	186	592	316	610	494	193	140	174
26	319	91	139	134	179	709	301	540	409	197	246	184
27	267	82	119	151	174	1260	285	489	366	194	197	179
28	257	82	146	244	169	1740	331	465	363	191	573	180
29	256	1180	128	338	---	879	304	3980	332	256	219	180
30	339	1910	150	264	---	697	280	873	334	471	186	178
31	512	---	126	250	---	719	---	604	---	272	174	---
TOTAL	4198	6342	5938	4507	9544	12817	17298	18185	32595	10267	6736	5179
MEAN	135	211	192	145	341	413	577	587	1087	331	217	173
MAX	512	1910	606	338	1800	1740	2280	3980	9740	915	573	479
MIN	57	82	119	90	169	99	280	192	256	183	123	126
AC-FT	8330	12580	11780	8940	18930	25420	34310	36070	64650	20360	13360	10270

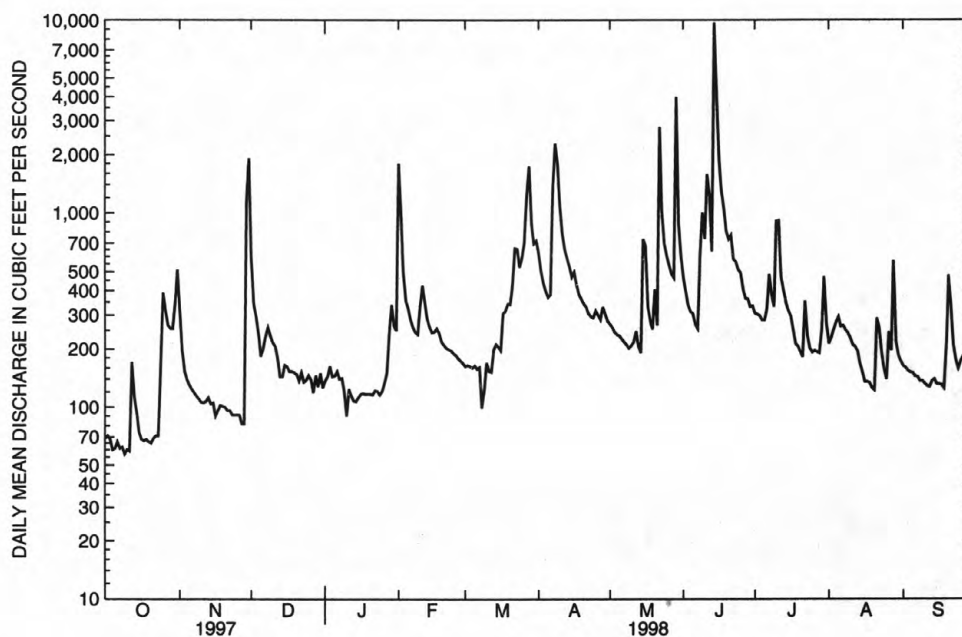
PLATTE RIVER BASIN

06803500 SALT CREEK AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	110	96.7	105	175	341	281	403	506	341	188	178
MAX	1621	332	349	350	577	1972	1383	1693	3061	3205	704	1075
(WY)	1974	1997	1987	1974	1958	1987	1987	1996	1951	1993	1987	1989
MIN	35.2	36.3	30.6	33.6	39.9	45.5	52.6	49.9	58.8	48.8	44.6	47.0
(WY)	1956	1956	1957	1957	1957	1957	1956	1955	1958	1955	1955	1953

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL TOTAL	69825		133606			
ANNUAL MEAN	191		366		242	
HIGHEST ANNUAL MEAN					721	1987
LOWEST ANNUAL MEAN					81.4	1970
HIGHEST DAILY MEAN	3850	Jun 25	9740	Jun 14	22100	Jun 2 1951
LOWEST DAILY MEAN	57	Oct 9	57	Oct 9	21	Jul 10 1977
ANNUAL SEVEN-DAY MINIMUM	61	Oct 5	61	Oct 5	26	May 19 1956
INSTANTANEOUS PEAK FLOW			15300	Jun 14	28400	Jul 24 1993
INSTANTANEOUS PEAK STAGE			18.61	Jun 14	26.52	Jul 24 1993
ANNUAL RUNOFF (AC-FT)	138500		265000		175100	
10 PERCENT EXCEEDS	306		667		397	
50 PERCENT EXCEEDS	144		214		96	
90 PERCENT EXCEEDS	82		103		51	



SALT CREEK AT LINCOLN

PLATTE RIVER BASIN

227

06803510 LITTLE SALT CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°53'36", long 96°40'52", in NW¹/₄ SW¹/₄ sec.30, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 10 ft downstream from county road bridge, 0.4 mi north of intersection of Interstate Highway 80 and North 27th Street north of Lincoln, and at mile 1.6.

DRAINAGE AREA.--43.6 mi².

PERIOD OF RECORD.--January 1969 to current year.

REVISED RECORDS.--WDR NE-77-1: 1969-73 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,114.73 ft above sea level. Prior to Oct. 10, 1980, water-stage recorder at present site and datum 3.00 ft higher.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.6	17	e18	7.0	96	5.4	15	11	13	11	4.7	4.0
2	e2.6	11	e13	e6.8	19	5.8	12	10	12	11	4.6	4.0
3	e2.6	9.4	e10	e6.4	11	6.7	12	10	10	10	6.0	4.2
4	e2.7	6.5	e9.4	e6.2	8.7	e6.8	12	10	10	8.9	5.0	4.2
5	e2.7	6.9	e8.2	e6.0	7.8	e6.9	11	11	9.8	8.6	5.0	4.2
6	2.7	6.5	e7.4	e5.6	7.4	e6.6	11	11	9.4	9.0	4.0	4.4
7	3.2	6.7	e7.4	e5.4	7.5	e6.2	37	10	8.7	19	4.2	4.2
8	2.4	6.7	e7.2	e5.2	7.5	e6.0	43	9.4	67	9.6	5.0	3.8
9	4.6	e6.6	e7.0	e5.0	7.4	e5.6	36	9.7	74	7.6	4.8	3.8
10	5.7	e6.4	e7.2	e5.0	11	e5.2	21	11	18	103	4.6	4.0
11	5.6	e6.4	e7.6	e4.6	10	e4.8	17	11	126	14	4.2	4.0
12	5.5	e6.4	e7.8	e4.6	8.4	e4.5	15	11	31	10	4.0	4.0
13	11	e6.7	e8.0	e4.6	7.9	e5.4	15	9.8	14	8.8	4.5	4.0
14	10	e6.8	e8.4	e4.7	7.9	e6.4	13	9.6	1090	7.3	4.4	4.0
15	7.2	e6.8	e8.6	e4.7	7.9	e7.0	13	20	138	5.9	4.4	3.8
16	6.9	e7.0	e9.2	e4.8	9.4	7.8	13	15	56	5.4	4.4	3.8
17	6.3	e8.6	e10	e4.8	9.6	11	12	12	40	4.2	4.5	6.5
18	6.4	e8.6	e11	e5.0	9.4	16	11	11	34	4.6	4.5	7.6
19	6.1	e8.0	e11	e5.0	8.0	15	11	9.8	28	4.6	4.4	5.9
20	6.5	e8.4	e10	e5.4	8.1	15	10	29	52	4.2	4.2	4.6
21	6.5	e8.6	e9.6	6.2	7.7	20	9.8	16	27	4.2	50	4.6
22	6.3	e8.6	e9.0	6.1	8.3	23	10	608	22	9.0	20	4.4
23	6.2	e9.2	e8.4	5.9	8.1	20	9.8	69	20	6.4	10	4.2
24	6.4	e9.6	e8.0	5.7	7.9	18	9.8	42	20	5.0	5.0	4.2
25	12	e9.8	e8.0	5.6	8.0	27	9.8	32	18	4.5	4.6	4.2
26	17	e10	e8.2	5.5	6.8	33	9.4	27	16	4.8	4.2	4.1
27	18	e10	e8.2	6.8	5.4	78	7.9	24	15	4.9	4.0	4.0
28	15	e12	e8.6	19	5.7	49	8.8	22	14	4.7	11	4.0
29	13	e16	9.0	27	---	20	12	203	13	4.8	4.2	4.0
30	24	e54	9.1	13	---	16	10	25	12	e5.0	3.8	3.8
31	38	---	7.6	11	---	19	---	16	---	e4.8	4.0	---
TOTAL	265.7	305.2	280.1	218.6	327.8	477.1	437.3	1325.3	2017.9	324.8	212.2	130.5
MEAN	8.57	10.2	9.04	7.05	11.7	15.4	14.6	42.8	67.3	10.5	6.85	4.35
MAX	38	54	18	27	96	78	43	608	1090	103	50	7.6
MIN	2.4	6.4	7.0	4.6	5.4	4.5	7.9	9.4	8.7	4.2	3.8	3.8
AC-FT	527	605	556	434	650	946	867	2630	4000	644	421	259

e Estimated

PLATTE RIVER BASIN

06803510 LITTLE SALT CREEK NEAR LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
SMEAN	10.4	7.35	6.56	7.30	12.4	26.6	17.4	23.6	24.4	27.3	12.0	10.5
MAX	87.5	20.5	16.8	25.3	42.3	134	68.6	85.3	180	379	110	87.2
(WY)	1987	1973	1987	1973	1971	1979	1987	1996	1984	1993	1987	1989
MIN	2.13	2.32	1.69	2.28	3.10	3.57	3.86	3.54	2.42	1.60	1.74	.96
(WY)	1977	1977	1977	1977	1972	1972	1970	1989	1981	1970	1976	1971

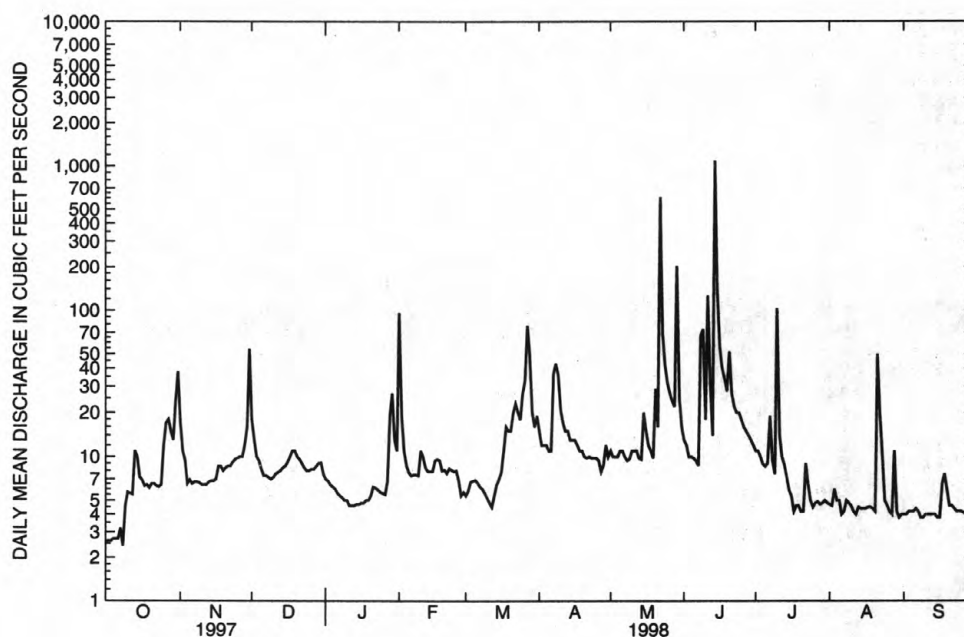
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1969 - 1998

ANNUAL TOTAL	3055.8	6322.5	
ANNUAL MEAN	8.37	17.3	15.6
MEDIAN OF ANNUAL MEANS			12.7
HIGHEST ANNUAL MEAN			51.7
LOWEST ANNUAL MEAN			3.59
HIGHEST DAILY MEAN	167 Jun 25	1090 Jun 14	5020 Jul 24 1993
LOWEST DAILY MEAN	2.1 Sep 19	2.4 Oct 8	.20 Sep 29 1969
ANNUAL SEVEN-DAY MINIMUM	2.4 Sep 16	2.7 Oct 2	.28 Sep 28 1969
INSTANTANEOUS PEAK FLOW		1770 Jun 14	8480 Jul 24 1993
INSTANTANEOUS PEAK STAGE		13.55 Jun 14	20.58 Jul 24 1993
ANNUAL RUNOFF (AC-FT)	6060	12540	11310
10 PERCENT EXCEEDS	11	22	19
50 PERCENT EXCEEDS	7.0	8.1	5.7
90 PERCENT EXCEEDS	3.4	4.2	2.3



LITTLE SALT CREEK NEAR LINCOLN

PLATTE RIVER BASIN

229

06803513 SALT CREEK AT 70th STREET AT LINCOLN, NE

LOCATION.--Lat 40°53'10", long 96°37'26", in SW¹/₄ SW¹/₄ sec. 27, T.11 N., R.7 W., Lancaster County, Hydrologic Unit 10200203, on left bank downstream from bridge.

DRAINAGE AREA.--753 mi².

PERIOD OF RECORD.--August 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,110 ft (revised) above sea level.

REMARKS.-- Record good except those for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	331	686	151	1810	170	693	259	563	351	205	163
2	83	220	365	156	1020	173	552	252	478	337	232	157
3	82	179	330	172	463	172	465	238	415	332	276	150
4	76	166	273	162	322	168	426	234	372	309	271	146
5	73	157	230	160	292	173	395	239	346	311	307	141
6	76	152	233	165	258	170	399	221	319	324	265	135
7	76	147	254	156	236	176	1370	215	301	613	267	133
8	77	142	279	156	223	150	2340	210	796	426	260	129
9	75	140	258	146	217	165	1890	200	1070	375	243	128
10	78	142	243	120	311	181	1230	204	802	1070	226	128
11	80	139	235	143	365	178	906	201	1750	1050	208	125
12	196	141	214	141	307	142	773	280	1420	512	200	125
13	152	145	183	136	258	222	682	200	746	440	195	130
14	116	146	179	129	240	234	617	188	10200	388	166	136
15	100	144	191	132	225	223	540	938	4420	346	153	133
16	95	136	187	138	231	215	562	781	1950	318	138	136
17	94	137	178	139	243	365	482	332	1430	266	137	134
18	93	139	179	137	226	346	424	274	1200	209	135	134
19	90	139	176	136	213	361	398	246	924	199	131	157
20	92	137	171	140	204	366	370	482	935	185	128	665
21	92	136	166	136	198	465	348	266	918	172	392	385
22	95	134	179	141	195	711	324	3860	681	424	279	238
23	94	132	165	141	192	720	302	1200	666	240	204	189
24	215	131	167	139	187	577	294	780	597	192	164	169
25	447	128	172	141	187	646	321	664	585	178	148	177
26	390	128	165	153	176	793	299	567	473	192	302	189
27	310	126	150	165	176	1400	282	498	423	179	236	180
28	290	124	162	243	173	1840	354	465	420	172	726	180
29	286	1180	153	341	---	1000	315	4240	373	185	237	180
30	366	1890	161	260	---	785	273	1020	388	622	187	179
31	510	---	146	238	---	823	---	710	---	281	173	---
TOTAL	4983	7288	6830	5013	9148	14110	18626	20464	35961	11198	7191	5351
MEAN	161	243	220	162	327	455	621	660	1199	361	232	178
MAX	510	1890	686	341	1810	1840	2340	4240	10200	1070	726	665
MIN	73	124	146	120	173	142	273	188	301	172	128	125
AC-FT	9880	14460	13550	9940	18150	27990	36940	40590	71330	22210	14260	10610

PLATTE RIVER BASIN

06803513 SALT CREEK AT 70th STREET AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	123	206	155	145	233	260	330	1055	732	325	208	174
MAX	161	346	220	162	327	455	621	1644	1199	521	367	279
(WY)	1998	1997	1998	1998	1998	1998	1998	1995	1998	1996	1996	1996
MIN	96.4	99.3	107	115	155	128	137	300	311	204	114	109
(WY)	1996	1996	1996	1996	1996	1996	1996	1997	1997	1995	1995	1995

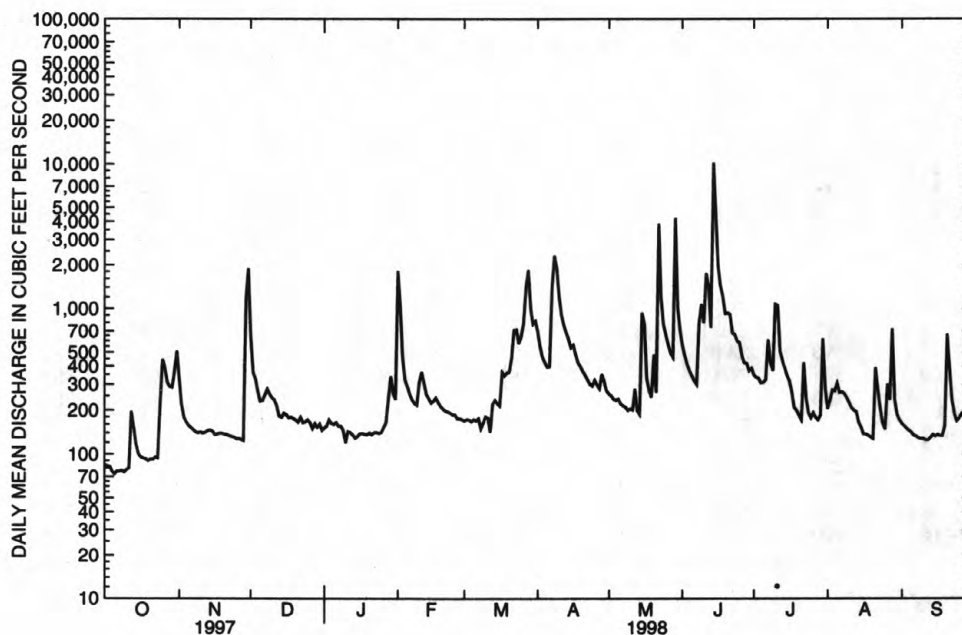
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1994 - 1998

ANNUAL TOTAL	76036	146163	
ANNUAL MEAN	208	400	329
HIGHEST ANNUAL MEAN			400
LOWEST ANNUAL MEAN			209
HIGHEST DAILY MEAN	3210	Jun 25	10200
LOWEST DAILY MEAN	73	Oct 5	66
ANNUAL SEVEN-DAY MINIMUM	76	Oct 4	76
INSTANTANEOUS PEAK FLOW			15800
INSTANTANEOUS PEAK STAGE			23.65
ANNUAL RUNOFF (AC-FT)	150800	289900	238500
10 PERCENT EXCEEDS	330	780	640
50 PERCENT EXCEEDS	165	221	167
90 PERCENT EXCEEDS	94	132	98



SALT CREEK AT 70th STREET AT LINCOLN

PLATTE RIVER BASIN

231

06803520 STEVENS CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°51'25", long 96°35'42", in NW¹/₄ NE¹/₄ sec.11, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 10 ft upstream, 20 ft west from county road bridge on Havelock Avenue, 1.6 mi east of 70th Street at east edge of Lincoln, and at mile 3.2.

DRAINAGE AREA.--47.8 mi².

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,123.57 ft above sea level. Oct. 1968, to Aug. 14, 1997, at present site and datum 2.0 ft higher.

REMARKS.--Records fair except for periods of estimated record which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	11	20	6.3	175	8.5	43	19	21	17	9.4	5.8
2	2.1	8.1	11	6.9	50	8.8	30	17	19	15	9.7	5.7
3	2.1	7.5	10	8.0	18	9.1	23	16	16	13	18	5.4
4	2.0	6.9	9.5	6.4	12	8.6	19	16	16	12	11	5.1
5	1.8	6.9	9.7	6.3	12	8.5	18	16	16	12	10	5.3
6	1.9	7.5	8.2	5.9	10	8.2	18	15	15	13	9.5	5.5
7	2.2	7.5	7.3	5.4	9.7	e7.0	191	14	15	24	9.5	5.4
8	2.4	7.5	7.1	5.3	10	e5.6	385	13	50	17	9.1	5.3
9	2.7	8.1	7.5	4.8	11	e5.0	252	12	53	13	8.1	5.3
10	2.3	8.1	7.3	e4.6	24	e5.2	99	13	51	175	7.7	5.3
11	2.3	8.1	7.0	e4.4	56	e6.0	72	13	215	41	7.5	5.3
12	4.2	8.1	6.7	e4.1	16	e6.4	55	15	78	20	6.9	5.1
13	9.2	8.1	6.7	e3.9	13	e7.0	41	12	27	16	6.7	5.3
14	4.8	8.1	6.8	e3.8	12	e7.6	28	11	1600	16	7.0	5.6
15	3.5	7.8	6.8	e3.8	11	e8.4	25	453	129	14	6.5	5.3
16	3.6	7.8	7.8	e3.9	12	e10	24	90	53	13	6.1	4.9
17	3.3	7.8	7.9	e3.9	12	12	22	30	38	20	6.8	5.0
18	3.3	8.2	8.4	e4.0	11	45	20	23	38	12	5.7	5.0
19	3.6	9.0	7.8	e4.1	9.8	33	20	19	29	11	5.2	5.4
20	3.0	7.8	7.1	e4.2	9.6	21	20	40	255	10	4.5	11
21	3.7	5.7	8.3	4.3	9.6	61	19	23	262	9.6	9.9	9.3
22	3.5	5.0	7.2	4.6	9.7	91	18	262	48	12	7.3	9.6
23	3.8	4.9	7.2	4.2	9.8	77	17	48	36	12	4.9	7.6
24	5.5	4.9	7.0	4.8	9.3	51	17	27	35	10	4.2	7.4
25	12	5.1	7.2	4.9	10	93	17	22	31	9.8	4.0	7.3
26	19	4.9	7.0	5.0	9.7	117	16	19	22	11	6.2	7.6
27	14	4.7	7.4	5.6	8.8	145	15	17	17	11	9.8	7.1
28	12	4.6	6.5	9.8	8.6	166	16	16	64	9.8	58	7.3
29	12	33	6.5	26	---	49	20	654	33	9.9	8.2	7.8
30	34	80	6.1	15	---	42	19	59	22	53	6.6	7.5
31	31	---	6.0	12	---	73	---	29	---	13	5.9	---
TOTAL	212.8	312.7	247.0	196.2	569.6	1195.9	1579	2033	3304	645.1	289.9	190.5
MEAN	6.86	10.4	7.97	6.33	20.3	38.6	52.6	65.6	110	20.8	9.35	6.35
MAX	34	80	20	26	175	166	385	654	1600	175	58	11
MIN	1.8	4.6	6.0	3.8	8.6	5.0	15	11	15	9.6	4.0	4.9
AC-FT	422	620	490	389	1130	2370	3130	4030	6550	1280	575	378

e Estimated

PLATTE RIVER BASIN

06803520 STEVENS CREEK NEAR LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.2	6.60	6.49	7.32	13.7	32.3	24.9	38.8	31.9	33.5	12.3	17.5
MAX	151	29.9	30.7	34.9	59.9	192	118	239	228	402	89.6	260
(WY)	1974	1997	1987	1974	1983	1979	1987	1995	1984	1993	1982	1989
MIN	.28	.57	.64	.83	1.13	1.33	1.28	1.29	.41	.27	.066	.13
(WY)	1977	1977	1977	1982	1978	1981	1981	1981	1981	1976	1976	1976

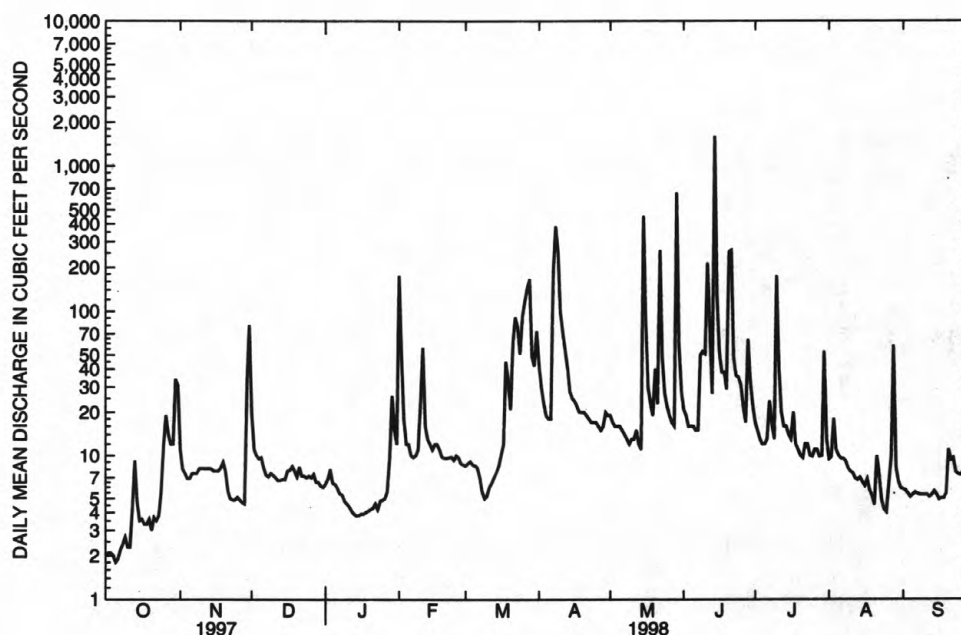
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1969 - 1998

ANNUAL TOTAL	3797.6	10775.7	
ANNUAL MEAN	10.4	29.5	20.0
MEDIAN OF ANNUAL MEANS			17.7
HIGHEST ANNUAL MEAN			69.3
LOWEST ANNUAL MEAN			1.84
HIGHEST DAILY MEAN	165 Jun 25	1600 Jun 14	4810 Sep 8 1989
LOWEST DAILY MEAN	1.1 Sep 12	1.8 Oct 5	.00 Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	1.3 Sep 9	2.0 Oct 1	.00 Jul 29 1977
INSTANTANEOUS PEAK FLOW (STAGE)		3000 Jun 14	12900 (19.42) Sep 8 1989
INSTANTANEOUS PEAK STAGE		16.57 Jun 14	19.57 Jun 13 1984
ANNUAL RUNOFF (AC-FT)	7530	21370	14490
10 PERCENT EXCEEDS	17	50	25
50 PERCENT EXCEEDS	7.8	9.7	4.1
90 PERCENT EXCEEDS	2.0	4.6	.84



STEVENS CREEK NEAR LINCOLN

PLATTE RIVER BASIN

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06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE

LOCATION.--Lat 40°54'18", long 96°35'09", in NW¹/₄ SW¹/₄ sec.24, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, at bridge 0.5 mi north of Interstate Highway 80 and 3 mi southwest of Waverly.

DRAINAGE AREA.--815 mi².

PERIOD OF RECORD.--Water years 1971-1992, January 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. (FT ³ /S) (00061)	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (°C) (00020)	TEMPERATURE WATER (°C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLIFORM, FECAL, 0.7 μ M-MF (COLS./100 ML) (31625)	STREP-TOCOCCEI, FECAL, KF (COLS. PER 100 ML) (31673)	HARDNESS AGAR (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 TOTAL (MG/L AS CaCO ₃) (90410)
OCT 14	1400	130	6010	7.6	16.0	14.5	9.9	<210	K72	370	286
NOV 12	1330	150	5950	7.4	2.0	6.0	11.8	8000	1200	400	308
DEC 10	1400	260	3150	7.7	-1.0	2.0	10.6	K37000	4000	270	243
JAN 14	1400	160	5750	8.2	-4.0	2.5	9.1	2000	880	370	323
FEB 12	1400	340	2340	8.0	7.5	4.5	12.5	2300	960	240	229
MAR 13	1400	230	4110	8.0	1.0	6.5	10.2	380	270	360	311
APR 14	1300	600	1810	7.9	20.0	14.5	10.2	1800	880	270	242
MAY 13	1300	210	3620	8.1	27.0	21.5	12.3	730	300	320	301
JUN 18	1000	1220	964	7.7	23.0	22.0	7.6	4100	1000	180	178
JUL 01	1000	360	2740	8.0	30.5	24.0	10.3	3400	1100	290	253
AUG 18	1300	150	5400	8.2	34.5	30.5	7.8	1100	440	370	296
SEP 09	1300	135	5510	8.2	27.0	21.5	10.1	320	190	330	298

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM ADSORPTION RATIO (00931)	SODIUM DIS-SOLVED (MG/L AS Na) (00930)	POTASSIUM DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO ₄) (00945)	CHLORIDE DIS-SOLVED (MG/L AS Cl) (00940)	FLUORIDE DIS-SOLVED (MG/L AS F) (00950)	SILICA DIS-SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
OCT 14	100	28	26	1170	15	310	1700	.73	26	3510	4.78
NOV 12	110	32	25	1160	14	300	1700	.73	23	3530	4.79
DEC 10	73	22	15	566	11	160	840	.47	16	1850	2.52
JAN 14	99	31	24	1060	14	280	1500	.78	29	3250	4.42
FEB 12	67	19	10	373	8.9	130	510	.40	16	1270	1.73
MAR 13	98	28	19	837	11	230	1200	.50	19	2600	3.54
APR 14	73	20	7	276	8.0	110	400	.38	13	1050	1.43
MAY 13	88	26	17	689	9.9	200	980	.53	16	2200	2.99
JUN 18	49	13	4	122	7.7	59	150	.34	11	530	.72
JUL 01	80	22	12	472	9.6	140	650	.53	17	1550	2.11
AUG 18	98	30	25	1080	14	270	1500	.69	20	3210	4.36
SEP 09	86	28	27	1140	14	300	1600	.75	20	3380	4.60

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SOLIDS DIS- SOLVED (TONS PER DAY (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (µ G/L AS AS) (01002)	BARIUM TOTAL RECOV- ERABLE (µ G/L AS BA) (01007)	
OCT													
NOV	14	1230	1.57	.378	1.94	3.69	1.3	5.0	6.9	1.70	1.47	--	--
DEC	12	1430	1.79	.275	2.06	2.26	.85	3.1	5.2	1.70	1.55	4	<100
	10	1300	1.55	.067	1.62	1.56	1.0	2.6	4.2	.808	.673	--	--
JAN													
FEB	14	1400	2.65	.164	2.82	4.64	.52	5.2	8.0	1.33	1.07	--	--
MAR	12	1170	1.50	.044	1.54	1.34	1.5	2.8	4.4	.782	.447	4	<100
	13	1620	1.53	.054	1.59	3.33	.99	4.3	5.9	1.06	.924	--	--
APR	14	1700	1.32	.090	1.41	.740	.78	1.5	2.9	.369	.278	--	--
MAY	13	1250	1.29	.252	1.54	2.38	.92	3.3	4.8	.688	.602	--	--
JUN	18	1750	1.41	.103	1.51	.392	.91	1.3	2.8	.468	.175	--	--
JUL	01	1510	1.92	.231	2.15	.502	1.1	1.6	3.7	.561	.458	--	--
AUG	18	1300	1.81	.515	2.33	1.14	--	--	--	--	.835	6	<100
SEP	09	1230	1.64	.493	2.13	3.62	.75	4.4	6.5	1.45	1.29	--	--

[illegible]

PLATTE RIVER BASIN

235

06803530 ROCK CREEK NEAR CERESCO, NE

LOCATION.--Lat 41°00'56", long 96°32'39", in NE¹/₄ NE¹/₄ sec.17, T.12 N., R.8 E., Lancaster County, Hydrologic Unit 10200203, on right bank 20 ft downstream from bridge on east-west county road, 5.7 mi southeast of Ceresco, and at mile 7.6.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--April 1970 to current year.

REVISED RECORDS.--WDR NE-76-1: 1975(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,109.18 ft above sea level. Apr. 1970, to Feb. 6, 1980, at present site and datum 6.0 ft higher; Feb 7, 1980, to July 13, 1981, at present site and datum 3.0 ft higher; July 14, 1981, to Feb. 29, 1984, on left bank 30 ft downstream from bridge at datum 3.0 ft higher; Mar. 1, 1984, to May 28, 1984, wire weight gage only, at datum 3.0 ft higher; May 28, 1984, to Apr. 4, 1997, at datum 3.0 ft higher.

REMARKS.--Record poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	27	28	12	109	14	36	32	34	22	14	e12
2	e6.0	21	16	13	32	14	30	29	32	22	13	e12
3	e6.2	18	14	12	13	15	26	31	23	22	23	e12
4	e6.0	17	12	e10	13	15	26	30	25	22	16	e12
5	e6.4	17	11	11	8.4	16	24	32	25	21	16	e12
6	e7.2	16	10	13	8.5	16	25	31	27	22	13	e12
7	e7.0	15	10	12	9.8	15	100	28	24	68	14	e12
8	e7.4	15	11	12	11	9.7	373	27	458	24	16	e11
9	e7.2	15	11	12	11	13	183	27	637	21	14	e11
10	e12	15	11	12	17	19	70	31	184	33	13	e11
11	e18	15	11	11	14	22	55	27	622	24	13	e11
12	e21	15	11	11	12	26	50	28	393	21	12	e10
13	e37	15	12	9.5	12	22	48	28	112	20	13	e10
14	e28	14	12	12	12	21	41	31	3630	19	12	e10
15	e17	14	12	14	13	27	41	121	1050	18	12	e10
16	e12	16	13	15	16	22	41	45	162	18	12	e10
17	e12	14	13	14	13	21	38	33	106	18	12	e11
18	e12	15	14	12	16	30	38	32	90	18	12	e10
19	e12	16	13	12	15	33	37	31	63	17	11	e9.8
20	e12	16	13	12	14	33	35	138	61	17	11	e9.6
21	e12	15	12	13	15	50	35	297	81	17	604	e9.6
22	e12	16	12	9.3	16	60	36	4210	48	50	213	e9.6
23	e12	17	12	4.4	17	50	36	370	47	21	48	e9.4
24	e13	17	12	e4.0	15	40	36	143	59	16	20	e9.4
25	e30	18	12	3.7	17	70	37	100	35	14	17	e9.4
26	e70	18	12	3.5	16	131	33	81	31	15	15	e9.2
27	e45	18	11	3.8	14	201	32	67	28	16	17	e9.2
28	e33	18	10	4.2	14	242	30	61	26	15	e15	e9.2
29	e37	208	e9.6	24	---	57	34	104	25	16	e13	e9.0
30	45	159	11	24	---	39	36	68	23	27	e12	e9.0
31	53	---	12	22	---	41	---	46	---	15	e12	---
TOTAL	614.4	830	383.6	357.4	493.7	1384.7	1662	6359	8161	689	1258	311.4
MEAN	19.8	27.7	12.4	11.5	17.6	44.7	55.4	205	272	22.2	40.6	10.4
MAX	70	208	28	24	109	242	373	4210	3630	68	604	12
MIN	6.0	14	9.6	3.5	8.4	9.7	24	27	23	14	11	9.0
AC-FT	1220	1650	761	709	979	2750	3300	12610	16190	1370	2500	618

e Estimated

PLATTE RIVER BASIN

06803530 ROCK CREEK NEAR CERESCO, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.9	16.5	14.8	15.6	33.8	59.1	43.4	66.8	69.9	55.8	49.4	24.4
MAX	191	45.5	44.8	63.3	116	260	236	237	272	648	527	128
(WY)	1987	1978	1985	1973	1983	1979	1984	1996	1998	1993	1987	1989
MIN	3.85	5.23	5.26	3.93	7.92	8.41	7.40	10.2	5.34	3.07	2.08	3.86
(WY)	1977	1977	1977	1977	1979	1972	1971	1976	1976	1976	1976	1971

SUMMARY STATISTICS

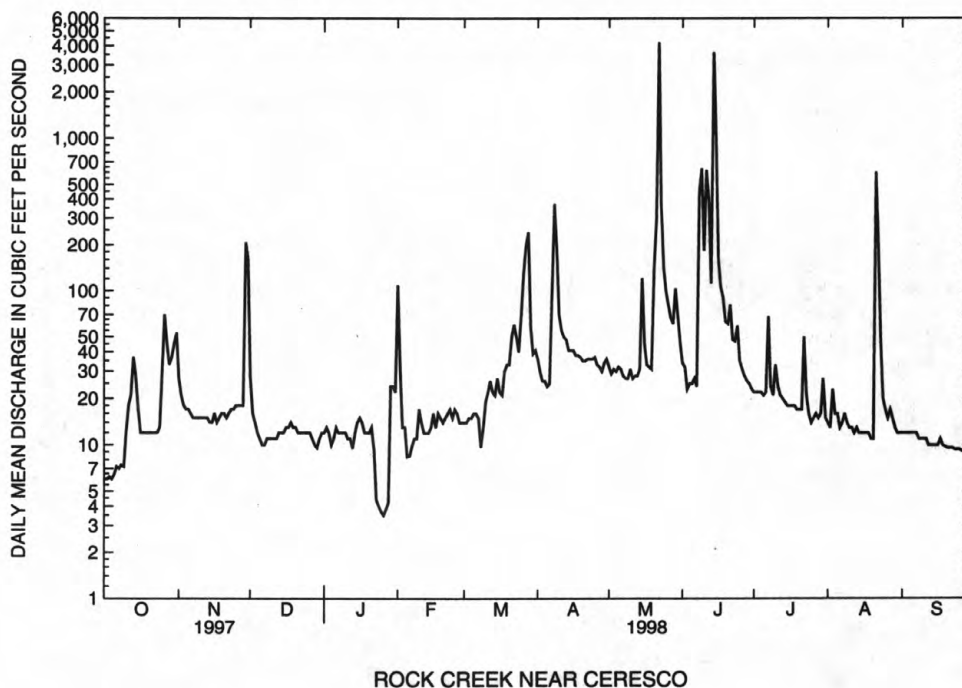
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1971 - 1998

ANNUAL TOTAL	6266.2	22504.2	
ANNUAL MEAN	17.2	61.7	39.5
MEDIAN OF ANNUAL MEANS			31.8
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			8.68
HIGHEST DAILY MEAN	400 Feb 18	4210 May 22	11400 Aug 25 1987
LOWEST DAILY MEAN	4.9 Sep 21	3.5 Jan 26	.25 Jul 13 1976
ANNUAL SEVEN-DAY MINIMUM	5.8 Sep 16	4.7 Jan 22	1.1 Jul 11 1976
INSTANTANEOUS PEAK FLOW (STAGE)		6600 May 22	*23300 (19.60) Aug 25 1987
INSTANTANEOUS PEAK STAGE		20.50 May 22	20.50 May 22 1998
ANNUAL RUNOFF (AC-FT)	12430	44640	28630
10 PERCENT EXCEEDS	22	68	47
50 PERCENT EXCEEDS	13	16	13
90 PERCENT EXCEEDS	6.9	10	6.0

* From floodmark; includes road overflow.



PLATTE RIVER BASIN

237

06803555 SALT CREEK AT GREENWOOD, NE

LOCATION.--Lat 40°57'56", long 96°27'01", at center of sec.31, T.12 N., R.9 E., Cass County, Hydrologic Unit 10200203, on right bank just downstream from county road bridge, 0.5 mi west of Greenwood, and at mile 13.0.

DRAINAGE AREA --1,050 mi².

PERIOD OF RECORD.--November 1951 to current year. Records furnished by Corps of Engineers prior to Oct. 1, 1972.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,068.14 ft above sea level. Prior to Nov. 5, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	492	1200	195	2670	246	1030	399	846	512	313	191
2	98	287	545	199	1910	244	842	382	688	458	269	176
3	97	211	447	222	815	246	729	352	476	462	360	168
4	92	181	377	212	555	240	663	337	407	481	329	160
5	89	168	308	208	488	240	624	354	383	410	383	158
6	86	162	288	212	430	246	602	317	353	416	346	155
7	87	158	311	205	396	239	1460	304	330	747	321	152
8	84	156	356	201	383	208	3650	289	936	578	336	147
9	88	152	343	196	381	263	2680	274	2150	496	308	143
10	87	149	325	e150	504	440	1630	284	1030	1060	284	140
11	86	150	315	e160	620	694	1130	273	2080	1750	265	139
12	112	154	290	e160	547	550	946	363	2960	712	249	135
13	258	157	249	e155	438	677	838	270	1160	558	240	134
14	134	156	238	e145	392	509	757	253	11400	489	222	139
15	107	157	247	e150	363	450	676	2370	9550	433	201	144
16	94	149	250	e155	361	424	665	1860	3220	395	182	138
17	88	151	249	e155	374	539	638	717	2130	396	172	138
18	84	156	245	e155	364	670	580	584	1800	285	171	137
19	84	159	241	e155	341	694	546	522	1410	259	165	134
20	82	162	232	e160	322	664	521	1040	2140	248	160	617
21	83	159	218	e160	307	815	492	889	2240	231	722	379
22	85	159	223	e160	300	1110	462	10800	1110	395	795	353
23	84	156	226	e165	296	1150	438	e4800	962	390	364	215
24	141	155	212	190	283	964	418	e2250	916	285	240	182
25	493	155	219	195	274	1110	441	e1040	847	250	201	165
26	517	155	219	203	267	1380	433	853	706	246	189	182
27	405	153	200	218	253	1870	412	712	618	254	414	181
28	316	148	197	261	251	2690	430	656	779	242	787	172
29	354	1090	213	535	---	1500	508	5160	578	227	411	174
30	535	3200	208	481	---	1110	429	1980	537	697	245	172
31	720	---	195	447	---	1160	---	1160	---	462	208	---
TOTAL	5771	9197	9386	6565	14885	23342	25670	41844	54742	14824	9852	5620
MEAN	186	307	303	212	532	753	856	1350	1825	478	318	187
MAX	720	3200	1200	535	2670	2690	3650	10800	11400	1750	795	617
MIN	82	148	195	145	251	208	412	253	330	227	160	134
AC-FT	11450	18240	18620	13020	29520	46300	50920	83000	108600	29400	19540	11150

e Estimated

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	255	167	146	158	270	523	413	586	715	524	322	263
MAX	2681	475	465	520	952	3481	2023	2383	4101	5461	1748	1534
(WY)	1974	1987	1987	1974	1983	1979	1984	1996	1984	1993	1987	1989
MIN	36.4	35.1	37.3	26.2	40.6	51.3	58.1	54.7	65.6	55.6	42.8	52.9
(WY)	1956	1956	1956	1957	1957	1957	1956	1955	1958	1955	1955	1953

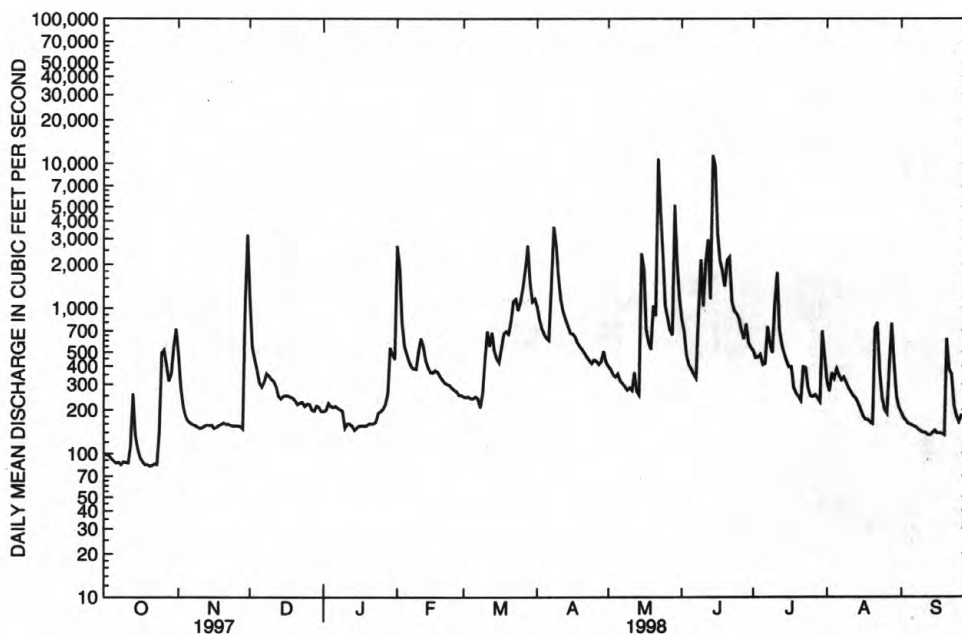
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1952 - 1998

ANNUAL TOTAL	101146	221698	
ANNUAL MEAN	277	607	360
MEDIAN OF ANNUAL MEANS			289
HIGHEST ANNUAL MEAN			1054
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	3510	Jun 25	11400
LOWEST DAILY MEAN	82	Oct 20	82
ANNUAL SEVEN-DAY MINIMUM	84	Oct 17	84
INSTANTANEOUS PEAK FLOW (STAGE)			20500
INSTANTANEOUS PEAK STAGE			18.59
ANNUAL RUNOFF (AC-FT)	200600	439700	261000
10 PERCENT EXCEEDS	448	1120	586
50 PERCENT EXCEEDS	213	315	143
90 PERCENT EXCEEDS	113	148	70



SALT CREEK AT GREENWOOD

PLATTE RIVER BASIN

239

06804000 WAHOO CREEK AT ITHACA, NE

LOCATION.--Lat 41°08'40", long 96°32'10", in NW¹/₄ NW¹/₄ sec.33, T.14 N., R.8 E., Saunders County, Hydrologic Unit 10200203, on right bank 16 ft downstream from bridge on State Highway 63, 0.5 mi south of Ithaca, and at mile 20.3.

DRAINAGE AREA.--273 mi², of which 268 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-78-1: 1977(P). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft above sea level. Prior to Oct. 27, 1959, nonrecording gages at same site and datum. Oct. 28, 1959, to Feb. 22, 1961, nonrecording gage at site 1.5 mi upstream at datum 8.21 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	68	73	42	120	41	113	85	67	96	61	e78
2	30	57	53	44	64	43	94	82	65	94	62	e76
3	30	54	50	46	e50	50	85	78	69	93	68	e72
4	30	52	48	e33	e42	46	82	75	86	113	74	e70
5	29	50	e36	e35	e45	46	78	75	72	155	92	e68
6	31	50	e36	45	e46	46	76	77	64	185	74	e64
7	30	49	e38	44	e47	41	376	74	59	286	70	e62
8	31	48	e41	43	e48	e38	780	70	495	153	70	e60
9	32	48	43	41	e52	e36	422	69	2280	107	67	57
10	31	47	43	e40	57	e34	225	69	376	101	64	55
11	32	46	42	e38	62	e33	167	68	542	97	62	54
12	41	45	39	e35	58	e31	147	72	579	92	62	54
13	79	45	40	e30	55	e36	133	76	184	90	61	52
14	51	45	41	e32	57	e42	118	67	1820	88	62	51
15	38	44	44	e35	55	45	618	118	1570	83	59	51
16	36	e38	45	e36	59	46	296	86	368	80	57	51
17	36	e38	44	e37	60	44	169	71	255	134	55	51
18	37	e39	46	e38	60	47	142	65	216	80	54	50
19	36	e41	45	e39	56	51	131	64	180	76	54	50
20	37	45	46	41	56	51	121	85	156	74	52	51
21	37	45	e37	41	52	59	107	131	147	70	2300	51
22	37	44	45	42	57	74	101	682	136	128	5430	51
23	38	42	46	41	54	82	97	177	131	147	577	49
24	41	41	46	e37	53	75	94	106	158	82	e340	49
25	89	41	47	e35	51	83	91	88	157	75	e240	50
26	145	41	e40	e38	52	143	85	80	128	74	165	50
27	82	41	e34	41	44	197	81	75	115	73	141	48
28	66	40	e36	41	43	256	77	72	108	70	121	46
29	74	55	e37	92	---	132	80	67	102	68	100	46
30	111	154	e37	126	---	113	88	70	100	64	87	46
31	95	---	e38	209	---	115	---	71	---	62	81	---
TOTAL	1542	1493	1336	1517	1555	2176	5274	3145	10785	3190	10862	1663
MEAN	49.7	49.8	43.1	48.9	55.5	70.2	176	101	360	103	350	55.4
MAX	145	154	73	209	120	256	780	682	2280	286	5430	78
MIN	29	38	34	30	42	31	76	64	59	62	52	46
AC-FT	3060	2960	2650	3010	3080	4320	10460	6240	21390	6330	21540	3300

e Estimated

PLATTE RIVER BASIN

06804000 WAHOO CREEK AT ITHACA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.0	39.0	34.8	38.7	73.7	123	89.2	121	224	87.9	97.3	71.7
MAX	343	110	96.3	125	276	518	430	401	1051	728	640	663
(WY)	1987	1987	1985	1983	1983	1979	1978	1984	1963	1993	1959	1965
MIN	8.39	11.3	10.1	10.7	13.2	16.6	19.6	16.3	18.6	10.6	9.27	6.95
(WY)	1956	1956	1977	1957	1957	1957	1956	1955	1976	1956	1956	1956

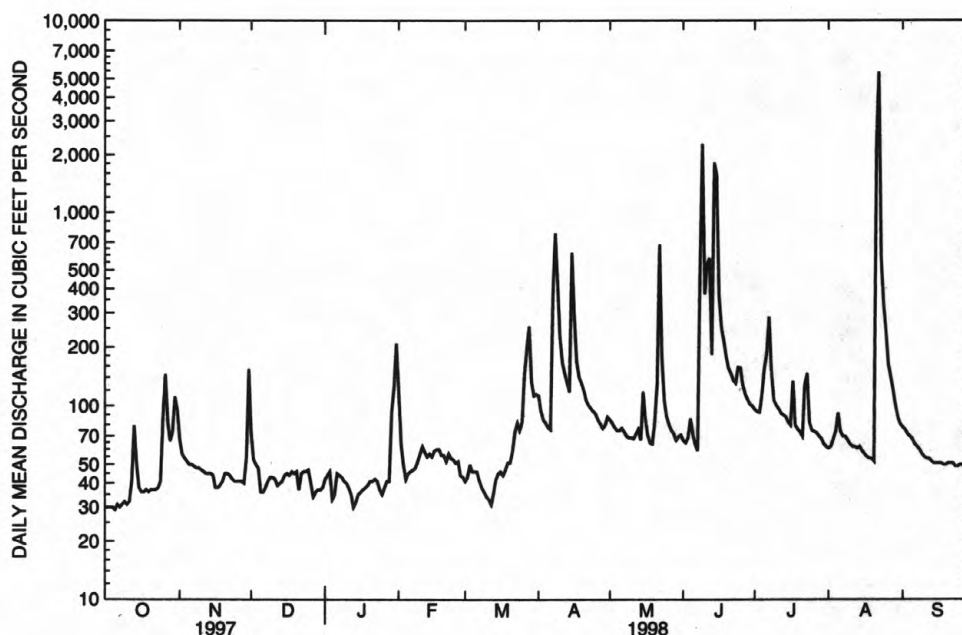
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

ANNUAL TOTAL	18406	44538	
ANNUAL MEAN	50.4	122	87.5
MEDIAN OF ANNUAL MEANS			77.1
HIGHEST ANNUAL MEAN			207
LOWEST ANNUAL MEAN			15.3
HIGHEST DAILY MEAN	901 Feb 19	5430 Aug 22	22100 Jun 24 1963
LOWEST DAILY MEAN	21 Aug 8	29 Oct 5	3.3 Jun 11 1955
ANNUAL SEVEN-DAY MINIMUM	22 Aug 4	30 Oct 1	4.4 Oct 12 1955
INSTANTANEOUS PEAK FLOW		10300 Aug 22	77400 Jun 24 1963
INSTANTANEOUS PEAK STAGE		21.67 Aug 22	22.93 Jun 24 1963
ANNUAL RUNOFF (AC-FT)	36510	88340	63360
10 PERCENT EXCEEDS	69	155	112
50 PERCENT EXCEEDS	41	60	35
90 PERCENT EXCEEDS	25	37	18



WAHOO CREEK AT ITHACA

PLATTE RIVER BASIN

241

06804700 WAHOO CREEK AT ASHLAND, NE

LOCATION.--Lat 41°03'13", long 96°22'04", in SE¹/₄NE¹/₄ sec.35, T.13 N., R.9 E., Saunders County, Hydrologic Unit 10200203, at right upstream side of bridge near end of guard rail on State Highway 63, 1 mi north of Ashland, and at mile 2.6.

DRAINAGE AREA.--416 mi².

PERIOD OF RECORD.--September 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,067.58 ft above sea level.

REMARKS.--Records good except for estimated periods, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1	34	84	149	64	293	68	158	128	108	106	74100
2	34	64	84	68	150	66	139	123	103	102	74	94
3	34	55	76	69	99	67	124	118	106	102	80	91
4	34	52	74	73	87	68	116	116	129	116	83	87
5	32	52	75	e62	78	67	111	114	115	148	94	84
6	31	51	81	e58	80	67	109	114	105	273	95	82
7	31	50	71	e60	77	70	163	110	102	235	82	81
8	32	50	67	e56	76	e64	1090	104	403	235	84	76
9	32	51	67	e56	82	e60	525	103	2480	127	81	73
10	30	50	68	e54	103	e56	305	105	986	115	77	71
11	31	50	66	e52	90	e52	216	100	638	112	74	70
12	34	50	65	e50	84	e50	192	101	917	108	72	69
13	56	51	66	e48	79	e54	176	109	279	104	72	68
14	67	52	64	e48	78	e58	161	98	3310	98	71	68
15	39	51	65	e50	78	e62	474	300	3650	93	70	67
16	34	52	67	e54	80	e72	456	185	538	92	69	66
17	33	50	68	e56	86	e76	228	117	271	145	68	66
18	32	50	67	e58	84	79	183	102	221	103	67	65
19	32	51	68	e58	81	84	168	98	184	89	66	66
20	31	51	68	e60	79	85	160	127	163	85	68	72
21	30	53	67	e58	78	92	152	202	160	80	2460	69
22	27	53	64	e60	78	110	143	2470	143	141	3350	68
23	28	52	68	e60	77	121	139	455	136	254	1680	67
24	35	51	68	e62	75	117	136	183	138	111	417	67
25	47	52	68	e62	74	122	133	151	178	91	283	67
26	176	53	67	e64	73	198	129	137	135	87	197	67
27	93	53	66	e68	71	282	123	132	124	87	163	66
28	72	53	65	e70	70	361	121	126	118	86	150	65
29	68	155	68	79	---	231	122	307	112	82	130	67
30	101	299	66	165	---	155	131	136	108	79	115	65
31	134	---	67	222	---	164	---	115	---	75	106	---
TOTAL	1524	1941	2210	2124	2540	3278	6583	6886	16160	3761	10572	2184
MEAN	49.2	64.7	71.3	68.5	90.7	106	219	222	539	121	341	72.8
MAX	176	299	149	222	293	361	1090	2470	3650	273	3350	100
MIN	27	50	64	48	70	50	109	98	102	75	66	65
AC-FT	3020	3850	4380	4210	5040	6500	13060	13660	32050	7460	20970	4330

e Estimated

PLATTE RIVER BASIN

06804700 WAHOO CREEK AT ASHLAND, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.6	63.2	58.0	62.1	99.0	157	118	216	404	262	119	64.2
MAX	98.2	95.7	75.4	91.5	199	580	219	552	1031	1032	341	150
(WY)	1994	1994	1995	1995	1997	1993	1998	1995	1991	1993	1998	1993
MIN	36.0	42.5	40.1	40.4	42.8	57.3	64.4	67.5	55.9	69.8	39.1	28.0
(WY)	1992	1991	1993	1993	1992	1992	1992	1997	1992	1997	1997	1990

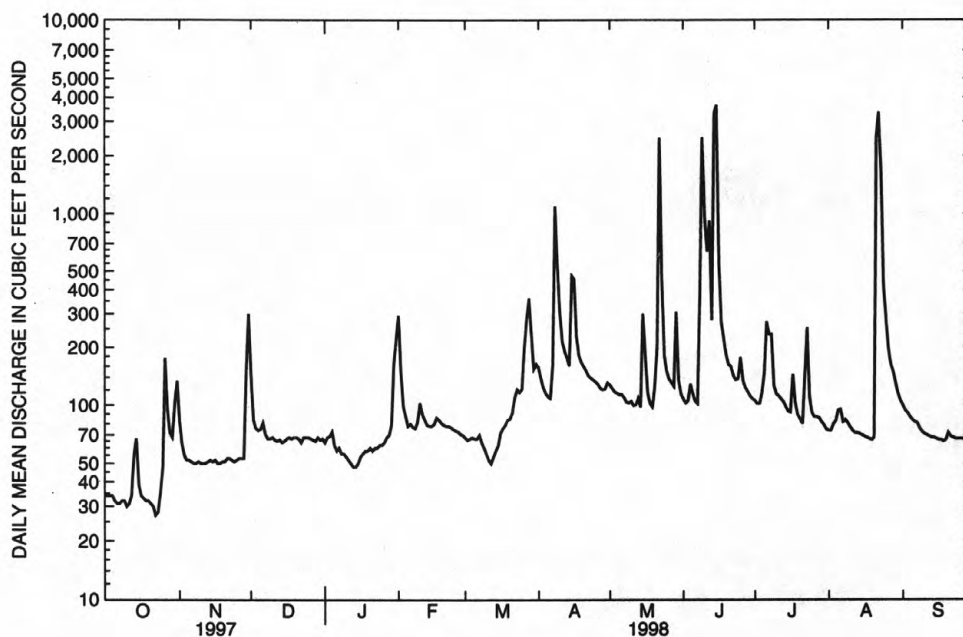
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1990 - 1998

ANNUAL TOTAL	28128	59763	
ANNUAL MEAN	77.1	164	140
HIGHEST ANNUAL MEAN			223 1993
LOWEST ANNUAL MEAN			63.9 1992
HIGHEST DAILY MEAN	1400 Feb 19	3650 Jun 15	7000 Jun 15 1991
LOWEST DAILY MEAN	27 Oct 22	27 Oct 22	21 Sep 16 1990
ANNUAL SEVEN-DAY MINIMUM	30 Aug 26	30 Oct 17	24 Sep 11 1990
INSTANTANEOUS PEAK FLOW		4810 Jun 15	7000 Jun 15 1991
INSTANTANEOUS PEAK STAGE		19.85 Jun 15	20.50 Jun 15 1991
ANNUAL RUNOFF (AC-FT)	55790	118500	101500
10 PERCENT EXCEEDS	100	218	185
50 PERCENT EXCEEDS	64	80	68
90 PERCENT EXCEEDS	34	51	39



WAHOO CREEK AT ASHLAND

PLATTE RIVER BASIN

243

06804900 JOHNSON CREEK NEAR MEMPHIS, NE

LOCATION.--Lat 41°08'48", long 96°23'12", in NW¹/₄ NW¹/₄ sec.35, T.14 N., R. 9 E., Saunders County, Hydrologic Unit 10200203, on left downstream bank on Saunders County road No. 37, 3.5 mi north and 2 mi east of Memphis, and at mile 0.9.

DRAINAGE AREA.--21.5 mi².

PERIOD OF RECORD.--September 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,070.00 ft above sea level.

REMARKS.--Records good except those for periods of estimated record, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	4.5	8.7	2.6	15	2.3	8.6	.95	2.3	1.7	3.2	.99
2	.91	3.6	7.9	2.6	8.6	2.3	6.9	1.0	2.3	1.8	3.3	.87
3	.90	2.6	7.7	2.5	7.0	2.3	6.9	1.1	3.7	1.9	3.6	.89
4	.83	2.4	6.5	2.4	6.6	2.2	6.8	.94	3.8	2.6	3.4	.88
5	.84	2.2	5.9	e2.3	6.1	2.3	6.9	.97	4.2	2.6	3.6	.89
6	.85	2.1	5.3	e2.2	5.6	e2.0	7.1	1.1	4.3	4.3	3.5	.91
7	.85	1.9	4.5	e2.1	5.3	e1.9	9.0	1.2	4.9	5.4	3.6	.91
8	.89	1.8	4.2	e2.1	5.6	e2.0	16	1.2	19	3.6	3.5	.87
9	.87	1.8	3.9	e2.0	6.5	e2.1	10	1.4	83	3.1	3.6	.83
10	.91	1.7	3.6	e2.0	9.1	2.2	7.6	1.2	28	2.8	3.6	.85
11	.91	1.7	3.3	e1.9	6.6	2.3	6.9	1.3	38	2.8	3.7	.84
12	1.2	1.6	3.2	e1.8	6.3	2.3	6.3	1.4	36	2.7	3.6	.85
13	1.2	1.6	3.1	e1.8	6.2	2.4	5.9	1.3	10	2.6	3.7	.87
14	1.2	1.6	3.0	e1.8	5.5	2.3	5.5	1.3	145	2.5	3.7	.94
15	1.2	1.5	3.0	e1.8	5.1	2.3	5.1	2.3	187	2.4	3.7	.91
16	1.1	1.4	3.0	e1.8	4.7	2.5	4.6	1.5	108	2.4	3.4	.91
17	1.1	1.4	3.0	e1.8	4.1	2.9	4.5	1.4	23	2.4	3.4	.92
18	1.1	1.4	3.0	1.9	3.7	3.2	4.5	1.4	8.4	2.5	3.4	.93
19	1.1	1.5	3.0	1.9	3.3	3.3	4.7	1.5	5.0	2.2	3.7	.96
20	1.1	1.5	2.9	2.0	3.1	4.4	4.3	2.1	2.8	2.3	4.0	1.2
21	1.0	1.5	2.9	2.0	2.9	5.7	4.2	2.3	2.4	2.3	131	1.1
22	.98	1.5	2.8	2.0	3.0	5.5	4.0	13	1.9	3.5	103	1.0
23	1.0	1.4	2.8	2.0	2.9	5.5	3.7	3.6	1.8	2.7	16	1.0
24	3.8	1.4	2.8	2.0	2.7	5.7	3.6	2.2	1.8	2.7	5.7	1.1
25	7.7	1.6	2.7	2.0	2.7	6.4	3.2	1.7	1.7	2.7	4.2	1.1
26	9.9	1.3	2.7	2.0	2.6	6.9	2.5	1.5	1.7	2.8	3.3	1.1
27	8.5	1.4	2.6	2.0	2.5	14	1.8	1.5	2.2	2.9	2.8	1.1
28	6.8	1.4	2.6	2.1	2.4	10	1.6	1.6	2.2	2.9	2.6	1.1
29	6.7	22	2.6	2.3	---	8.8	1.2	5.7	2.1	2.9	2.0	1.1
30	6.9	18	2.6	3.5	---	9.4	1.1	2.5	1.8	3.0	1.4	1.1
31	5.5	---	2.5	6.3	---	10	---	2.4	---	3.0	1.3	---
TOTAL	78.80	91.3	118.3	69.5	145.7	137.4	165.0	64.56	738.3	86.0	344.5	29.02
MEAN	2.54	3.04	3.82	2.24	5.20	4.43	5.50	2.08	24.6	2.77	11.1	.97
MAX	9.9	22	8.7	6.3	15	14	16	13	187	5.4	131	1.2
MIN	.83	1.3	2.5	1.8	2.4	1.9	1.1	.94	1.7	1.7	1.3	.83
AC-FT	156	181	235	138	289	273	327	128	1460	171	683	58

e Estimated

PLATTE RIVER BASIN

06804900 JOHNSON CREEK NEAR MEMPHIS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.71	1.86	1.94	1.79	2.53	4.65	2.60	2.89	12.7	6.11	3.25	2.03
MAX	2.56	3.04	3.82	2.24	5.20	17.8	5.50	6.24	26.9	26.1	11.1	3.79
(WY)	1994	1998	1998	1998	1998	1993	1998	1995	1991	1993	1998	1993
MIN	1.02	1.22	1.40	1.42	1.52	1.54	1.43	1.42	2.15	1.21	.84	.72
(WY)	1993	1991	1991	1991	1992	1992	1997	1997	1992	1991	1991	1992

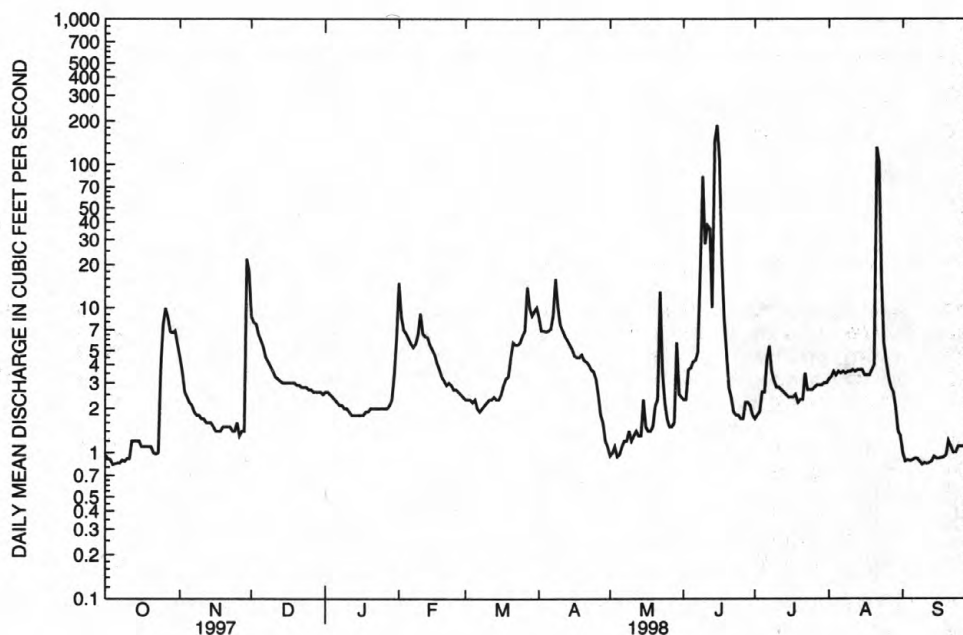
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998

ANNUAL TOTAL	899.36	2068.38	
ANNUAL MEAN	2.46	5.67	3.68
MEDIAN OF ANNUAL MEANS			2.98
HIGHEST ANNUAL MEAN			6.79
LOWEST ANNUAL MEAN			1.75
HIGHEST DAILY MEAN	22	Nov 29	187
LOWEST DAILY MEAN	.66	Sep 21	.83
ANNUAL SEVEN-DAY MINIMUM	.84	Sep 16	.86
INSTANTANEOUS PEAK FLOW (STAGE)			219
INSTANTANEOUS PEAK STAGE			10.10
ANNUAL RUNOFF (AC-FT)	1780	4100	2660
10 PERCENT EXCEEDS	3.8	7.3	3.9
50 PERCENT EXCEEDS	1.7	2.5	1.9
90 PERCENT EXCEEDS	1.1	1.0	1.1



PLATTE RIVER BASIN

245

06805500 PLATTE RIVER AT LOUISVILLE, NE
(National Stream-Quality Accounting Network, NASQAN, station)
(National Water-Quality Assessment, NAWQA, station)

LOCATION.--Lat 41°00'55", long 96°09'28", in NW¹/₄ NW¹/₄ sec.14, T.12 N., R.11 E., Sarpy County, Hydrologic Unit 10200202, on the left bank at the upstream side of bridge on Nebraska Highway 50, 1 mi north of Louisville, and at mile 16.5.

DRAINAGE AREA.--85,370 mi² approximately, of which about 71,000 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1953 to current year. October 1961 to September 1973 published as Platte River at South Bend.

REVISED RECORDS.--WDR NE-97-1: Drainage area; 1995.

GAGE.--Water-stage recorder. Datum of gage is 1,007.10 ft above sea level. Dec. 5, 1961, to Sept. 30, 1973, at site 7 mi upstream at datum 31.43 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7580	12800	11000	10300	e13000	10500	21500	12700	8970	9440	5400	5040
2	8040	11700	10500	10900	e12000	10200	20100	12900	8770	9660	6390	4460
3	7450	11700	10500	11100	e11600	9020	18400	11800	8010	9020	6790	4200
4	7370	11100	9580	11000	e11400	9220	16700	10600	8330	11500	6840	4300
5	6850	10500	8600	10700	e11000	8910	15700	10800	7990	17800	8050	4440
6	6570	10400	7330	10100	e10800	8800	16500	9800	8590	30500	8710	3940
7	6770	9720	7580	9630	e10600	9220	20200	9040	8850	24200	8920	4330
8	7120	9710	7520	e9000	e10600	9630	31700	8660	11400	21900	9230	3700
9	7590	9480	6890	e8200	e11000	9320	36800	8850	28900	15700	9020	3700
10	7750	10000	7660	e7800	e12000	e9200	33900	7890	25400	12000	8480	3740
11	7420	9950	8190	e6800	e13000	e8800	28600	8440	23900	12400	7760	3370
12	7800	9470	8570	e6900	13300	e8600	24900	7800	23600	10300	7000	3660
13	9080	9160	9300	e8000	12000	e8600	22700	8480	23300	8240	6700	3630
14	9240	8380	9030	e9000	11800	e9000	19900	8620	39200	7740	7180	3420
15	12700	9090	9160	e11000	11500	e9800	19100	9440	40800	7180	6920	3970
16	11600	7760	9490	e12000	10900	e10000	23100	11800	31400	6990	6750	3830
17	9470	8420	10000	e11800	11300	e11000	22800	9310	26600	6920	7160	4090
18	9130	8160	8940	e11000	11500	e11600	20400	9530	25700	5360	6820	4350
19	9270	7680	10300	e11000	11100	e12000	18600	8870	27200	5110	6250	4570
20	8810	8290	10900	e11000	11500	e14000	17100	9060	30300	4890	5890	5430
21	8330	8560	9820	e12000	11400	16500	15600	10500	24900	4540	10700	5420
22	8470	8850	9420	e13000	11000	14500	14200	22300	19100	4790	21900	5290
23	7510	8820	9160	e12000	11100	12800	13800	18200	16000	7550	19400	5170
24	8910	8710	10100	e12000	10300	13000	12900	14800	16300	7110	12300	5120
25	8580	9280	9900	e12000	10600	13800	12300	15500	20500	6370	9190	5120
26	11600	8040	9260	e12000	10500	14400	11300	15900	15500	7500	7750	5100
27	12200	8070	9460	e12200	10800	15500	11300	13800	12800	5870	7320	5040
28	12800	8370	9680	e12600	10200	20300	11900	12600	11900	5470	6540	5040
29	11200	8710	9250	e13000	---	24200	12900	17900	11100	5180	6330	5190
30	11700	12900	10100	e13000	---	23500	12200	13300	9800	5840	5330	5220
31	11900	---	9970	e14000	---	22600	---	10100	---	5980	5190	---
TOTAL	280810	283780	287160	335030	317800	388520	577100	359290	580110	303050	258210	133880
MEAN	9058	9459	9263	10810	11350	12530	19240	11590	19340	9776	8329	4463
MAX	12800	12900	11000	14000	13300	24200	36800	22300	40800	30500	21900	5430
MIN	6570	7680	6890	6800	10200	8600	11300	7800	7990	4540	5190	3370
AC-FT	557000	562900	569600	664500	630400	770600	1145000	712700	1151000	601100	512200	265600

e Estimated

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station)
 (National Water-Quality Assessment, NAWQA, station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5129	5401	4834	4714	7553	11300	9919	9739	11330	6300	4144	4321
MAX	15630	10580	10910	10810	17270	27010	34250	35350	39430	43440	13890	12870
(WY)	1987	1987	1985	1998	1984	1993	1984	1984	1984	1993	1993	1993
MIN	1604	2234	1456	1822	3237	4898	3701	2548	2493	978	519	975
(WY)	1957	1956	1956	1957	1955	1957	1967	1955	1981	1974	1955	1955

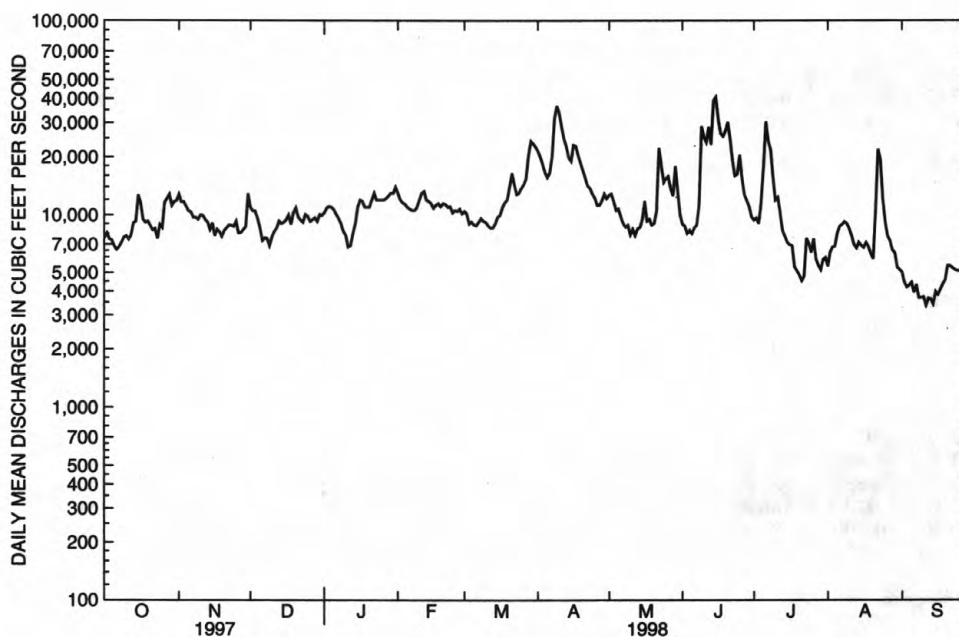
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1953 - 1998

ANNUAL TOTAL	3350680	4104740	
ANNUAL MEAN	9180	11250	7071
HIGHEST ANNUAL MEAN			16210 1984
LOWEST ANNUAL MEAN			2885 1956
HIGHEST DAILY MEAN	39000 Feb 21	40800 Jun 15	138000 Jul 25 1993
LOWEST DAILY MEAN	2280 Aug 1	3370 Sep 11	131 Sep 3 1976
ANNUAL SEVEN-DAY MINIMUM	2770 Jul 30	3600 Sep 8	159 Aug 29 1976
INSTANTANEOUS PEAK FLOW (STAGE)		51000 Jun 14	160000(11.90) Jul 25 1993
INSTANTANEOUS PEAK STAGE		8.25 Jun 14	12.45 Mar 30 1960
ANNUAL RUNOFF (AC-FT)	6646000	8142000	5123000
10 PERCENT EXCEEDS	12800	19600	13000
50 PERCENT EXCEEDS	8600	9720	5200
90 PERCENT EXCEEDS	5460	5380	2000



PLATTE RIVER AT LOUISVILLE

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
(National Stream-Quality Accounting Network, NASQAN, station)
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1974 to September 1981.

WATER TEMPERATURES: November 1974 to September 1981

SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1981.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by the U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,450 microsiemens Sept. 1, 1976; minimum daily, 254 microsiemens Aug. 7, 1981.

WATER TEMPERATURES: Maximum, 36.0 °C July 24, 1977, Aug. 19, 1979; minimum, 0.0 °C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 11,600 mg/L May 19, 1974; minimum daily, 60 mg/L July 19, 1976.

SEDIMENT LOADS: Maximum daily, 1,180,000 tons Mar. 21, 1978; minimum daily, 64 tons July 19, 1976.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BARO- METRIC PRES- SURE TEMPER- ATURE WATER (°C) (00010)	HARD- NESS SURE (MM OF HG) (00025)	HARD- NESS NONCARB TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	TOTAL (MG/L AS CaCO ₃) (00900)	DISSOLV FLD. AS CaCO ₃ (MG/L) (00904)
OCT										
15...	1030	13900	640	8.2	12.5	726	56	11.6	200	28
NOV										
04...	1100	10900	670	8.1	4.0	726	31	14.7	230	46
DEC										
11...	1100	8220	915	8.5	.5	726	--	8.3	270	65
JAN										
15...	1100	11000	1250	8.0	.0	737	--	13.4	310	57
FEB										
24...	1030	11300	792	8.2	7.0	737	--	11.6	230	57
MAR										
16...	1100	10000	700	8.1	.5	726	4.6	11.3	250	69
MAR										
20...	1100	14000	604	7.8	.5	728	26	13.9	220	51
MAR										
30...	1130	22600	460	7.9	13.0	727	240	9.0	200	--
APR										
08...	1130	34300	520	8.1	9.0	726	220	10.2	200	40
APR										
27...	1130	10700	646	8.5	12.5	738	44	10.4	260	54
MAY										
19...	1200	10200	561	8.4	25.0	732	67	6.9	190	52
MAY										
22...	1300	26700	464	7.4	19.0	729	1000	4.9	110	19
MAY										
30...	1200	17800	525	8.4	25.0	732	290	7.4	190	37
JUN										
09...	1130	32800	440	7.9	15.5	728	620	7.2	160	41
JUN										
15...	1100	42900	440	7.8	20.0	727	360	7.0	110	--
JUL										
06...	1300	33100	220	7.7	23.5	730	810	4.3	94	11
AUG										
22...	1100	25200	403	7.5	26.0	730	390	3.6	130	--
SEP										
09...	1100	3100	530	8.5	20.0	732	27	10.1	190	35

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station)
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CA _{CO} ₃ (39086)	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO ₃ (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO ₃ (00452)
OCT												
15...	167	372	366	.51	13500	52	16	40	1	9.0	204	0
NOV												
04...	186	476	452	.65	14000	64	18	53	2	10	227	0
DEC												
11...	201	561	543	.76	12600	72	21	72	2	9.3	245	0
JAN												
15...	256	850	816	1.16	31200	86	24	148	4	10	312	0
FEB												
24...	171	510	468	.69	15300	63	17	61	2	8.8	209	0
MAR												
16...	174	585	555	.80	32500	71	18	90	2	8.8	226	0
MAR												
20...	174	461	442	.63	20700	62	17	54	2	7.8	212	0
MAR												
30...	211	364	372	.50	21300	58	14	33	1	11	257	0
APR												
08...	159	383	365	.52	32300	55	15	43	1	9.3	194	0
APR												
27...	209	467	448	.64	13500	73	19	49	1	9.6	228	13
MAY												
19...	141	405	392	.55	10700	50	17	51	2	11	172	0
MAY												
22...	90	270	254	.37	19000	29	8.6	39	2	8.2	110	0
MAY												
30...	148	339	323	.46	13000	52	13	35	1	9.8	181	0
JUN												
09...	117	291	266	.40	24400	43	12	30	1	8.3	143	0
JUN												
15...	162	222	238	.30	29300	30	7.8	20	.9	8.0	198	0
JUL												
06...	83	174	166	.24	14600	27	6.3	16	.7	8.3	101	0
AUG												
22...	128	253	237	.34	16800	34	9.8	25	1	9.3	156	0
SEP												
09...	158	435	413	.59	3640	49	17	67	2	9.0	161	16

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO ₂) (00955)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT												
15...	98	16	.41	31	--	<.010	.653	<.020	--	--	1.9	.22
NOV												
04...	120	31	.41	31	1.71	.012	1.73	<.020	--	--	.79	.26
DEC												
11...	150	55	.42	32	--	<.010	2.19	.079	.46	.18	.54	.26
JAN												
15...	180	17	.60	36	3.04	.027	3.07	.117	.35	.24	.47	.36
FEB												
24...	130	49	.40	29	2.28	.016	2.29	.043	.65	.18	.69	.22
MAR												
16...	120	88	.39	32	2.20	.021	2.22	.188	.36	.27	.55	.46
MAR												
20...	120	36	.40	28	2.07	.010	2.08	.097	.63	.26	.73	.36
MAR												
30...	73	19	.41	27	1.69	.089	1.78	.235	3.0	.76	3.2	1.0
APR												
08...	92	23	.33	22	1.70	.024	1.72	.140	2.8	.57	2.9	.71
APR												
27...	120	27	.44	19	1.99	.014	2.01	<.020	--	--	1.4	.36
MAY												
19...	130	31	.47	13	.940	.040	.980	.036	2.9	.36	2.9	.39
MAY												
22...	60	34	.35	10	1.98	.075	2.05	.555	2.4	.55	2.9	1.1
MAY												
30...	78	19	.40	18	1.55	.055	1.61	.096	1.3	.49	1.3	.59
JUN												
09...	55	21	.32	14	2.55	.061	2.61	.200	.42	.47	.62	.67
JUN												
15...	41	12	.38	14	1.50	.051	1.55	.133	3.4	.54	3.6	.67
JUL												
06...	25	13	.33	10	1.56	.074	1.63	.261	5.1	.46	5.3	.72
AUG												
22...	48	16	.31	16	.045	.011	.056	.072	1.3	.48	1.4	.55
SEP												
09...	94	56	.40	24	--	<.010	<.050	.033	1.4	.26	1.5	.29

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (µ G/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (µ G/L AS SB) (01095)	ARSENIC DIS- SOLVED (µ G/L AS AS) (01000)	BARIUM, DIS- SOLVED (µ G/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (µ G/L AS BE) (01010)	BORON, DIS- SOLVED (µ G/L AS B) (01020)	CADMIUM DIS- SOLVED (µ G/L AS CD) (01025)
OCT 15...	2.5	.87	.553	.145	.136	<1.0	<1.0	6	121	<1.0	73	<1.0
NOV 04...	2.5	2.0	.362	.206	.231	1.2	<1.0	6	143	<1.0	83	<1.0
DEC 11...	2.7	2.5	.250	.194	.221	--	--	--	--	--	--	--
JAN 15...	3.5	3.4	.308	.278	.294	--	--	--	--	--	--	--
FEB 24...	3.0	2.5	.335	.189	.199	--	--	--	--	--	--	--
MAR 16...	2.8	2.7	.267	.248	.247	1.4	<1.0	6	122	<1.0	97	<1.0
MAR 20...	2.8	2.4	.334	.176	.170	1.4	<1.0	4	115	<1.0	77	<1.0
MAR 30...	5.0	2.8	.971	.289	.259	1.1	<1.0	5	132	<1.0	53	<1.0
APR 08...	4.7	2.4	.894	.206	.181	2.6	<1.0	4	125	<1.0	65	<1.0
APR 27...	3.4	2.4	.338	.149	.133	1.2	<1.0	5	138	<1.0	79	<1.0
MAY 19...	3.9	1.4	.779	<.010	.020	1.9	<1.0	4	121	<1.0	83	<1.0
MAY 22...	5.0	3.2	.841	.042	.060	2.7	<1.0	3	113	<1.0	55	<1.0
MAY 30...	3.0	2.2	.380	.198	.194	3.8	<1.0	6	124	<1.0	65	<1.0
JUN 09...	3.2	3.3	.139	.129	.144	1.6	<1.0	3	113	<1.0	55	<1.0
JUN 15...	5.1	2.2	1.20	.201	.162	2.7	<1.0	3	98	<1.0	49	<1.0
JUL 06...	7.0	2.4	2.06	.206	.270	1.4	<1.0	4	83	<1.0	40	<1.0
AUG 22...	1.4	.61	.385	.188	.218	2.1	<1.0	4	112	<1.0	56	<1.0
SEP 09...	--	--	.354	<.010	.034	1.4	<1.0	7	120	<1.0	91	<1.0

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CHROMIUM, DIS- SOLVED (μ G/L AS CR) (01030)	COBALT, DIS- SOLVED (μ G/L AS CO) (01035)	COPPER, DIS- SOLVED (μ G/L AS CU) (01040)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	LEAD, DIS- SOLVED (μ G/L AS PB) (01049)	LITHIUM DIS- SOLVED (μ G/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)
OCT												
15...	2.3	<1.0	2.1	<3.0	<1.0	23	<1.0	3.5	1.8	<1	<1.0	413
NOV												
04...	3.5	<1.0	4.5	<3.0	<1.0	23	4.2	3.6	2.4	3	<1.0	491
DEC												
11...	--	--	--	<3.0	--	--	6.8	--	--	--	--	--
JAN												
15...	--	--	--	<10	--	--	4.7	--	--	--	--	--
FEB												
24...	--	--	--	<10	--	--	4.3	--	--	--	--	--
MAR												
16...	3.4	<1.0	5.5	<10	<1.0	28	13	3.4	2.2	3	<1.0	540
MAR												
20...	2.9	<1.0	3.4	<10	<1.0	22	9.7	3.2	1.9	3	<1.0	472
MAR												
30...	2.2	<1.0	7.2	<10	<1.0	19	<1.0	3.2	3.1	3	<1.0	383
APR												
08...	2.4	<1.0	5.1	<10	<1.0	19	29	3.3	2.4	3	<1.0	397
APR												
27...	4.8	<1.0	3.3	<10	<1.0	25	<1.0	3.6	1.9	5	<1.0	492
MAY												
19...	1.7	<1.0	1.8	<10	<1.0	23	<1.0	4.1	2.7	3	<1.0	400
MAY												
22...	2.9	<1.0	5.1	<10	<1.0	12	22	3.3	3.2	2	<1.0	215
MAY												
30...	2.9	<1.0	5.5	<10	<1.0	18	<1.0	3.8	2.9	3	<1.0	355
JUN												
09...	1.5	<1.0	3.1	<10	<1.0	14	10	3.1	3.2	3	<1.0	288
JUN												
15...	1.9	<1.0	3.6	<10	<1.0	8	4.0	2.6	3.1	1	<1.0	204
JUL												
06...	<1.0	<1.0	3.0	<10	<1.0	8	<1.0	2.7	3.5	2	<1.0	149
AUG												
22...	1.9	<1.0	7.6	<10	<1.0	14	<1.0	3.5	3.3	3	<1.0	239
SEP												
09...	1.6	<1.0	6.7	<10	<1.0	26	<1.0	4.7	1.8	4	<1.0	385

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	VANA- DIUM, DIS- SOLVED (µ G/L AS V) (01085)	ZINC, DIS- SOLVED (µ G/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (µ G/L AS U) (22703)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ACETO- CHLOR, WATER FLTRD REC (µ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µ G/L) (46342)	ALPHA BHC DIS- SOLVED (µ G/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µ G/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µ G/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µ G/L) (04028)
OCT 15...	7	<1.0	10	3.7	2.8	<.0020	.008	<.0020	.072	<.0020	<.0020
NOV 04...	<6	2.3	12	1.8	3.6	.0049	.004	<.0020	.094	<.0020	<.0020
DEC 11...	--	--	--	--	--	<.0020	<.002	<.0020	.108	<.0020	<.0020
JAN 15...	--	--	--	--	--	<.0020	<.002	<.0020	.127	<.0020	<.0020
FEB 24...	--	--	--	--	--	<.0020	<.002	<.0020	.080	<.0020	<.0020
MAR 16...	<10	4.4	11	.40	3.0	<.0020	<.002	<.0020	.067	<.0020	<.0020
MAR 20...	<10	1.5	12	1.8	2.5	<.0020	<.002	<.0020	.055	<.0020	<.0020
MAR 30...	<10	1.3	8.1	>5.0	7.4	.0124	.007	<.0020	.118	<.0020	<.0020
APR 08...	<10	1.8	9.7	>5.0	5.9	.0076	.012	<.0020	.264	<.0020	<.0020
APR 27...	<10	<1.0	13	.20	5.0	.0340	.010	<.0020	.118	<.0020	<.0020
MAY 19...	<10	4.3	12	>5.0	4.1	1.63	.321	<.0020	2.99	<.0020	<.0020
MAY 22...	<10	4.0	3.3	>10	6.1	3.08	2.70	<.0020	E25.1	<.0020	<.0020
MAY 30...	<10	2.1	8.2	>5.0	5.8	1.47	1.21	<.0020	12.7	<.0020	<.0020
JUN 09...	<10	<1.0	6.0	>10	4.9	.729	.839	<.0020	8.80	<.0020	<.0020
JUN 15...	<10	<1.0	3.5	>10	6.2	.428	.518	<.0020	5.47	<.0020	<.0020
JUL 06...	<10	1.5	1.7	>10	5.8	.211	.106	<.0020	1.77	<.0020	<.0020
AUG 22...	10	2.5	4.1	>10	6.2	.0183	.016	<.0020	.205	<.0020	<.0020
SEP 09...	10	<1.0	8.5	>5.0	3.2	<.0020	<.002	<.0020	.162	<.0020	<.0020

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station)
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µ G/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µ G/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µ G/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µ G/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µ G/L) (04040)	DI- AZINON, DIS- SOLVED (µ G/L) (39572)	DI- ELDRIN DIS- SOLVED (µ G/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µ G/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µ G/L) (82668)
OCT 15...	<.0030	<.0030	<.0040	.0077	E.0011	E.0326	<.002	<.001	<.0030	<.0170	<.0020
NOV 04...	<.0030	<.0030	<.0040	.0076	E.0011	E.0173	<.002	<.001	<.0030	<.0170	<.0020
DEC 11...	<.0030	<.0030	<.0040	.0073	<.0020	E.0652	<.002	<.001	<.0030	<.0170	<.0020
JAN 15...	<.0030	<.0190	<.0040	.0173	<.0020	E.0609	<.002	<.001	<.0030	<.0170	<.0020
FEB 24...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0347	<.002	<.001	<.0030	<.0170	<.0020
MAR 16...	<.0030	<.0030	<.0040	.0071	<.0020	E.0337	<.002	<.001	<.0030	<.0170	<.0020
MAR 20...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0289	<.002	<.001	<.0030	<.0170	<.0020
MAR 30...	<.0030	<.0030	<.0040	.0262	<.0020	E.0273	<.002	<.001	<.0030	<.0170	<.0020
APR 08...	<.0030	<.0030	<.0040	.0180	<.0020	E.0377	<.002	<.001	<.0030	<.0170	<.0020
APR 27...	<.0030	<.0030	<.0040	.0164	<.0020	E.0270	<.002	<.001	<.0030	<.0170	E.0034
MAY 19...	<.0030	<.0030	<.0040	1.92	<.0020	E.0862	<.002	<.001	<.0030	<.0170	<.0020
MAY 22...	<.0030	E.0111	<.0040	4.67	<.0020	E.610	<.002	<.001	<.0030	<.0170	E.0036
MAY 30...	<.0030	<.0030	<.0200	1.16	<.0020	E.510	.009	<.001	<.0030	<.0170	<.0020
JUN 09...	<.0030	E.0713	<.0200	1.49	<.0020	E.327	.007	<.001	<.0030	<.0170	<.0020
JUN 15...	E.0197	E.0825	.0473	1.36	<.0020	E.452	.006	<.001	<.0030	<.0170	<.0020
JUL 06...	<.0030	E.0655	<.0200	.294	<.0020	E.229	<.002	<.001	<.0030	<.0170	<.0020
AUG 22...	E.0162	<.0030	<.0040	.0419	E.0011	E.0553	.009	<.001	<.0030	<.0170	<.0020
SEP 09...	<.0030	<.0030	<.0040	<.0040	<.0020	E.0446	<.002	<.001	<.0030	<.0170	<.0020

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µ G/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µ G/L) (82672)	FONOFO WATER DISS REC (µ G/L) (04095)	LINDANE DIS- SOLVED (µ G/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µ G/L) (82666)	MALA- THION, DIS- SOLVED (µ G/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µ G/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µ G/L) (82667)	METO- LACHLOR WATER DISSOLV (µ G/L) (39415)	METRI- BUZIN WATER DISSOLV (µ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82671)
OCT 15...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.017	<.004	<.0040
NOV 04...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.029	<.004	<.0040
DEC 11...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.019	<.004	<.0040
JAN 15...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.027	<.004	<.0040
FEB 24...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.010	<.004	<.0040
MAR 16...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.013	<.004	<.0040
MAR 20...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.013	<.004	<.0040
MAR 30...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.052	<.004	<.0040
APR 08...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.207	<.004	<.0040
APR 27...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.058	<.004	<.0040
MAY 19...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	1.73	.023	<.0040
MAY 22...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	6.26	.310	<.0040
MAY 30...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	3.73	.070	<.0040
JUN 09...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	2.97	.143	<.0040
JUN 15...	<.0040	<.0030	<.0030	E.002	<.0020	<.005	<.0010	<.0060	3.12	.054	<.0040
JUL 06...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	1.86	.114	<.0040
AUG 22...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.183	.009	<.0040
SEP 09...	<.0040	<.0030	<.0030	<.004	<.0020	<.005	<.0010	<.0060	.024	<.004	<.0040

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
(National Stream-Quality Accounting Network, NASQAN, station)
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82684)	PARA- THION, DIS- SOLVED (µ G/L) (39542)	PEB- ULATE WATER FILTRD 0.7 µ GF, REC (µ G/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µ G/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µ G/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82664)	P,P' DDE DISSOLV (µ G/L) (34653)	PRO- METON, WATER, DISS, REC (µ G/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82676)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µ G/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82685)
OCT 15...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0078	<.0030	<.0040	<.0130
NOV 04...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0076	<.0030	<.0040	<.0130
DEC 11...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0135	<.0030	<.0040	<.0130
JAN 15...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0115	<.0030	<.0040	<.0130
FEB 24...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0056	<.0030	<.0040	<.0130
MAR 16...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	<.0180	<.0030	<.0040	<.0130
MAR 20...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0067	<.0030	<.0040	<.0130
MAR 30...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0054	<.0030	<.0040	<.0130
APR 08...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0046	<.0030	<.0040	<.0130
APR 27...	<.0030	<.004	<.0040	.0052	<.0050	<.0020	<.0060	E.0073	<.0030	<.0040	<.0130
MAY 19...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	E.0020	.0294	<.0030	<.0040	<.0130
MAY 22...	<.0030	<.004	<.0040	.0359	<.0050	<.0020	<.0060	.0522	<.0030	<.0040	<.0130
MAY 30...	<.0030	<.004	<.0040	<.0250	<.0050	<.0020	<.0060	.0310	<.0030	<.0040	<.0130
JUN 09...	<.0030	<.004	<.0040	.0347	<.0050	<.0020	<.0060	.0613	<.0030	<.0040	<.0130
JUN 15...	<.0030	<.004	<.0040	.0279	<.0050	<.0020	<.0060	.0293	<.0030	<.0040	<.0130
JUL 06...	<.0030	<.004	<.0040	.0476	<.0050	<.0020	<.0060	E.0119	<.0030	<.0040	<.0130
AUG 22...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0172	<.0030	<.0040	<.0130
SEP 09...	<.0030	<.004	<.0040	<.0040	<.0050	<.0020	<.0060	E.0055	<.0030	<.0040	<.0130

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 (National Stream-Quality Accounting Network, NASQAN, station)
 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PROP- CHLOR, WATER, DISS, REC (μ G/L) (04024)	SI- MAZINE, WATER, DISS, REC (μ G/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82670)	TER- BACIL WATER FLTRD 0.7 μ GF, REC (μ G/L) (82665)	TER- BUFOS WATER FLTRD 0.7 μ GF, REC (μ G/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 μ GF, REC (μ G/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82678)	TRIFLUR- ALIN WAT FLT 0.7 μ GF, REC (μ G/L) (82661)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062MM (70331)
OCT 15...	<.0070	E.0044	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	1420	51400	45
NOV 04...	<.0070	.0053	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	1180	34700	15
DEC 11...	<.0070	.0062	E.0051	<.0070	<.0130	<.0020	<.0010	<.0020	860	19300	10
JAN 15...	<.0070	.0098	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	24	881	32
FEB 24...	<.0070	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	644	19300	22
MAR 16...	<.0070	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	167	9280	22
MAR 20...	<.0070	<.0050	E.0043	<.0070	<.0130	<.0020	<.0010	<.0020	950	42600	23
MAR 30...	<.0070	E.0030	E.0039	<.0070	<.0130	<.0020	<.0010	<.0020	2610	153000	66
APR 08...	<.0070	.0052	E.0041	<.0070	<.0130	<.0020	<.0010	<.0020	2690	227000	78
APR 27...	<.0070	.0060	<.0100	<.0070	<.0130	<.0020	<.0010	.0060	503	14500	57
MAY 19...	<.0070	.0199	.0118	<.0070	<.0130	<.0020	<.0010	.0042	1070	28300	71
MAY 22...	.0402	.221	<.0100	<.0070	<.0130	<.0020	<.0010	.0338	8020	563000	88
MAY 30...	.180	.0508	E.0071	<.0070	<.0130	<.0020	<.0010	.0149	1710	65600	83
JUN 09...	.0149	.0289	E.0038	<.0070	<.0130	<.0020	<.0010	.0300	5540	465000	77
JUN 15...	.0106	.0332	<.0100	<.0070	<.0130	<.0020	<.0010	.0175	3980	524000	69
JUL 06...	<.0070	.0140	<.0100	<.0070	<.0130	<.0020	<.0010	.0211	5060	425000	83
AUG 22...	<.0070	.0106	<.0100	<.0070	<.0130	<.0020	<.0010	.0060	3480	231000	82
SEP 09...	<.0070	.0148	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020	364	3050	71

WEeping WATER CREEK BASIN

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06806500 WEeping WATER CREEK AT UNION, NE

LOCATION.--Lat 40°47'35", long 95°54'40", in SW¹/₄ NW¹/₄ sec.36, T.10 N., R.13 E., Cass County, Hydrologic unit 10240001, on left bank near downstream side of bridge on U.S. Highways 73 and 75, 1.5 mi southeast of Union, 2.8 mi downstream from South Branch Weeping Water Creek, and at mile 6.2.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 926.72 ft above sea level. Prior to May 14, 1951, nonrecording gage at site 2 mi upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980, water-stage recorder on downstream side of bridge pier, Aug. 23, 1980 to Nov. 4, 1980 at present site, all at datum 3.00 ft higher. Nov. 5, 1980 to Aug. 23, 1984 at present site and datum. Aug. 24, 1984, to Mar. 5, 1986, on left bank 200 ft upstream at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	126	166	60	635	89	400	168	189	167	116	65
2	27	94	103	63	305	88	309	157	158	160	127	63
3	26	77	95	75	154	88	281	159	141	157	236	61
4	21	67	86	e58	e102	88	271	152	142	281	144	58
5	21	59	e60	64	e98	86	265	144	140	214	169	57
6	20	58	e58	62	e96	88	273	142	136	191	127	57
7	21	56	e62	61	95	89	832	136	131	225	115	57
8	22	53	65	59	91	92	1730	128	292	183	109	51
9	25	52	65	e42	91	e84	827	127	475	159	103	49
10	26	52	65	e44	129	e76	407	162	212	159	97	48
11	26	51	60	e48	211	e68	299	130	224	168	94	47
12	35	51	60	52	162	e60	263	126	497	160	92	46
13	56	50	e60	51	145	e58	244	117	204	153	89	47
14	45	49	e58	45	143	e66	229	111	7380	147	90	48
15	37	47	e58	49	133	e80	223	122	2180	146	88	50
16	32	44	e56	52	134	e96	214	144	922	160	84	49
17	28	55	e60	e48	135	121	200	120	354	335	81	50
18	27	51	e62	e50	131	147	193	107	287	173	76	50
19	27	50	66	60	119	149	191	101	248	139	74	50
20	25	52	66	61	114	148	188	109	222	129	85	84
21	25	52	e56	65	109	184	182	111	322	121	110	101
22	26	44	65	66	112	237	175	232	248	128	147	77
23	30	42	65	65	110	240	170	175	214	139	92	66
24	38	41	65	64	103	217	167	124	213	126	75	63
25	72	42	e60	59	101	297	166	111	193	119	68	63
26	192	41	e58	53	102	551	160	104	184	124	66	61
27	137	40	e56	54	92	488	153	101	172	128	106	59
28	94	40	e56	64	93	513	160	99	378	119	127	57
29	88	100	55	135	---	317	186	5500	269	113	85	58
30	132	285	e52	140	---	318	174	935	186	133	74	59
31	234	---	e48	117	---	421	---	298	---	144	68	---
TOTAL	1641	1921	2067	1986	4045	5644	9532	10452	16913	5000	3214	1751
MEAN	52.9	64.0	66.7	64.1	144	182	318	337	564	161	104	58.4
MAX	234	285	166	140	635	551	1730	5500	7380	335	236	101
MIN	20	40	48	42	91	58	153	99	131	113	66	46
AC-FT	3250	3810	4100	3940	8020	11190	18910	20730	33550	9920	6370	3470

e Estimated

WEeping WATER CREEK BASIN

06806500 WEEPING WATER CREEK AT UNION, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.5	44.8	39.6	41.3	84.1	130	110	175	199	187	91.5	71.5
MAX	579	148	136	177	301	1049	426	678	1603	2688	507	470
(WY)	1987	1974	1987	1974	1971	1979	1984	1987	1984	1993	1987	1989
MIN	.55	1.26	2.09	2.01	4.16	7.57	4.60	3.15	2.39	1.49	.70	2.21
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1956	1954	1955	1976

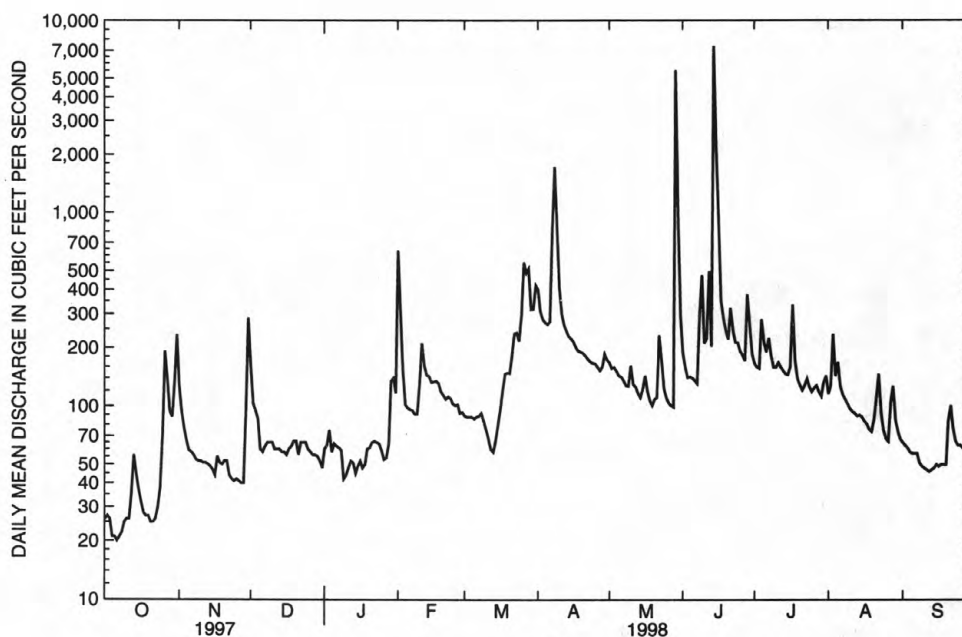
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1951 - 1998

ANNUAL TOTAL	24870	64166	
ANNUAL MEAN	68.1	176	103
MEDIAN OF ANNUAL MEANS			75.7
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			19.9
HIGHEST DAILY MEAN	795 Jun 25	7380 Jun 14	34000 Jul 23 1993
LOWEST DAILY MEAN	20 Oct 6	20 Oct 6	.10 Sep 10 1955
ANNUAL SEVEN-DAY MINIMUM	22 Oct 3	22 Oct 3	.13 Sep 9 1955
INSTANTANEOUS PEAK FLOW		10400 May 29	65100 Jul 23 1993
INSTANTANEOUS PEAK STAGE		24.90 May 29	30.97 Jul 23 1993
ANNUAL RUNOFF (AC-FT)	49330	127300	74620
10 PERCENT EXCEEDS	102	267	167
50 PERCENT EXCEEDS	56	100	39
90 PERCENT EXCEEDS	29	47	9.0



WEeping WATER CREEK AT UNION

MISSOURI RIVER MAIN STEM

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06807000 MISSOURI RIVER AT NEBRASKA CITY, NE

LOCATION.--Lat 40°40'55", long 95°50'48", in NW¹/₄ NE¹/₄ sec.9, T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001, on right bank 2.0 mi upstream from Highway 2 Bridge at Nebraska City, and at mile 562.6.

DRAINAGE AREA.--410,000 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage encoder. Datum of gage is 905.36 ft above sea level, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers rain-gage and satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 ft³/s Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

COOPERATION.--Records provided by Geological Survey, Iowa District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75200	78300	81300	38000	46400	39400	58300	48800	52700	55300	43100	39000
2	74000	79800	79100	38100	46100	39600	56900	47600	52000	53800	42800	39400
3	74300	81000	77600	38400	42800	38500	54800	47700	50800	52500	43700	39300
4	73800	81600	75100	38700	41000	38400	52400	47800	50300	56000	43700	39400
5	73300	81000	72100	38400	39600	38000	50700	47200	49600	70100	45400	40300
6	73000	80800	69100	37500	39200	37800	49800	46400	49400	85600	44900	40300
7	73200	81100	65800	37300	39300	38200	54600	45000	49900	83600	44900	40200
8	74200	80500	62700	37300	39000	38900	65900	44000	51500	78200	45500	40300
9	75500	79300	59800	36300	38900	37300	72300	43300	66600	68700	46900	39600
10	76500	79800	57200	35500	39200	35300	69700	43400	73000	59000	45800	39400
11	76800	80200	55100	32400	41200	33600	64200	41800	66300	55100	44500	39100
12	77200	80000	52500	30000	40400	33200	60200	43100	75200	52900	44000	38800
13	79800	79000	49500	28200	40100	33600	57200	43000	70900	49400	43100	38600
14	80800	78100	47000	26300	39700	34000	55000	43500	79200	48100	43200	38400
15	81700	77900	43100	26000	39300	35300	53900	44200	93900	47500	43100	38500
16	81200	77400	41500	25900	39000	35600	55500	46400	85700	49300	44600	38800
17	79300	76800	40800	27000	38700	40600	58900	46700	77700	47100	44700	39000
18	78100	77400	40900	28200	39100	41500	56800	45700	70700	45200	43200	38900
19	76700	77000	40400	28700	39500	42700	54400	45100	67300	43300	42200	38800
20	75400	77700	40900	27600	40200	43000	52300	46800	66700	42600	41200	40200
21	75000	78800	40800	28900	40100	43800	51800	49300	62000	42100	46700	40400
22	74700	79500	39900	30300	40100	44300	50400	55200	56600	45300	52500	40100
23	75300	80800	39000	30800	40200	44400	49900	60200	52500	45600	54500	39700
24	75300	81000	39400	32100	40600	44700	49600	53600	50100	45100	47300	39400
25	77400	80700	39100	33600	39800	45900	48400	52500	65100	43900	43800	39200
26	79000	80000	38700	34300	40400	47200	47900	52400	64900	43600	41800	39700
27	79900	78600	38100	35100	40200	48500	49100	51500	58200	43900	41500	39700
28	79300	77800	38000	36600	40300	51600	51900	51300	57700	43400	40900	39600
29	78400	78500	37600	37700	---	55800	52100	62100	55300	43200	40800	39800
30	77700	81800	37700	39500	---	60000	50600	64000	54700	43200	40000	40000
31	77700	---	37800	40800	---	59500	---	54800	---	43100	39000	---
TOTAL	2379700	2382200	1577600	1035500	1130400	1300200	1655500	1514400	1876500	1625700	1369300	1183900
MEAN	76760	79410	50890	33400	40370	41940	55180	48850	62550	52440	44170	39460
MAX	81700	81800	81300	40800	46400	60000	72300	64000	93900	85600	54500	40400
MIN	73000	76800	37600	25900	38700	33200	47900	41800	49400	42100	39000	38400
AC-FT	4720000	4725000	3129000	2054000	2242000	2579000	3284000	3004000	3722000	3225000	2716000	2348000

MISSOURI RIVER MAIN STEM

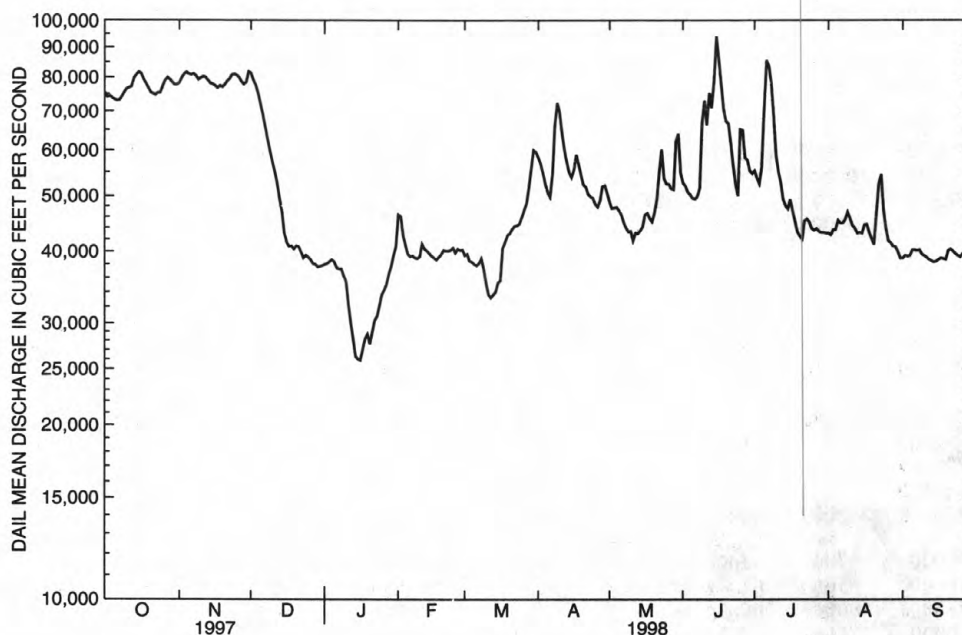
06807000 MISSOURI RIVER AT NEBRASKA CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42840	38370	25070	21000	26360	38110	47810	47500	52430	46530	42870	42760
MAX	76760	79410	52410	39970	48630	66730	98960	90280	117500	116700	71540	73410
(WY)	1998	1998	1987	1987	1983	1983	1997	1997	1984	1993	1996	1997
MIN	22420	14380	10510	10160	12780	15310	21850	32470	33530	32760	29870	32560
(WY)	1962	1962	1956	1957	1957	1957	1957	1955	1958	1961	1955	1958

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		aWATER YEARS 1953 - 1998	
ANNUAL TOTAL	25573600		19030900			
ANNUAL MEAN	70060		52140		39330	
HIGHEST ANNUAL MEAN					66450	1997
LOWEST ANNUAL MEAN					25370	1957
HIGHEST DAILY MEAN	113000	Apr 18	93900	Jun 15	188000	Jul 25 1993
LOWEST DAILY MEAN	27800	Jan 2	25900	Jan 16	4320	Jan 11 1957
ANNUAL SEVEN-DAY MINIMUM	30900	Jan 13	27100	Jan 14	5590	Nov 29 1955
INSTANTANEOUS PEAK FLOW			97300	Jun 15	196000	Jul 23 1993
INSTANTANEOUS PEAK STAGE			20.34	Jun 15	27.19	Jul 23 1993
ANNUAL RUNOFF (AC-FT)	50730000		37750000		28500000	
10 PERCENT EXCEEDS	93800		78400		62100	
50 PERCENT EXCEEDS	73000		46400		37100	
90 PERCENT EXCEEDS	38100		37900		17400	

ea Post-regulation, revised.



MISSOURI RIVER AT NEBRASKA CITY

LITTLE NEMAHA RIVER BASIN

261

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE

LOCATION.--Lat 40°23'33", long 95°48'46", in NE¹/₄ NW¹/₄ sec.23, T.5 N., R.14 E., Nemaha County, Hydrologic Unit 10240006, on left bank at downstream side of bridge on U.S. Highway 136, 1 mi downstream from Longs Creek and Willow Creek, 1 mi east of Auburn, and at mile 10.4.

DRAINAGE AREA.--792 mi².

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft above sea level. See WSP 2119 for history of changes prior to July 24, 1967.

REMARKS.--Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	378	946	154	1740	161	2130	399	e700	330	422	130
2	56	219	453	178	1660	157	1080	357	537	261	318	111
3	52	170	360	208	e1000	159	789	348	e450	278	467	105
4	51	143	e280	175	e650	153	699	318	399	227	422	e100
5	49	128	e230	151	e450	e150	628	310	375	223	301	94
6	49	116	e190	174	e350	e150	572	292	331	235	306	e90
7	53	112	e150	154	273	e140	790	281	268	259	239	e88
8	58	111	e200	142	e250	e80	5690	259	371	267	219	e90
9	99	109	e240	134	240	e66	3900	228	918	223	206	e92
10	68	109	e260	147	e600	e76	1820	307	566	12600	189	e87
11	56	109	e240	e150	e1600	e140	1120	274	2520	2980	175	78
12	79	109	e220	e130	704	e200	841	244	3380	980	165	76
13	108	111	e210	e200	446	e250	691	224	845	570	157	76
14	85	106	e200	e180	350	e240	630	206	15500	433	153	78
15	72	105	e210	e160	309	e230	576	253	5010	356	148	77
16	60	e98	344	e180	287	224	519	323	2290	402	141	76
17	63	e102	347	e190	280	256	457	281	1250	543	135	77
18	60	e104	367	e170	270	474	418	226	836	468	132	79
19	59	e110	294	e175	239	741	410	208	628	322	e130	79
20	51	114	276	e170	213	669	415	198	554	269	e120	118
21	51	110	e240	e180	200	1090	376	206	2210	231	e130	189
22	53	105	206	e185	199	1820	334	334	930	242	e150	190
23	57	100	201	e190	209	1350	306	630	669	281	e170	148
24	58	100	190	e195	201	893	315	383	657	233	e130	122
25	69	99	196	e200	197	1200	344	412	471	215	e100	113
26	374	97	e160	e240	188	1910	288	297	380	218	e108	106
27	396	95	121	e300	176	1540	297	237	332	222	e120	97
28	226	92	e150	e500	168	1940	357	230	427	215	e170	92
29	246	1120	164	e700	---	896	453	4840	561	201	158	91
30	421	2730	160	392	---	6250	453	e2000	375	1660	e150	93
31	869	---	147	280	---	3360	---	e1000	---	710	e140	---
TOTAL	4104	7311	7952	6684	13449	26965	27698	16105	44740	26654	6071	3042
MEAN	132	244	257	216	480	870	923	520	1491	860	196	101
MAX	869	2730	946	700	1740	6250	5690	4840	15500	12600	467	190
MIN	49	92	121	130	168	66	288	198	268	201	100	76
AC-FT	8140	14500	15770	13260	26680	53490	54940	31940	88740	52870	12040	6030

e Estimated

LITTLE NEMAHA RIVER BASIN

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	130	115	119	233	456	359	553	532	611	231	248
MAX	2003	447	509	562	747	2870	1589	2949	3524	9419	1256	1546
(WY)	1974	1962	1987	1974	1993	1979	1984	1996	1951	1993	1982	1977
MIN	25.4	25.7	23.4	19.7	28.4	49.1	30.6	29.9	14.9	16.2	14.0	26.6
(WY)	1992	1956	1957	1957	1956	1957	1956	1956	1977	1977	1955	1991

SUMMARY STATISTICS

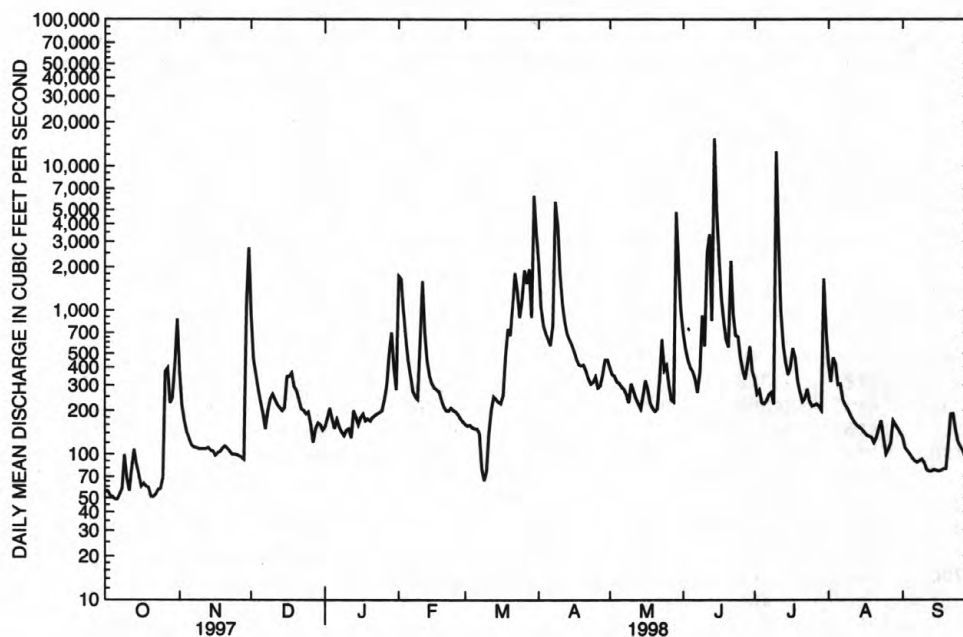
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

ANNUAL TOTAL	83337	190775	
ANNUAL MEAN	228	523	318
MEDIAN OF ANNUAL MEANS			262
HIGHEST ANNUAL MEAN			1389
LOWEST ANNUAL MEAN			64.4
HIGHEST DAILY MEAN	3700 Jun 25	15500 Jun 14	70400 Jul 24 1993
LOWEST DAILY MEAN	43 Sep 20	49 Oct 5	.87 Jul 6 1977
ANNUAL SEVEN-DAY MINIMUM	47 Sep 15	52 Oct 1	1.1 Jul 3 1977
INSTANTANEOUS PEAK FLOW		23300 Jul 10	164000 May 9 1950
INSTANTANEOUS PEAK STAGE		23.13 Jul 10	*27.65 May 9 1950
ANNUAL RUNOFF (AC-FT)	165300	378400	230500
10 PERCENT EXCEEDS	424	936	464
50 PERCENT EXCEEDS	142	226	100
90 PERCENT EXCEEDS	59	88	34

* From floodmark.



LITTLE NEMAHA RIVER AT AUBURN

MISSOURI RIVER MAIN STEM

263

06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40°03'13", long 95°25'19", in NW¹/₄ NW¹/₄ sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mile 498.0.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of U.S. Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City office of U.S. Army Corps of Engineers.

GAGE.--Water-stage encoder. Datum of gage is 837.23 ft above sea level. Oct. 1949 to Sept. 12, 1950, nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Estimated daily discharges: Aug. 29-31 and Sept. 13, 14. Records good except for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily discharge, 4,420 ft³/s Jan. 13, 1957; minimum gage height, -0.19 ft Dec. 25, 1990, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

COOPERATION.--Records provided by Geological Survey, Iowa District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77800	85900	94200	43000	51400	45300	69200	55700	61200	64300	50400	41300
2	77200	85100	90500	43300	61100	45100	63700	54600	58800	61400	49700	41500
3	76400	84700	88100	43500	51700	45200	61300	54400	56300	58700	50300	41500
4	76200	85100	84800	43500	46800	44100	60700	54800	55100	58300	50600	41500
5	76200	84500	80200	43200	44600	44000	58500	54000	54400	68300	50400	41900
6	75800	83500	76100	42600	43300	43500	57800	53400	53200	93000	50800	42400
7	75500	84000	72100	41700	43600	43100	61500	51800	53000	102000	50400	41800
8	75800	84100	67700	41500	43500	43800	82800	50500	53600	99100	50300	41800
9	76600	83600	65200	40200	43200	42700	99200	49800	65700	92700	51100	41800
10	77900	83000	62200	39100	43600	40400	93200	49700	91900	89500	51300	42000
11	77700	83600	60000	37200	48100	38600	82700	48600	87200	82700	48500	42400
12	78100	84100	57400	34500	47800	38000	75500	48400	97500	70000	48000	42600
13	80400	83800	55000	33400	45900	37900	70500	48700	95600	63900	47800	e42600
14	81300	83700	52400	30800	45300	38600	66800	48900	114000	59800	47300	e42900
15	82600	83300	49500	30200	45100	39300	63800	49400	129000	58200	47700	42800
16	83900	83400	47800	29800	44900	40200	63800	52300	129000	59400	48100	43200
17	82100	83100	46600	30000	46000	42800	68100	58400	123000	59400	50200	43600
18	80500	82700	46700	31200	47200	47200	67100	54200	121000	55700	48800	44000
19	80400	82100	46200	31900	46100	48900	63000	52300	113000	52700	47400	43500
20	79300	82400	46400	31500	46300	48800	60000	52100	102000	51600	46000	44300
21	78600	82300	46500	31200	46200	50200	58800	55600	96300	50500	45700	46600
22	78100	82400	45700	32900	45300	52300	57300	61700	84700	50200	56900	46100
23	78700	82700	44900	33400	44600	52400	55400	76900	73900	58700	61900	45300
24	78800	83100	44600	34200	44400	51300	54500	67500	67200	56500	55700	44500
25	81100	82100	45400	35800	44200	52000	52900	63000	70000	53500	48500	44100
26	84300	82300	44600	36900	44500	55600	51400	62200	81600	51000	45900	43500
27	87300	82500	44000	37500	45100	57800	51800	59500	74100	51100	45200	43700
28	85900	82900	43600	39000	45500	62600	56500	57800	68500	49900	46900	43300
29	85100	85600	43600	40700	---	66600	59800	64100	72400	49600	e45500	43600
30	85600	94700	43300	41800	---	80600	58700	83700	67800	51500	e44000	43100
31	86300	---	43500	43300	---	76900	---	69900	---	52200	e42000	---
TOTAL	2481500	2516300	1778800	1148800	1295300	1515800	1946300	1763900	2471000	1975400	1523300	1293200
MEAN	80050	83880	57380	37060	46260	48900	64880	56900	82370	63720	49140	43110
MAX	87300	94700	94200	43500	61100	80600	99200	83700	129000	102000	61900	46600
MIN	75500	82100	43300	29800	43200	37900	51400	48400	53000	49600	42000	41300
AC-FT	4922000	4991000	3528000	2279000	2569000	3007000	3860000	3499000	4901000	3918000	3021000	2565000

MISSOURI RIVER MAIN STEM

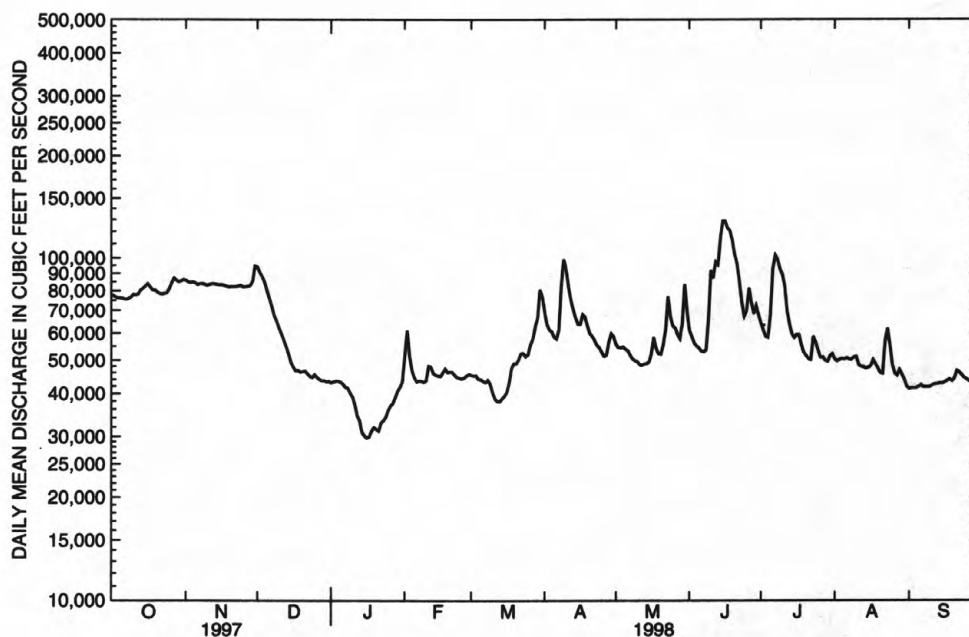
06813500 MISSOURI RIVER AT RULO, NE-Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44800	40410	26740	22300	28390	41390	51350	51600	56780	50990	45130	45380
MAX	80050	83880	57380	42280	53140	79590	106100	97280	130600	164800	78730	76410
(WY)	1998	1998	1998	1973	1997	1979	1997	1997	1984	1993	1996	1997
MIN	25580	17000	9953	10800	13230	15380	21820	33790	33710	33860	29820	34140
(WY)	1962	1962	1956	1957	1957	1957	1957	1956	1956	1963	1955	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		*WATER YEARS 1958 - 1998	
ANNUAL TOTAL	27331900		21709600			
ANNUAL MEAN	74880		59480		42140	
HIGHEST ANNUAL MEAN					71880	
LOWEST ANNUAL MEAN					26340	
HIGHEST DAILY MEAN	121000		Apr 15	129000	Jun 15	289000
LOWEST DAILY MEAN	33400		Jan 2	29800	Jan 16	4420
ANNUAL SEVEN-DAY MINIMUM	35400		Jan 13	30800	Jan 14	5560
INSTANTANEOUS PEAK FLOW				133000	Jun 16	307000
INSTANTANEOUS PEAK STAGE				22.27	Jun 16	25.37
ANNUAL RUNOFF (AC-FT)	54210000		43060000		30530000	
10 PERCENT EXCEEDS	102000		84400		67000	
50 PERCENT EXCEEDS	77200		52700		38600	
90 PERCENT EXCEEDS	42400		41800		18400	

* Post-regulation period



MISSOURI RIVER BASIN

265

BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW¹/₄ NW¹/₄ SW¹/₄ sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, on left bank at downstream side of county highway bridge, 2.0 mi downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi²

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft above sea level. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite telemeter at station.

COOPERATION.--Records provided by Geological Survey, Kansas District.

PEAK DISCHARGES GREATER THAN BASE FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/sec and maximum (*):

Date	Time	Discharge (ft ³ /sec)	Gage height (ft)	Date	Time	Discharge (ft ³ /sec)	Gage height (ft)
Mar. 30	1415	*16,200	*23.92	June 14	1615	5,490	20.15
June 12	0115	4,120	17.40	June 29	0815	4,690	18.59.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	16	138	35	1410	44	1170	109	22	202	60	11
2	3.3	9.4	63	86	494	43	523	92	20	157	65	9.7
3	3.3	7.9	53	110	223	44	618	81	18	127	64	8.8
4	2.5	8.0	59	48	138	43	472	75	21	107	63	7.5
5	2.5	7.4	34	37	118	42	317	71	25	133	36	7.0
6	2.9	8.2	40	47	99	40	267	67	26	163	31	7.5
7	2.1	8.5	40	39	89	43	250	132	26	339	28	6.5
8	3.0	8.2	37	34	77	27	334	75	142	213	28	5.9
9	5.1	8.2	34	25	75	28	685	63	198	108	23	5.5
10	10	8.5	34	e22	547	e30	337	63	372	402	21	5.4
11	6.9	8.9	33	e24	652	e40	248	60	1350	373	20	5.2
12	9.4	9.3	27	e26	225	e50	217	60	1310	176	18	5.1
13	17	8.9	27	e18	152	67	210	56	275	120	17	5.1
14	23	9.1	32	e24	115	84	262	52	3350	91	17	5.8
15	9.8	8.3	34	e22	99	100	192	64	749	73	16	6.2
16	6.0	e6.8	34	e25	93	92	171	95	379	65	15	9.8
17	5.3	e8.5	44	37	90	256	148	60	258	57	14	5.9
18	4.7	9.6	117	40	82	707	134	52	198	50	12	5.1
19	5.8	9.6	89	43	72	543	128	47	158	45	11	5.0
20	4.7	10	59	45	66	409	121	43	212	40	11	34
21	4.5	10	37	47	63	721	114	41	1040	33	10	115
22	4.9	9.9	41	48	62	766	107	43	263	29	9.3	48
23	5.3	9.0	43	47	58	485	102	43	200	32	8.8	24
24	5.9	8.7	35	46	54	294	99	44	239	35	8.0	15
25	7.8	8.8	38	48	52	368	96	42	190	39	7.3	12
26	214	8.7	34	73	51	436	89	39	107	51	9.3	9.9
27	150	8.4	24	253	47	451	81	36	86	51	23	8.4
28	52	9.0	37	298	46	784	87	32	246	38	86	17
29	50	82	33	258	---	303	124	34	2750	30	26	12
30	58	490	34	161	---	8080	122	33	335	150	15	8.6
31	30	---	25	121	---	3600	---	27	---	202	12	---
MEAN	23.0	27.5	45.5	70.5	191	614	261	59.1	486	120	25.3	14.4
MAX	214	490	138	298	1410	8080	1170	132	3350	402	86	115
MIN	2.1	6.8	24	18	46	27	81	27	18	29	7.3	5.0
AC-FT	1410	1630	2790	4340	10610	37730	15520	3630	28890	7400	1560	857

MISSOURI RIVER BASIN

BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.7	43.4	34.3	41.5	93.7	213	170	221	240	210	85.5	134
MAX	1050	251	206	310	372	1297	1079	1354	2067	3193	914	1057
(WY)	1974	1962	1974	1962	1982	1979	1984	1995	1951	1993	1954	1958
MIN	.000	.000	.000	.000	.018	.065	.28	2.43	2.75	.92	1.48	.000
(WY)	1957	1957	1957	1957	1957	1957	1956	1989	1977	1989	1988	1956

SUMMARY STATISTICS

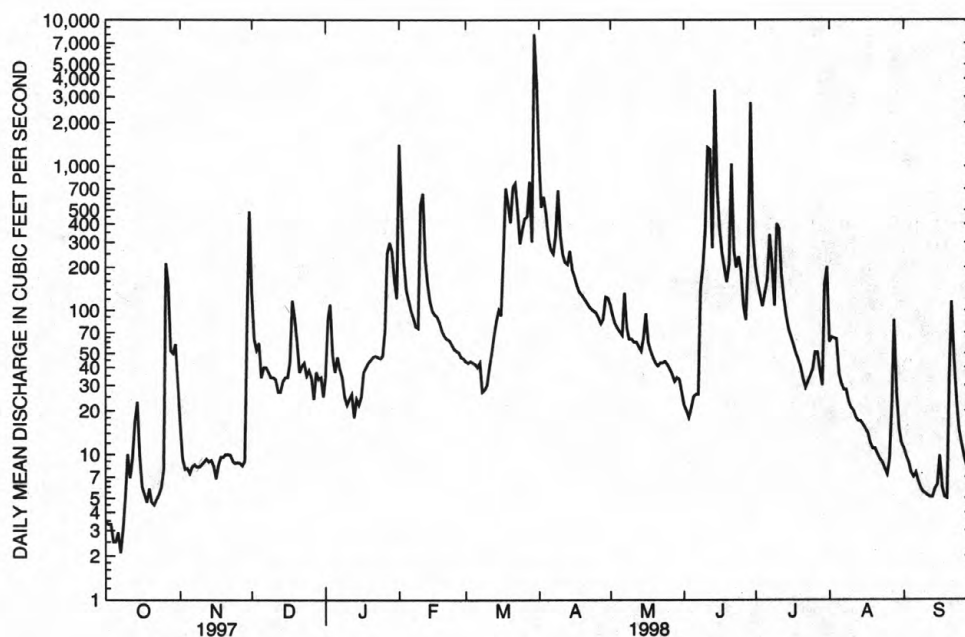
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1949 - 1998

ANNUAL MEAN	74.7	161	130	
HIGHEST ANNUAL MEAN			547	1993
LOWEST ANNUAL MEAN			3.24	1956
HIGHEST DAILY MEAN	4090 Jun 25	8080 Mar 30	16700	Oct 11 1973
LOWEST DAILY MEAN	2.1 Oct 7	2.1 Oct 7	.00	Jul 28 1956
ANNUAL SEVEN-DAY MINIMUM	2.8 Oct 2	2.8 Oct 2	.00	Aug 21 1956
INSTANTANEOUS PEAK FLOW		16200 Mar 30	21400	Oct 11 1973
INSTANTANEOUS PEAK STAGE		23.92 Mar 30	24.77	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	54050	116400	93890	
10 PERCENT EXCEEDS	128	324	210	
50 PERCENT EXCEEDS	34	44	23	
90 PERCENT EXCEEDS	5.1	7.5	2.1	

e Estimated



TURKEY CREEK NEAR SENECA, KS

BIG NEMAHA RIVER BASIN

267

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE

LOCATION.--Lat 40°02'08", long 95°35'45", in NE¹/₄ SE¹/₄ sec.22, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, on right bank near upstream side of bridge on U.S. Highway 73, 1 mi south of Falls City and 14.5 mi upstream from mouth.

DRAINAGE AREA.--1,339 mi².

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

REVISED RECORDS.--WSP 1086: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 858.24 ft (revised) above sea level. Prior to Oct. 16, 1952, nonrecording gage and Oct. 17, 1952 to Aug. 24, 1982, water-stage recorder for stages above 6.1 ft at site 150 ft downstream at same datum. On Oct. 1, 1997, datum lowered 3.0 ft.

REMARKS.--Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	432	1430	205	3700	222	5500	539	188	944	594	133
2	54	240	697	236	3610	215	2270	492	167	608	393	126
3	58	171	480	423	1290	214	1780	441	155	471	653	122
4	53	140	418	390	745	213	2430	403	154	404	506	116
5	64	127	327	252	512	206	1260	377	160	974	391	111
6	82	116	226	233	434	205	999	354	167	733	320	104
7	77	109	e200	247	386	206	1030	336	167	1770	287	101
8	62	105	e350	225	346	180	2570	363	438	1290	260	95
9	78	103	e350	202	320	76	3530	322	782	667	252	90
10	167	104	e320	202	686	e100	2180	306	1060	720	224	85
11	127	103	e280	245	2970	e200	1340	301	4530	4030	208	84
12	138	102	e260	285	1360	e250	1060	302	4350	1610	201	81
13	155	101	e240	232	747	e300	908	290	1580	934	192	80
14	168	102	e230	264	555	e300	882	281	7850	636	182	88
15	101	100	e260	255	474	e350	828	286	2700	464	172	88
16	86	91	e350	241	437	e350	720	379	1800	383	161	86
17	70	93	e450	237	417	507	660	572	1290	402	151	86
18	63	99	627	248	394	2190	607	368	753	325	143	92
19	60	110	541	241	363	2390	575	299	e700	274	134	87
20	61	105	419	257	334	1760	562	263	e680	244	127	169
21	62	105	300	264	317	2510	544	241	e800	219	120	365
22	64	105	255	261	308	2960	521	236	1210	201	118	359
23	66	101	246	268	303	2310	502	247	851	197	113	375
24	67	98	256	261	287	1640	491	265	790	219	107	321
25	74	96	256	265	275	1370	481	262	772	215	101	228
26	188	97	242	300	267	1970	455	333	519	239	106	186
27	738	96	206	394	251	1850	432	292	354	254	194	169
28	412	101	194	867	234	2940	457	239	316	253	373	257
29	309	798	193	1110	---	1900	536	244	5330	218	382	420
30	396	2810	206	810	---	13600	561	225	2410	1360	213	262
31	487	---	174	449	---	13100	---	222	---	1330	152	---
TOTAL	4668	7060	10983	10369	22322	56584	36671	10080	43023	22588	7530	4966
MEAN	151	235	354	334	797	1825	1222	325	1434	729	243	166
MAX	738	2810	1430	1110	3700	13600	5500	572	7850	4030	653	420
MIN	53	91	174	202	234	76	432	222	154	197	101	80
AC-FT	9260	14000	21780	20570	44280	112200	72740	19990	85340	44800	14940	9850

e Estimated

BIG NEMAHA RIVER BASIN

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	430	249	188	232	445	908	776	1046	1145	1004	488	651
MAX	5229	1249	1036	1446	2998	5819	4462	6166	7816	15690	3898	3408
(WY)	1974	1962	1974	1974	1949	1979	1984	1995	1951	1993	1954	1958
MIN	21.0	28.1	24.1	19.9	42.2	42.5	32.3	44.5	46.4	20.7	29.8	16.6
(WY)	1957	1957	1957	1957	1957	1956	1956	1989	1981	1977	1991	1956

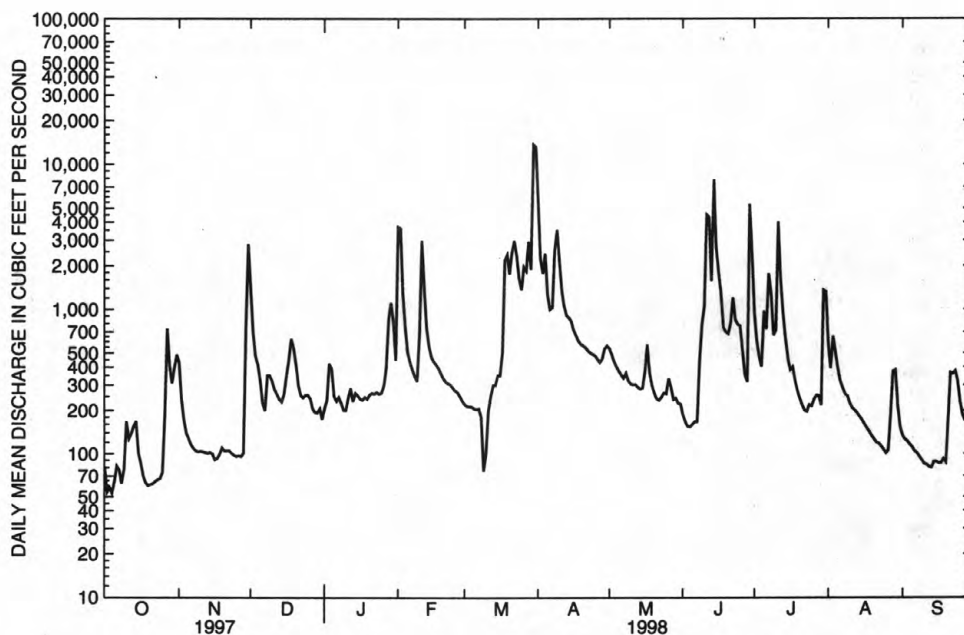
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATERYEARS1944-1998

ANNUAL TOTAL	153909	236844	
ANNUAL MEAN	422	649	628
MEDIAN OF ANNUAL MEANS			509
HIGHEST ANNUAL MEAN			2559
LOWEST ANNUAL MEAN			86.7
HIGHEST DAILY MEAN	160 Jun 25	13600 Mar 30	57600 Oct 11 1973
LOWEST DAILY MEAN	53 Oct 4	53 Oct 4	3.0 Jul 9 1977
ANNUAL SEVEN-DAY MINIMUM	59 Sep 16	63 Oct 18	4.0 Jul 4 1977
INSTANTANEOUS PEAK FLOW		26300 Mar 30	71600 Oct 11 1973
INSTANTANEOUS PEAK STAGE		23.47 Mar 30	31.40 Oct 11 1973
ANNUAL RUNOFF (AC-FT)	305300	469800	454600
10 PERCENT EXCEEDS	757	1390	1070
50 PERCENT EXCEEDS	258	280	162
90 PERCENT EXCEEDS	86	97	45



BIG NEMAHA RIVER AT FALLS CITY

KANSAS RIVER BASIN

269

06821500 ARIKAREE RIVER AT HAIGLER, NE

LOCATION.--Lat 40°01'45", long 101°58'10", in NE¹/₄ NE¹/₄ sec.29, T.1 N., R.41 W., Dundy County, Hydrologic Unit 10250001, on right bank at downstream side of bridge on U.S. Highway 34, 1.3 mi upstream from Burlington Northern Inc. bridge, 1.9 mi upstream from confluence with North Fork Republican River, 2 mi northwest of Haigler, and 3.2 mi downstream from Kansas-Nebraska State line.

DRAINAGE AREA --1,700 mi², of which about 1,020 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1951, 1954, 1956, 1960. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,250.98 ft above sea level. See WSP 1919 for history of changes prior to Sept. 29, 1964. Sept. 29, 1964 to Apr. 25, 1982 on left bank 57 ft downstream from bridge at present datum.

REMARKS.--Record poor. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 acres in Colorado and by return flow from Haigler Canal.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	e1.6	e.80	e.60	e.60	e1.4	7.0	2.5	6.8	.18	11	.00
2	5.2	e1.7	e.80	e.60	e.60	e1.3	7.3	2.3	12	.00	7.8	.00
3	5.6	e1.5	e.80	e.60	e.60	e1.2	12	1.9	9.5	.00	4.1	.00
4	7.1	1.3	e.80	e.60	e.60	e1.1	12	2.6	6.4	.00	7.5	.00
5	8.5	1.5	e.70	e.60	e.60	e1.1	10	4.1	11	.00	7.5	.00
6	8.4	1.3	e.70	e.50	e.60	e1.0	9.4	4.8	8.6	.32	5.5	.00
7	8.3	1.6	e.70	e.50	e.60	e1.1	8.7	4.8	8.2	.00	5.0	.00
8	9.2	e1.5	e.70	e.50	e.70	e1.3	8.5	7.5	9.6	.15	5.0	.00
9	11	e1.3	e.70	e.50	e.70	e1.5	7.2	25	8.7	.82	4.2	.00
10	10	e1.0	e.60	e.50	e.70	e1.7	6.8	29	10	6.1	3.4	.00
11	7.0	e.90	e.60	e.40	e.70	e1.8	6.7	21	4.7	6.5	2.0	.00
12	8.4	e.90	e.60	e.40	e.70	e1.8	6.4	18	.58	11	3.5	.00
13	11	e.90	e.60	e.40	e.70	e1.8	19	12	.30	12	3.5	.00
14	5.7	e.90	e.60	e.40	e.80	e1.8	20	10	7.2	7.9	1.6	2.4
15	7.0	e.80	e.60	e.40	e.80	e1.9	14	16	6.2	9.0	.49	5.2
16	8.7	e.80	e.60	e.40	e.90	e1.9	13	17	2.2	7.8	.99	4.0
17	9.6	e.80	e.60	e.40	e.90	e2.0	13	16	5.1	1.4	.55	2.5
18	7.6	e.80	e.60	e.40	e.90	e2.0	7.1	12	7.7	3.9	.89	3.8
19	5.2	e.80	e.60	e.50	e1.0	e2.0	3.5	7.8	4.4	4.2	1.6	.82
20	5.3	e.80	e.60	e.50	e1.0	e2.0	2.8	8.0	2.7	1.5	1.2	.00
21	5.2	e.80	e.60	e.50	e1.0	e2.1	2.3	7.9	1.9	1.2	.04	.00
22	6.0	e.80	e.50	e.50	e1.0	e2.3	13	5.1	.94	1.5	.04	.02
23	6.0	e.80	e.50	e.50	e1.0	e2.5	9.7	20	2.6	1.9	.00	.63
24	5.8	e.80	e.50	e.50	e1.0	e3.0	7.7	19	.81	2.4	.60	3.3
25	6.9	e.80	e.50	e.50	e1.0	e3.5	8.6	13	.03	.21	.86	5.1
26	5.5	e.90	e.50	e.50	e1.1	e4.5	6.4	8.9	.00	1.7	1.5	1.4
27	3.0	e.90	e.50	e.50	e1.2	e5.0	5.7	6.4	.00	3.7	.10	3.0
28	2.0	e.90	e.50	e.60	e1.3	e5.6	6.8	12	.26	3.8	.00	3.3
29	1.7	e.90	e.50	e.60	---	e6.0	7.2	6.1	1.6	5.6	.00	2.6
30	e1.5	e.90	e.60	e.60	---	e6.4	3.8	9.2	.00	12	.00	1.6
31	e1.4	---	e.60	e.60	---	6.7	---	5.4	---	16	.00	---
TOTAL	198.5	31.20	19.10	15.60	23.30	79.3	265.6	335.3	140.02	122.78	80.46	39.67
MEAN	6.40	1.04	.62	.50	.83	2.56	8.85	10.8	4.67	3.96	2.60	1.32
MAX	11	1.7	.80	.60	1.3	6.7	20	29	12	16	11	5.2
MIN	1.4	.80	.50	.40	.60	1.0	2.3	1.9	.00	.00	.00	.00
AC-FT	394	62	38	31	46	157	527	665	278	244	160	79

e Estimated

KANSAS RIVER BASIN

06821500 ARIKAREE RIVER AT HAIGLER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.89	8.23	6.64	7.83	16.0	28.5	23.5	41.5	40.7	20.3	18.4	15.5
MAX	39.8	31.8	28.3	24.0	67.0	400	78.0	709	599	193	111	140
(WY)	1943	1947	1939	1934	1937	1960	1944	1935	1935	1962	1938	1938
MIN	1.41	.61	.35	.42	.56	2.17	2.72	3.61	3.34	.044	.000	.58
(WY)	1984	1983	1969	1995	1995	1995	1978	1986	1956	1997	1952	1953

SUMMARY STATISTICS

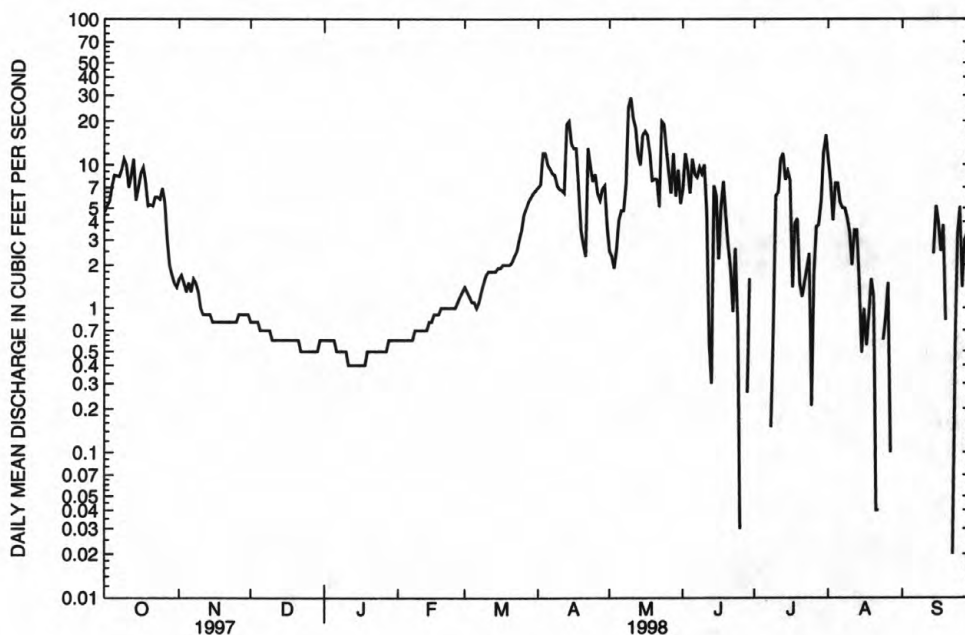
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1932 - 1998

ANNUAL TOTAL	1486.49	1350.83	
ANNUAL MEAN	4.07	3.70	19.7
MEDIAN OF ANNUAL MEANS			15.4
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			3.69
HIGHEST DAILY MEAN	14 Apr 13	29 May 10	17000 May 31 1935
LOWEST DAILY MEAN	.00 Jul 4	.00 Jun 26	.00 Jul 21 1932
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 4	.00 Aug 28	.00 Jul 30 1934
INSTANTANEOUS PEAK FLOW		39 May 9	50000 May 31 1935
INSTANTANEOUS PEAK STAGE		6.02 May 9	*11.20 May 31 1935
ANNUAL RUNOFF (AC-FT)	2950	2680	14290
10 PERCENT EXCEEDS	8.8	9.6	31
50 PERCENT EXCEEDS	3.5	1.5	9.0
90 PERCENT EXCEEDS	.34	.24	.78

* Site and datum then in use.



ARIKAREE RIVER AT HAIGLER

KANSAS RIVER BASIN

271

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in SE¹/₄ NW¹/₄ sec. 10, T. 1 N., R. 42 W., Dundy County, Nebraska, Hydrologic Unit 10250002, on right bank 100 ft east of Colorado-Nebraska State line, 9.5 mi upstream from confluence with Arikaree River, and at mile 448.

DRAINAGE AREA.--2,370 mi², of which about 174 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River at Colorado-Nebraska State line. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1947(M). WSP 1390: 1934. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft above sea level. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated discharges, which are poor. Natural flow affected by diversion in Haigler Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	e45	e43	e43	e38	45	59	3.1	15	7.0	31	5.2
2	4.0	e45	e41	e42	e38	e44	60	3.7	13	7.8	38	4.4
3	4.0	e45	e40	e40	e39	e43	64	7.7	19	8.0	31	4.2
4	4.0	e46	e40	e40	e40	e41	64	8.2	25	8.0	24	4.6
5	4.0	e47	39	e41	e40	e41	60	8.0	32	6.4	25	4.7
6	4.0	e47	33	e41	e40	e40	59	7.4	34	6.6	25	4.5
7	4.0	e47	32	e41	e41	e40	59	6.0	37	6.1	18	5.3
8	4.4	e46	32	e41	e42	e40	61	5.5	34	6.7	16	6.3
9	6.0	e46	35	e40	e42	e41	58	22	23	7.1	11	6.5
10	9.7	e45	37	e38	e43	e43	58	41	23	7.5	9.9	5.1
11	11	e44	38	e38	e42	e45	60	35	30	7.6	11	5.0
12	13	e42	e38	e38	e42	e45	32	34	29	8.7	9.0	6.8
13	19	e40	e37	e39	e41	e45	19	34	21	8.3	8.4	7.4
14	19	e39	e37	e41	e43	e42	22	22	13	14	9.7	6.4
15	15	e39	38	e44	e45	e40	36	10	10	13	8.4	6.9
16	15	e40	39	e44	e45	e40	37	8.8	10	13	8.0	6.1
17	16	e40	39	e44	e45	e40	38	7.9	8.5	13	7.5	7.1
18	27	e40	39	e44	e44	e40	48	15	8.4	8.2	5.6	6.9
19	36	e40	41	e41	e43	e40	50	21	9.1	7.9	5.3	5.8
20	36	e39	42	e40	e42	e39	46	15	9.1	6.6	6.0	7.6
21	32	e38	42	e40	e42	e39	38	15	8.9	6.6	5.4	8.1
22	30	e38	e42	e39	e41	e39	16	22	9.2	7.2	3.5	8.7
23	31	e39	e42	e39	e43	e39	11	26	11	9.6	3.6	10
24	33	e39	e42	e40	e44	e42	6.9	27	9.8	8.9	3.6	10
25	e38	e43	e42	e40	e44	44	5.7	33	10	8.0	4.2	11
26	e38	e44	e42	e40	e45	45	4.5	33	8.8	12	4.9	10
27	e38	e45	e43	e39	e45	51	3.9	27	8.4	13	5.2	9.3
28	44	e45	e44	e39	45	52	3.5	13	7.5	10	4.5	8.9
29	45	e45	e44	e38	---	53	3.3	26	6.7	11	4.7	9.0
30	45	e44	e44	e38	---	57	3.1	20	6.6	28	5.5	9.7
31	e45	---	e44	e38	---	58	---	17	---	24	5.2	---
TOTAL	674.2	1282	1273	1250	1184	1353	1085.9	574.3	490.0	309.8	358.1	211.5
MEAN	21.7	42.7	41.1	40.3	42.3	43.6	36.2	18.5	16.3	9.99	11.6	7.05
MAX	45	47	44	44	45	58	64	41	37	28	38	11
MIN	4.0	38	37	38	38	39	3.1	3.1	6.6	6.1	3.5	4.2
AC-FT	1340	2540	2520	2480	2350	2680	2150	1140	972	614	710	420

e Estimated

KANSAS RIVER BASIN

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.9	56.8	60.7	60.2	62.2	64.7	57.8	41.9	34.9	18.8	18.9	26.2
MAX	67.1	83.5	74.7	73.4	76.8	85.8	85.7	104	113	93.8	72.4	128
(WY)	1963	1957	1954	1953	1960	1960	1980	1951	1962	1962	1950	1951
MIN	11.1	27.0	40.5	39.4	42.3	43.6	23.5	11.0	12.2	5.36	4.12	5.78
(WY)	1979	1989	1993	1979	1998	1998	1972	1992	1952	1978	1940	1978

SUMMARY STATISTICS

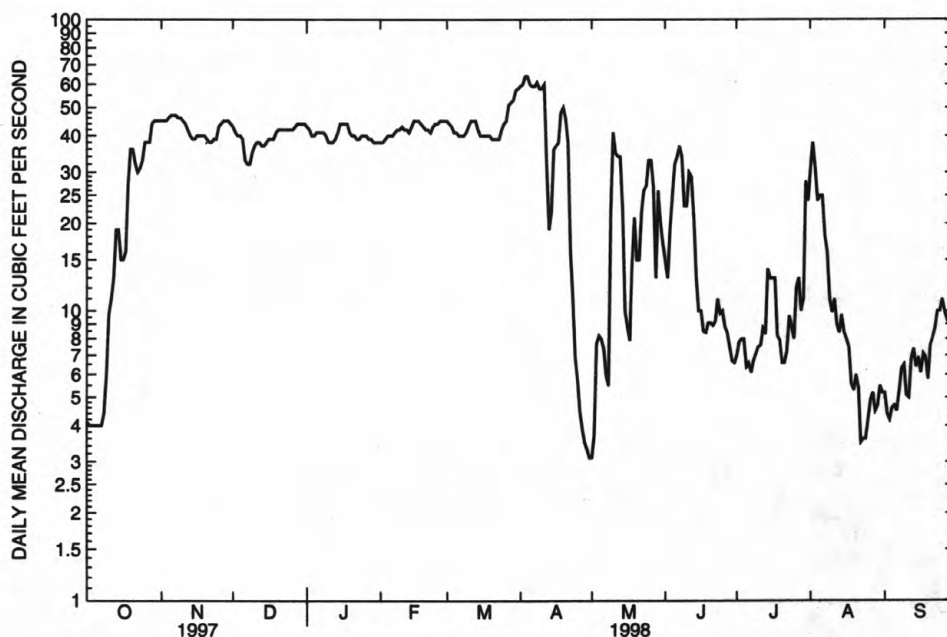
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1935 - 1998

ANNUAL TOTAL	11249.6	10045.8	
ANNUAL MEAN	30.8	27.5	44.8
HIGHEST ANNUAL MEAN			65.3
LOWEST ANNUAL MEAN			27.5
HIGHEST DAILY MEAN	86 Aug 6	64 Apr 3	761 May 15 1951
LOWEST DAILY MEAN	4.0 Jul 17	3.1 Apr 30	1.7 Jul 11 1938
ANNUAL SEVEN-DAY MINIMUM	4.0 Oct 1	3.6 Apr 26	2.3 Aug 5 1940
INSTANTANEOUS PEAK FLOW		68 Apr 11	2110 Apr 28 1947
INSTANTANEOUS PEAK STAGE		*1.47 Nov 15	5.92 Apr 28 1947
ANNUAL RUNOFF (AC-FT)	22310	19930	32440
10 PERCENT EXCEEDS	51	45	72
50 PERCENT EXCEEDS	38	34	50
90 PERCENT EXCEEDS	7.0	5.5	8.9

* Backwater from ice.



NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

KANSAS RIVER BASIN

273

06823500 BUFFALO CREEK NEAR HAIGLER, NE

LOCATION.--Lat 40°02'22", long 101°51'57", in SE¹/₄ NW¹/₄ sec.20, T.1 N., R.40 W., Dundy County, Hydrologic Unit 10250002, on upstream side of bridge, 0.4 mi upstream from mouth, and 4 mi northeast of Haigler.

DRAINAGE AREA.--172 mi², of which about 8.6 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 2119: 1948-50(M), 1957(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,189.00 ft above sea level. Prior to Sept. 19, 1980, at site 0.5 mi upstream at datum 15.57 ft higher. Sept. 18, 1980, to June 4, 1996, on left bank 15 ft upstream from county highway bridge at datum 0.10 ft lower. June 4, 1996, to Nov. 7, 1996, 135 ft downstream from county highway bridge, at datum 0.10 ft lower.

REMARKS.--Records poor. Natural flow affected by diversion about 1 mi upstream for irrigation of 880 acres.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	4.4	4.6	e3.6	.51	e3.5	5.4	5.9	.00	.00	.36	.00
2	1.3	3.9	4.8	3.8	.38	e3.5	6.1	5.7	.00	.00	.84	.08
3	1.6	4.2	4.3	3.7	.32	e3.5	7.9	5.8	.04	.00	.38	.04
4	1.6	3.6	e4.3	e3.5	.28	e3.5	7.6	6.5	.01	.00	.06	.00
5	1.7	2.9	e4.0	e3.2	.41	e3.5	6.3	7.3	.00	.00	.08	.00
6	2.0	3.1	e3.5	e3.0	.39	e3.4	6.8	7.8	.00	.00	.31	.00
7	2.3	3.4	e3.3	e2.8	.54	e3.2	7.1	7.8	.00	.00	.30	.00
8	2.7	3.5	e3.5	e2.8	.60	e3.0	6.8	8.6	.00	.00	.24	.00
9	3.2	3.6	e3.7	e3.0	.99	e2.9	7.5	12	.00	.00	.19	.00
10	3.0	4.0	e3.5	e3.2	1.4	e2.8	7.3	12	.00	.00	.23	.00
11	2.0	4.0	e3.3	e3.3	1.3	e2.8	6.1	10	.00	.00	.27	.00
12	3.8	e3.5	e3.1	e3.5	.99	e2.6	7.7	8.7	.00	.00	.36	.00
13	4.9	e3.1	e3.3	e3.3	.83	e2.3	7.1	7.2	.00	.00	.60	.00
14	4.6	e2.8	e3.5	e3.6	.84	e2.0	8.5	8.0	.00	.00	1.3	.00
15	4.1	e2.6	e3.5	e3.9	.71	e1.9	9.5	7.6	.00	.00	.33	.00
16	4.2	e2.5	e3.5	e3.8	.44	e1.8	9.7	7.5	.00	3.3	.16	.00
17	4.2	e2.5	e3.5	e3.7	.29	e1.7	8.9	6.4	.00	4.3	.02	.00
18	4.0	e2.6	e3.5	e3.5	.25	e1.8	8.3	6.8	.00	3.5	.01	.00
19	4.5	e2.8	e3.5	e3.3	.14	e1.8	8.0	6.6	.00	1.2	.00	.00
20	4.5	2.9	e3.5	e3.2	.08	e1.9	7.8	6.7	.00	1.0	.00	.00
21	4.8	3.5	e3.4	e3.0	.03	e1.9	7.5	5.5	.00	.07	.00	.00
22	5.0	3.8	e3.3	e2.7	.09	1.9	6.5	1.9	.00	.00	.02	.00
23	5.0	3.5	e3.3	e2.5	.06	1.9	5.6	.42	.00	.00	.08	.01
24	4.8	3.1	e3.3	e1.6	.05	1.7	4.6	.54	.00	.05	.05	.02
25	3.9	3.3	e3.3	e1.0	2.3	e2.0	5.1	.16	.00	.01	.01	.05
26	.38	4.2	e3.2	e.90	3.6	e2.5	5.7	.15	.00	.02	.08	.00
27	e4.0	3.3	e3.2	.89	3.6	e2.9	5.8	.07	.00	.00	.04	.63
28	e7.0	3.5	e3.3	.89	e3.5	e3.2	6.2	.07	.00	.07	.00	.67
29	e5.0	4.2	e3.5	.77	---	3.4	6.1	.04	.00	.19	.00	2.2
30	e4.5	4.0	e3.5	.62	---	4.5	5.5	.03	.00	.23	.02	3.1
31	e4.4	---	e3.5	.58	---	5.0	---	.00	---	1.1	.01	---
TOTAL	110.48	102.3	110.5	83.15	24.92	84.3	209.0	163.78	0.05	15.04	6.35	6.80
MEAN	3.56	3.41	3.56	2.68	.89	2.72	6.97	5.28	.002	.49	.20	.23
MAX	7.0	4.4	4.8	3.9	3.6	5.0	9.7	12	.04	4.3	1.3	3.1
MIN	.38	2.5	3.1	.58	.03	1.7	4.6	.00	.00	.00	.00	.00
AC-FT	219	203	219	165	49	167	415	325	.1	30	13	13

e Estimated

KANSAS RIVER BASIN

06823500 BUFFALO CREEK NEAR HAIGLER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.84	8.05	8.21	8.43	9.04	9.33	9.20	7.84	5.69	2.76	2.46	4.24
MAX	12.6	12.1	13.7	12.7	12.9	14.3	14.2	12.5	13.2	11.0	19.7	15.2
(WY)	1943	1947	1946	1942	1960	1952	1944	1944	1962	1948	1950	1951
MIN	2.84	3.41	3.56	2.68	.89	2.72	3.92	2.11	.000	.000	.001	.23
(WY)	1965	1998	1998	1998	1998	1998	1989	1965	1994	1997	1976	1998

SUMMARY STATISTICS

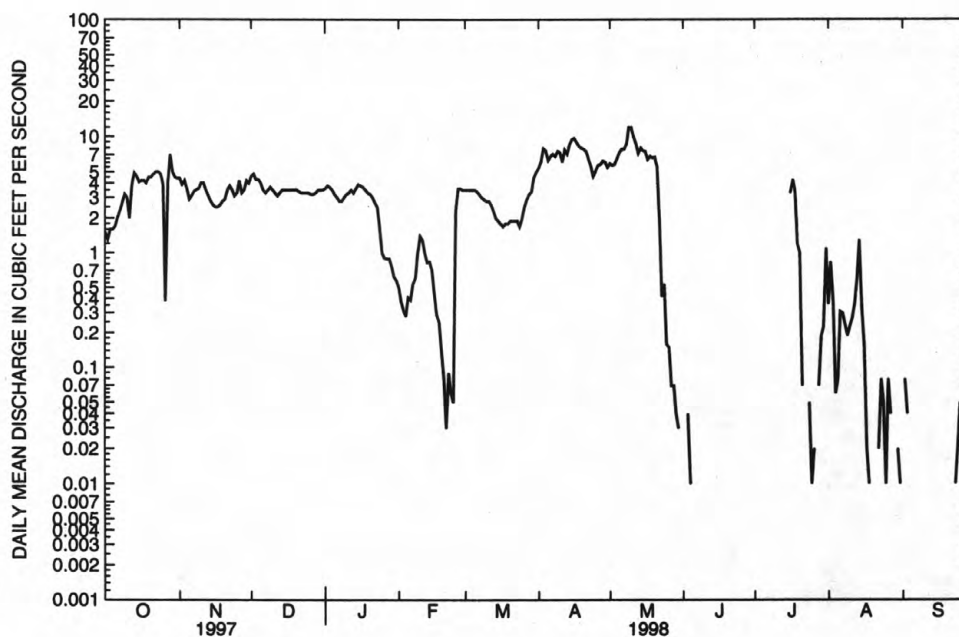
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1941 - 1998

ANNUAL TOTAL	1218.98	916.67	
ANNUAL MEAN	3.34	2.51	6.83
HIGHEST ANNUAL MEAN			10.9 1951
LOWEST ANNUAL MEAN			2.51 1998
HIGHEST DAILY MEAN	17 Aug 7	12 May 9	90 Aug 11 1950
LOWEST DAILY MEAN	.00 Jun 26	.00 May 31	.00 Aug 3 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 26	.00 Jun 5	.00 Aug 14 1973
INSTANTANEOUS PEAK FLOW (STAGE)		13 (1.64) May 10	140 (4.37) Jun 27 1948
INSTANTANEOUS PEAK STAGE		*2.13 Mar 9	*5.93 Jan 3 1976
ANNUAL RUNOFF (AC-FT)	2420	1820	4950
10 PERCENT EXCEEDS	5.5	6.3	11
50 PERCENT EXCEEDS	3.7	2.3	7.5
90 PERCENT EXCEEDS	.00	.00	.27

* Backwater from ice.



BUFFALO CREEK NEAR HAIGLER

KANSAS RIVER BASIN

275

06824000 ROCK CREEK AT PARKS, NE

LOCATION.--Lat 40°02'30", long 101°43'40", in SW¹/₄ NE¹/₄ sec.21, T.1 N., R.39 W., Dundy County, Hydrologic Unit 10250002, on right bank at west edge of Parks, 100 ft downstream from county road bridge and 0.6 mi upstream from mouth.

DRAINAGE AREA.--23.6 mi², of which about 20 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1630: 1951(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,093.35 ft above sea level.

REMARKS.--Records fair except for periods of estimated record, which are poor. One diversion about 2 mi above station for irrigation of 215 acres; flow regulated at times by reservoir at State fish hatchery 7 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	11	9.5	e9.0	11	11	7.2	5.7	8.0	9.0	9.3	7.7
2	7.8	16	9.3	e9.0	11	e10	7.6	6.0	7.9	9.1	9.1	7.9
3	7.5	20	9.2	e9.0	11	e10	9.0	6.0	8.1	9.0	9.1	7.7
4	7.1	15	9.4	e9.0	11	e10	8.6	6.1	8.1	9.0	9.1	7.6
5	7.2	7.5	e10	e9.0	11	e9.6	8.3	6.6	8.2	8.9	9.1	7.5
6	7.3	7.4	e11	e8.6	11	e9.2	8.7	6.7	8.3	8.7	9.1	7.5
7	7.6	7.4	11	e8.6	11	e8.8	9.0	6.2	8.3	8.8	9.0	7.7
8	7.5	7.2	11	e8.6	11	e8.4	8.9	6.4	8.3	9.0	8.8	7.9
9	7.6	7.3	11	e8.6	12	e9.0	8.6	8.8	8.4	9.1	8.8	7.7
10	7.4	7.2	11	e8.8	14	e9.6	8.6	9.2	8.5	9.1	9.1	7.8
11	7.7	7.3	11	e9.0	13	e9.6	8.7	8.9	8.6	9.1	9.1	7.7
12	11	7.7	e11	e9.4	12	e8.0	8.5	8.6	8.6	9.0	9.1	7.7
13	12	7.8	e10	e10	11	7.0	8.9	8.2	8.7	8.9	9.1	8.1
14	10	8.5	e10	11	11	7.0	9.4	7.6	8.7	8.6	9.0	9.0
15	9.2	e9.0	e10	11	11	7.0	9.4	7.8	8.7	8.1	8.9	8.9
16	9.1	e9.0	9.7	11	11	7.0	9.4	9.7	8.6	7.7	8.6	8.6
17	9.1	e9.0	9.7	11	11	7.2	9.0	8.1	8.5	7.5	8.4	8.4
18	8.4	9.0	9.7	11	10	7.2	9.5	7.8	8.5	7.2	8.3	8.4
19	8.1	9.2	9.5	11	10	7.4	9.5	7.8	8.4	7.0	8.3	8.3
20	8.1	8.9	9.8	11	10	7.0	9.3	7.9	8.3	6.8	8.8	8.3
21	7.8	8.9	9.8	11	10	7.0	9.6	7.9	8.4	6.7	8.3	8.2
22	7.7	8.9	9.5	11	10	6.7	9.5	8.0	8.5	7.1	8.0	8.3
23	7.4	9.0	e9.4	11	9.9	7.9	5.8	8.9	8.9	7.4	8.2	8.3
24	7.5	8.9	e9.0	11	9.7	16	5.5	8.3	9.1	10	8.0	8.3
25	6.6	8.9	e9.0	11	10	4.3	5.7	8.3	9.1	9.1	8.1	8.3
26	e6.2	8.9	e9.0	11	11	5.2	5.8	8.1	9.1	9.1	8.2	8.1
27	e8.0	9.4	e9.0	11	11	5.8	5.7	8.0	9.1	9.1	8.1	8.1
28	e8.2	9.7	e9.0	11	12	6.3	5.7	7.9	9.1	9.1	8.0	8.1
29	9.0	12	e9.0	11	---	6.7	5.7	8.0	8.9	13	7.8	8.2
30	13	10	e9.0	11	---	6.9	5.6	8.1	8.8	20	7.7	8.3
31	12	---	e9.0	11	---	7.2	---	8.1	---	12	7.5	---
TOTAL	261.1	286.0	303.5	314.6	307.6	250.0	240.7	239.7	256.7	282.2	266.0	242.6
MEAN	8.42	9.53	9.79	10.1	11.0	8.06	8.02	7.73	8.56	9.10	8.58	8.09
MAX	13	20	11	11	14	16	9.6	9.7	9.1	20	9.3	9.0
MIN	6.2	7.2	9.0	8.6	9.7	4.3	5.5	5.7	7.9	6.7	7.5	7.5
AC-FT	518	567	602	624	610	496	477	475	509	560	528	481

e Estimated

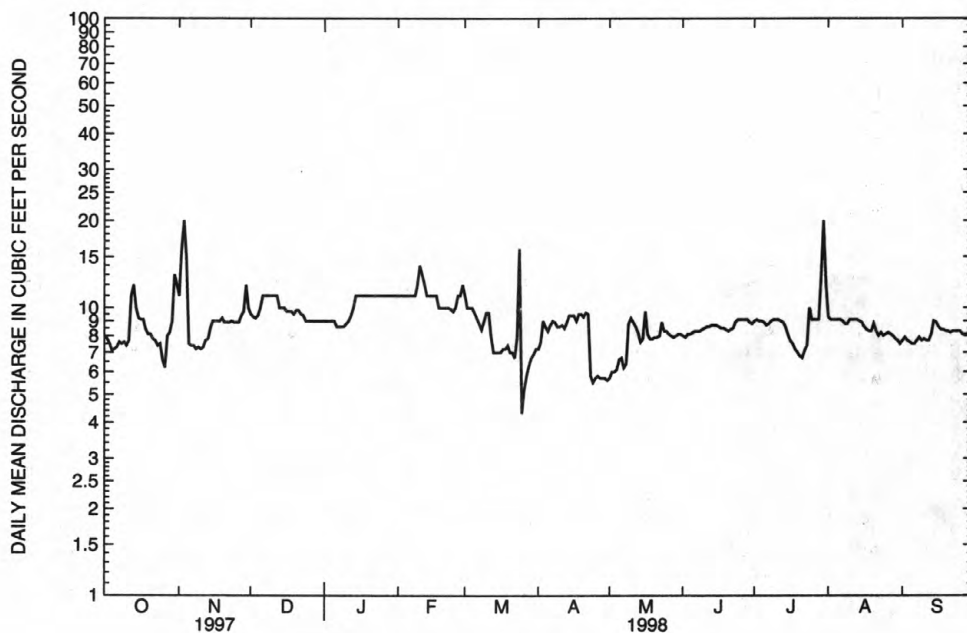
KANSAS RIVER BASIN

06824000 ROCK CREEK AT PARKS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	13.5	13.4	13.5	13.7	13.8	13.8	13.8	13.2	12.0	11.4	11.8
MAX	16.2	19.7	17.1	17.9	17.5	18.1	18.1	19.0	19.0	30.3	17.7	18.8
(WY)	1966	1943	1941	1942	1949	1949	1949	1969	1965	1965	1950	1951
MIN	7.56	8.79	8.63	8.37	9.01	7.74	8.02	7.73	8.31	7.67	7.93	7.72
(WY)	1993	1997	1997	1996	1996	1985	1998	1998	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1941 - 1998
ANNUAL TOTAL	3331.6	3250.7	
ANNUAL MEAN	9.13	8.91	13.0
HIGHEST ANNUAL MEAN			15.8
LOWEST ANNUAL MEAN			8.91
HIGHEST DAILY MEAN	27 Aug 6	20 Nov 3	111 Jul 6 1965
LOWEST DAILY MEAN	4.2 Aug 21	4.3 Mar 25	2.6 Nov 19 1975
ANNUAL SEVEN-DAY MINIMUM	5.4 Aug 19	5.7 Apr 24	3.1 Feb 17 1943
INSTANTANEOUS PEAK FLOW		46 Jul 29	493 Jul 5 1965
INSTANTANEOUS PEAK STAGE		2.83 Jul 29	6.00 Jul 5 1965
ANNUAL RUNOFF (AC-FT)	6610	6450	9440
10 PERCENT EXCEEDS	12	11	16
50 PERCENT EXCEEDS	8.6	8.8	13
90 PERCENT EXCEEDS	7.4	7.2	9.5



ROCK CREEK AT PARKS

KANSAS RIVER BASIN

277

06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE

LOCATION.--Lat 40°00'34", long 101°32'32", in NE¹/₄ SW¹/₄ sec.31, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250003, on right bank 200 ft downstream from bridge on State Highway 61, 1 mi downstream from Kansas-Nebraska State line, 2.5 mi southwest of Benkelman, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--2,740 mi², approximately, of which about 2,190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1895, October 1902 to November 1906, October 1930 to September 1932, August 1937 to current year. Published as South Fork of Republican River at Benkelman prior to 1906 and as Republican River at Benkelman 1931-32. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WSP 2119: Drainage area. WDR NE-97: 1995 (M).

GAGE.--Water-stage recorder. Datum of gage is 2,990.91 ft above sea level. Prior to Dec. 10, 1947, nonrecording gages at several sites within 3.5 mi of present site at various datums. Dec.10, 1947, to Sept. 28, 1966, water-stage recorder 170 ft upstream at datum 2.00 ft higher and Sept. 29, 1966, to Mar. 7, 1968, at site 300 ft upstream at datum 2.00 ft higher. Mar. 8, 1968, to May 29, 1991, at site 300 ft upstream at same datum.

REMARKS.--Records fair except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station, and since July 6, 1950, by storage in Bonny Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	12	e15	22	20	22	22	11	.00	55	3.0
2	.00	4.0	11	e14	22	20	23	21	10	.18	74	3.0
3	.00	8.8	11	e13	22	20	27	22	9.5	.04	88	2.5
4	.00	3.1	10	e12	23	19	30	22	10	.00	39	2.0
5	.00	2.7	e9.4	e12	23	18	29	22	10	.00	22	1.5
6	.00	3.4	e9.0	e12	23	18	30	22	9.1	.00	15	1.2
7	.00	4.0	9.9	e11	24	19	32	23	8.2	.00	12	.87
8	.00	3.7	12	e11	25	21	31	23	7.6	.00	9.4	.75
9	.00	3.8	9.8	e10	26	21	29	33	6.8	.00	7.6	.56
10	.00	3.8	9.1	e10	32	22	28	41	6.1	.00	8.1	.45
11	.00	4.2	11	e10	32	26	29	45	5.6	.00	7.4	.40
12	.00	4.7	e12	e10	30	29	30	42	4.7	5.7	8.7	.32
13	.00	4.9	e15	e13	28	25	29	42	3.8	7.8	15	.23
14	.00	8.3	e15	e14	27	23	28	39	3.0	5.2	16	.34
15	.00	e9.0	e14	e16	28	21	27	37	2.3	3.2	12	.25
16	.00	e9.8	e13	e17	28	21	26	35	1.9	1.8	9.2	.10
17	.00	e9.8	e13	e17	27	22	26	34	1.4	1.0	7.3	.00
18	.00	e9.8	13	e16	26	21	25	32	.93	.48	6.1	.00
19	.00	e10	12	e15	25	21	24	29	.70	.26	5.5	.00
20	.00	e10	12	e14	25	21	23	28	.47	.13	14	.00
21	.00	e10	12	e13	24	22	22	28	.37	.00	12	.00
22	.00	e10	e12	e12	25	22	22	47	.28	.00	11	.00
23	.00	e10	e11	e14	24	22	22	56	.22	.00	8.1	.00
24	.00	e10	e11	e16	24	22	21	29	.17	.26	6.2	.00
25	.00	10	e12	e20	23	23	20	27	.12	.00	5.2	.00
26	.00	9.9	e12	24	22	24	20	21	.10	.03	5.0	.00
27	.00	9.9	e13	24	20	23	21	17	.05	.04	4.7	.00
28	.00	9.5	e14	23	21	23	21	14	.03	9.3	4.4	.00
29	.00	12	e15	23	---	23	21	14	.03	28	4.1	.00
30	.00	12	e16	23	---	22	21	13	.01	31	3.6	.00
31	.00	---	e16	23	---	22	---	12	---	51	3.2	---
TOTAL	0.00	221.10	377.2	477	701	676	759	892	114.48	145.42	498.8	17.47
MEAN	.000	7.37	12.2	15.4	25.0	21.8	25.3	28.8	3.82	4.69	16.1	.58
MAX	.00	12	16	24	32	29	32	56	11	51	88	3.0
MIN	.00	.00	9.0	10	20	18	20	12	.01	.00	3.2	.00
AC-FT	.00	439	748	946	1390	1340	1510	1770	227	288	989	35

e Estimated

KANSAS RIVER BASIN

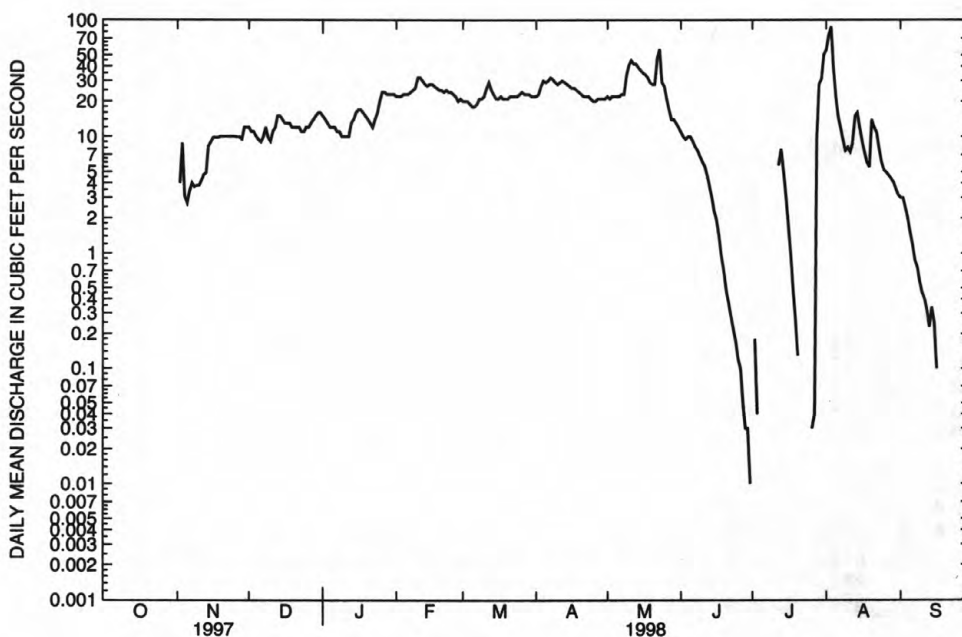
06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.0	22.0	21.1	23.6	40.2	52.8	58.1	73.4	74.5	59.2	35.5	25.0
MAX	160	113	77.0	77.5	121	227	158	396	455	616	383	335
(WY)	1966	1970	1943	1943	1949	1942	1958	1957	1948	1946	1958	1951
MIN	.000	.000	.000	.000	6.63	18.1	12.1	6.57	.077	.000	.000	.000
(WY)	1940	1953	1953	1977	1978	1995	1956	1979	1956	1943	1940	1939

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	5180.18		4879.47			
ANNUAL MEAN	14.2		13.4		41.8	
HIGHEST ANNUAL MEAN					121	
LOWEST ANNUAL MEAN					9.79	
HIGHEST DAILY MEAN	49 Jun 21		88 Aug 3		6220 Aug 16 1958	
LOWEST DAILY MEAN	.00 Jul 11		.00 Oct 1		.00 Jul 3 1938	
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 11		.00 Oct 1		.00 Aug 1 1938	
INSTANTANEOUS PEAK FLOW			150 May 22		19600 Aug 16 1958	
INSTANTANEOUS PEAK STAGE			2.60 May 22		*8.70 Aug 16 1958	
ANNUAL RUNOFF (AC-FT)	10270		9680		30310	
10 PERCENT EXCEEDS	31		28		88	
50 PERCENT EXCEEDS	13		11		20	
90 PERCENT EXCEEDS	.00		.00		.00	

* May have been higher during flood of June 24, 1945, site and datum then in use.



SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN

KANSAS RIVER BASIN

279

06828500 REPUBLICAN RIVER AT STRATTON, NE

LOCATION.--Lat 40°08'28", long 101°13'42", in SW¹/₄ NW¹/₄ sec.13, T.2 N., R.35 W., Hitchcock County, Hydrologic Unit 10250004, on right bank at downstream side of county bridge, 0.5 mi south of Stratton, 0.2 mi downstream from Muddy Creek, 10 mi upstream from Trenton Dam, 19 mi downstream from South Fork Republican River, and at mile 387.

DRAINAGE AREA.--8,200 mi², approximately, of which about 3,690 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WDR NE-73: 1968-71(M), 1972. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,775.49 ft above sea level. Prior to Aug. 1, 1967, at site 0.3 mi downstream at present datum.

REMARKS.--Records fair except for periods of estimated records, which are poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir (station 06826000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	57	61	e90	91	83	79	54	29	.00	18	.00
2	.00	50	61	e94	90	81	75	50	32	.00	26	.00
3	.00	44	65	e94	90	79	86	45	29	.00	25	.00
4	.00	45	70	95	90	81	89	45	34	.00	29	.00
5	.00	43	e80	99	90	87	88	45	35	.00	22	.00
6	.00	43	e70	97	90	88	89	45	33	.00	15	.00
7	.00	44	e80	91	89	92	93	47	31	.00	14	.00
8	.00	45	e84	e88	88	85	91	49	32	.00	12	.00
9	.00	45	e90	e82	89	73	87	60	31	.00	9.0	.00
10	.00	49	e80	e76	104	74	88	57	28	.00	13	.00
11	.00	48	e76	e70	104	e70	83	60	24	.00	9.6	.00
12	.00	49	e70	e66	100	e64	82	64	20	.00	13	.00
13	.22	54	e66	e70	99	83	80	62	17	.00	9.2	.00
14	5.2	56	e70	e70	96	89	79	60	16	.00	6.6	.00
15	8.9	90	e76	e74	95	90	77	55	15	.00	5.2	.00
16	10	62	e78	e80	93	90	77	52	12	.00	3.9	.00
17	10	80	e80	e82	95	90	77	51	8.5	.00	2.1	.00
18	11	84	e80	e82	96	90	77	49	5.8	.00	.62	.00
19	12	93	e80	e78	96	89	76	45	3.9	.00	.00	.00
20	13	83	e80	e76	95	91	74	45	2.3	.00	10	.00
21	15	60	e74	e70	96	88	72	42	1.4	.00	30	.00
22	17	59	e80	e74	94	85	71	44	1.2	.00	4.9	.00
23	18	56	84	e78	93	85	70	993	2.0	.00	2.2	.00
24	18	57	e82	e80	92	84	68	336	.67	.00	.93	.00
25	39	57	e76	e80	97	90	65	119	.12	.00	.09	.00
26	38	57	e80	e80	93	89	60	78	.02	.00	.00	.00
27	31	55	e80	e80	91	84	57	68	.00	.00	.00	.00
28	52	51	e86	e84	88	82	56	55	.00	.00	.00	.00
29	67	59	e86	e86	---	81	54	45	.00	.00	.00	.00
30	73	62	e90	e90	---	78	54	37	.00	.00	.00	.00
31	65	---	e90	e90	---	79	---	33	---	7.5	.00	---
TOTAL	503.32	1737	2405	2546	2624	2594	2274	2890	443.91	7.50	281.34	0.00
MEAN	16.2	57.9	77.6	82.1	93.7	83.7	75.8	93.2	14.8	.24	9.08	.000
MAX	73	93	90	99	104	92	93	993	35	7.5	30	.00
MIN	.00	43	61	66	88	64	54	33	.00	.00	.00	.00
AC-FT	998	3450	4770	5050	5200	5150	4510	5730	880	15	558	.00

e Estimated

KANSAS RIVER BASIN

06828500 REPUBLICAN RIVER AT STRATTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.6	91.4	92.2	102	146	182	173	179	147	91.0	67.5	54.3
MAX	285	218	157	159	225	788	388	766	572	759	479	1005
(WY)	1966	1970	1966	1974	1963	1960	1980	1957	1951	1962	1950	1951
MIN	.000	9.52	27.6	22.8	51.6	83.7	75.6	37.9	14.8	.000	.000	.000
(WY)	1977	1979	1979	1979	1995	1998	1972	1992	1998	1954	1952	1952

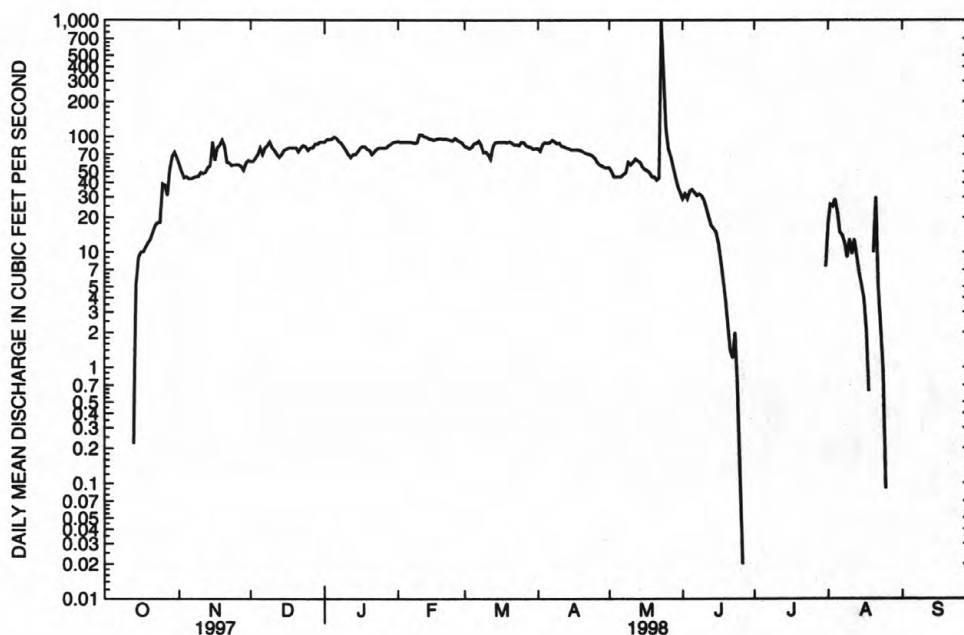
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

ANNUAL TOTAL	22334.98	18306.07	
ANNUAL MEAN	61.2	50.2	114
MEDIAN OF ANNUAL MEANS			103
HIGHEST ANNUAL MEAN			304
LOWEST ANNUAL MEAN			50.2
HIGHEST DAILY MEAN	240	993	8180
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		1480	26800
INSTANTANEOUS PEAK STAGE		8.26	9.34
ANNUAL RUNOFF (AC-FT)	44300	36310	82240
10 PERCENT EXCEEDS	132	90	220
50 PERCENT EXCEEDS	57	54	87
90 PERCENT EXCEEDS	.00	.00	.00



REPUBLICAN RIVER AT STRATTON

KANSAS RIVER BASIN

281

06832000 ENDERS RESERVOIR NEAR ENDERS, NE

LOCATION.--Lat 40°25'05", long 101°30'55", in NE¹/₄ sec.9, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, near right bank in control house at outlet tube of Enders Dam on Frenchman Creek, 2.2 mi southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorders: Graphic recorder and Sutron 8400 data-logger, installed Dec. 15, 1997 Datum of gage is sea level. Prior to Sept. 3, 1960, mercury-column pressure gage at same datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 23, 1950. Capacity, 36,010 acre-ft between elevations 3,080.0 ft, sill of outlet gates, and 3,112.3 ft, top of storage pool. Top of flood-control pool at elevation 3,127.0 ft, capacity, 74,520 acre-ft. Top of superstorage flood-control pool at elevation 3,129.5 ft, capacity, 80,730 acre-ft. Dead storage, 8,470 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,330 acre-ft Mar. 25, 1960, elevation, 3,118.20 ft; minimum since operation of reservoir began, 8,870 acre-ft Aug. 28, 1978, elevation, 3,080.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,610 acre-ft June 13, elevation, 3,102.40 ft; minimum, 15,610 acre-ft Aug. 18, elevation, 3,089.75 ft.

Capacity table (elevation, in feet, and
contents, in acre-feet)

3,085	11,770	3,100	26,540
3,090	15,830	3,110	40,660

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21140	22150	23140	24440	25680	26820	27920	28610	29460	25960	18480	16120
2	21190	22140	23310	24480	25710	26830	27950	28610	29370	25700	18390	16050
3	21160	22180	23370	24490	25740	26840	27990	28640	29280	25400	18240	16060
4	21170	22220	23370	24530	25770	26870	28020	28680	29280	25110	18070	16110
5	21160	22220	23370	24580	25820	26910	28070	28680	29290	24870	17930	16120
6	21180	22290	23370	24620	25860	26930	28120	28700	29360	24600	17810	16140
7	21220	22330	23440	24660	25900	26960	28110	28700	29370	24290	17680	16140
8	21240	22340	23470	24700	25960	26980	28130	28730	29410	24040	17560	16130
9	21250	22370	23470	24730	26020	27020	28160	28840	29440	23930	17470	16160
10	21310	22410	23500	24770	26080	27040	28210	28880	29490	23780	17280	16190
11	21290	22420	23500	24810	26120	27070	28250	28930	29520	23640	17060	16220
12	21400	22480	23560	24850	26160	27130	28260	28980	29530	23530	16840	16220
13	21450	22510	23660	24890	26210	27180	28300	29030	29490	23310	16610	16230
14	21480	22520	23680	24920	26240	27210	28290	29050	29460	23020	16420	16240
15	21520	22540	23680	24970	26290	27230	28300	29040	29460	22700	16160	16290
16	21530	22590	23790	25020	26340	27270	28320	29050	29460	22410	15900	16320
17	21550	22650	23780	25050	26390	27330	28350	29130	29440	22140	15670	16330
18	21600	22680	23820	25100	26430	27350	28360	29150	29450	21850	15650	16350
19	21600	22710	23840	25130	26450	27400	28360	29150	29440	21530	15700	16380
20	21630	22760	23890	25170	26500	27450	28380	29160	29280	21240	15740	16360
21	21640	22800	23920	25230	26550	27500	28400	29170	29130	20870	15790	16420
22	21710	22820	23970	25270	26590	27520	28440	29260	29160	20550	15840	16420
23	21740	22870	24000	25300	26630	27560	28490	29320	28880	20290	15890	16480
24	21720	22910	24090	25350	26630	27620	28520	29340	28610	20030	15900	16530
25	21810	22960	24140	25400	26770	27700	28530	29370	28310	19820	15920	16590
26	21840	22990	24170	25440	26680	27760	28490	29400	27930	19660	15960	16610
27	21910	23030	24220	25480	26750	27790	28480	29450	27540	19490	15970	16620
28	21950	23060	24260	25530	26790	27840	28490	29500	27160	19270	16020	16640
29	22020	23090	24310	25570	---	27880	28530	29490	26740	19050	16060	16660
30	22070	23120	24350	25600	---	27860	28580	29490	26280	18790	16090	16640
31	22120	---	24410	25640	---	27890	---	29460	---	18590	16110	---
MAX	22120	23120	24410	25640	26790	27890	28580	29500	29530	25960	18480	16660
MIN	21140	22140	23140	24440	25680	26820	27920	28610	26280	18590	15650	16050
(*)	3096.25	3097.14	3098.24	3099.27	3100.20	3101.07	3101.61	3102.29	3099.79	3092.91	3090.30	3090.89
(**)	+1040	+1000	+1290	+1230	+1150	+1100	+690	+880	-3180	-7690	-2480	+530
CAL YR 1997		MAX 34450		MIN 19910	(**)	-2680						
WTR YR 1998		MAX 29530		MIN 15650	(**)	-4440						

(*) Elevation, in feet, at end of month.

(**) Change in contents, in acre-feet.

KANSAS RIVER BASIN

06834000 FRENCHMAN CREEK AT PALISADE, NE

LOCATION.--Lat 40°21'07", long 101°07'24" (revised), in SW¹/₄ SE¹/₄ sec. 36, T.5 N., R. 34 W., Hayes County, Hydrologic Unit 10250005, on right bank at upstream side of bridge on U.S. Highway 6, 0.7 mi west of Palisade, 1.5 mi upstream from Stinking Water Creek, and at mile 30.2.

DRAINAGE AREA --1,300 mi², approximately, of which about 1,110 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman River at Palisade, October 1894 to October 1896 and October 1965 to September 1972.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,743.49 ft above sea level. October 1894 to October 1896, nonrecording gage at railroad bridge 0.4 mi downstream at different datum; June 1950 to Feb. 7, 1977, recording gage at site 2,000 ft upstream at datum 4.0 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000).

COOPERATION.--Records provided by Nebraska Department of Water Resources and reviewed by the Geological Survey.

CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	24	26	26	28	e28	28	22	20	172	127	22
2	18	24	27	25	28	e29	27	21	20	175	125	21
3	18	25	26	25	28	31	28	21	21	163	120	20
4	17	25	e25	e24	27	28	28	20	21	143	105	19
5	17	25	e24	e25	27	e27	28	20	22	145	100	18
6	17	25	e24	e27	27	28	28	20	23	139	109	17
7	16	25	e24	e29	e26	e27	28	20	21	135	102	17
8	16	25	e23	e30	27	e26	28	21	22	136	93	17
9	17	25	e24	e32	27	e26	27	25	22	138	91	17
10	18	25	e25	e30	28	e27	27	27	21	121	188	17
11	17	25	e24	e24	28	e27	26	26	20	103	128	16
12	21	25	e23	e23	26	e28	26	24	18	98	351	15
13	22	e24	e24	e23	26	e29	26	23	16	96	195	15
14	21	e23	e25	e24	26	30	26	23	15	101	150	15
15	20	e22	e27	e25	26	29	26	22	16	126	138	20
16	20	e22	29	e26	27	29	27	21	16	134	137	18
17	20	e23	28	e26	28	29	26	20	15	135	147	17
18	19	e25	27	e26	27	29	26	20	14	135	146	16
19	19	e28	26	e25	26	28	26	20	13	132	103	16
20	19	e29	25	e24	26	28	26	19	13	134	64	15
21	19	28	25	e23	26	27	25	19	17	143	52	15
22	19	27	25	e23	26	26	25	20	50	154	44	17
23	19	28	e24	e23	26	26	24	22	103	154	40	18
24	20	26	e25	e24	26	26	24	21	159	158	37	18
25	e18	26	e25	e26	27	26	25	21	123	160	33	17
26	e17	26	e24	e28	28	27	22	20	129	158	31	17
27	e17	26	e23	29	e27	27	22	20	157	145	28	16
28	e18	26	e24	30	e27	28	23	20	159	141	26	16
29	e19	26	e25	29	---	28	23	19	165	137	25	15
30	20	25	e26	29	---	27	22	19	167	132	24	15
31	22	---	27	29	---	28	---	18	---	142	23	---
TOTAL	578	758	779	812	752	859	773	654	1598	4285	3082	512
MEAN	18.6	25.3	25.1	26.2	26.9	27.7	25.8	21.1	53.3	138	99.4	17.1
MAX	22	29	29	32	28	31	28	27	167	175	351	22
MIN	16	22	23	23	26	26	22	18	13	96	23	15
AC-FT	1150	1500	1550	1610	1490	1700	1530	1300	3170	8500	6110	1020

e Estimated

KANSAS RIVER BASIN

283

06834000 FRENCHMAN CREEK AT PALISADE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.3	35.8	35.8	37.7	43.2	48.4	47.8	53.9	72.6	186	174	70.3
MAX	120	88.9	97.4	102	147	247	198	151	270	340	367	232
(WY)	1963	1959	1959	1953	1952	1960	1960	1957	1967	1968	1962	1962
MIN	16.5	23.1	21.6	19.3	23.9	26.7	21.6	20.4	19.5	67.0	38.5	8.32
(WY)	1991	1990	1990	1979	1993	1991	1972	1992	1992	1951	1990	1990

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

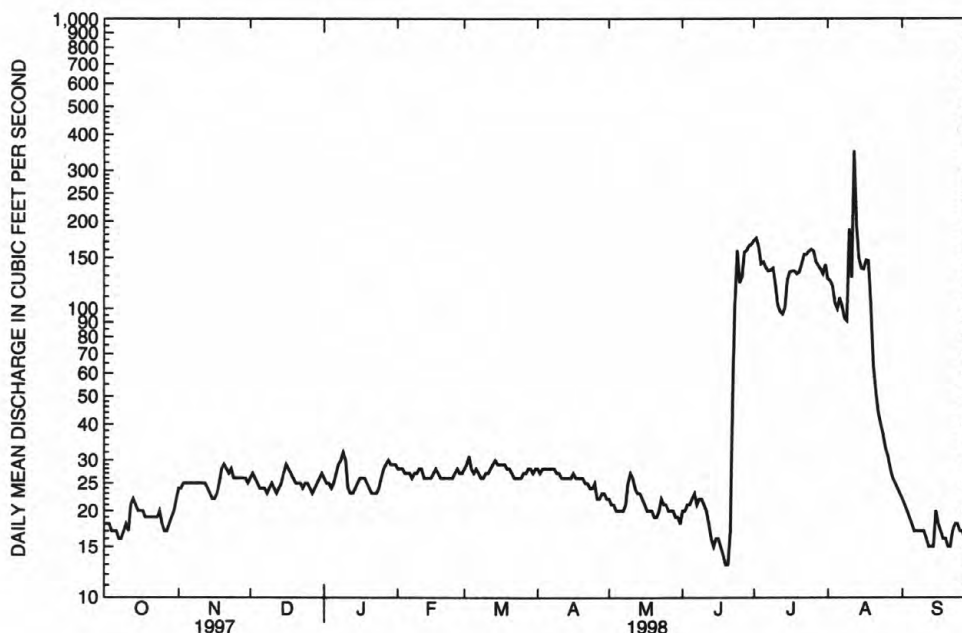
FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

(SINCE STORAGE IN ENDERS RESERVOIR)

ANNUAL TOTAL	16604	15442	
ANNUAL MEAN	45.5	42.3	71.1
HIGHEST ANNUAL MEAN			115
LOWEST ANNUAL MEAN			37.9
HIGHEST DAILY MEAN	223	Aug 1	351
LOWEST DAILY MEAN	16	Oct 7	13
ANNUAL SEVEN-DAY MINIMUM	17	Oct 3	15
INSTANTANEOUS PEAK FLOW			533
INSTANTANEOUS PEAK STAGE			7.10
ANNUAL RUNOFF (AC-FT)	32930	30630	51510
10 PERCENT EXCEEDS	127	133	166
50 PERCENT EXCEEDS	29	26	39
90 PERCENT EXCEEDS	20	17	23

* Site and datum then in use.



FRENCHMAN CREEK AT PALISADE

KANSAS RIVER BASIN

06835500 FRENCHMAN CREEK AT CULBERTSON, NE

LOCATION.--Lat 40°14'05", long 100°52'40", in SW¹/₄ SE¹/₄ sec. 12, T. 3 N., R. 32 W., Hitchcock County, Hydrologic Unit 10250005, on right bank 8 ft upstream from bridge on U.S. Highways 6 and 34, 2 mi west of Culbertson, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--2,990 mi², of which about 1,590 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Published as Frenchman River at Culbertson October 1965 to September 1972. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1931, 1933, 1934(M), 1938(M). WDR NE-84-1: 1979, 1982(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft above sea level. See WSP 1919 for history of changes prior to Nov. 2, 1950.

REMARKS.--Records good except for estimated periods, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000). Principal diversion is by Culbertson Canal, 20,800 acres.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	50	58	61	65	66	67	23	16	13	8.3	16
2	26	50	58	62	64	64	66	23	16	13	7.1	14
3	25	48	57	62	64	67	65	23	16	11	6.9	13
4	30	49	56	60	65	68	64	23	17	9.7	6.3	12
5	27	49	53	62	65	67	64	22	17	8.6	4.9	10
6	24	50	51	61	64	69	51	22	17	8.8	4.6	10
7	25	50	53	60	65	69	49	22	16	8.3	4.5	9.5
8	25	50	59	57	65	67	41	21	17	6.6	4.7	8.0
9	25	50	60	55	66	65	34	23	17	5.8	4.3	6.8
10	26	50	58	50	69	65	33	22	17	8.0	4.2	7.1
11	32	50	57	47	69	67	35	25	17	8.4	4.3	7.2
12	35	51	54	52	70	63	40	27	16	5.1	2.6	9.2
13	33	52	53	53	70	72	37	26	11	4.5	132	8.4
14	32	50	59	52	69	71	31	25	7.8	4.2	46	7.3
15	37	42	59	57	69	69	29	29	7.5	3.9	26	6.9
16	38	42	59	61	70	69	27	22	7.1	3.9	19	8.5
17	35	47	58	63	70	69	27	22	7.0	3.4	16	13
18	42	55	59	65	71	69	26	21	6.5	3.2	15	16
19	41	55	59	65	71	69	26	20	6.4	2.8	14	20
20	35	55	59	64	70	68	26	20	6.0	2.3	10	18
21	37	55	59	63	71	68	26	20	5.6	2.4	7.9	14
22	38	54	59	63	70	68	28	19	5.4	14	7.0	15
23	40	54	58	63	70	67	28	20	8.2	71	6.3	18
24	42	54	59	62	70	67	26	20	25	84	13	19
25	50	55	60	62	70	67	27	21	38	88	45	20
26	38	55	59	63	68	67	26	19	14	38	20	24
27	37	56	58	62	66	68	25	20	14	25	21	22
28	60	56	58	63	66	68	24	16	15	12	24	18
29	52	59	60	63	---	70	23	14	14	8.6	20	18
30	52	58	62	64	---	71	23	17	13	8.8	18	19
31	51	---	61	64	---	69	---	16	---	7.1	17	---
TOTAL	1115	1551	1792	1861	1902	2103	1094	663	410.5	493.4	602.0	407.9
MEAN	36.0	51.7	57.8	60.0	67.9	67.8	36.5	21.4	13.7	15.9	19.4	13.6
MAX	60	59	62	65	71	72	67	29	38	88	132	24
MIN	24	42	51	47	64	63	23	14	5.4	2.3	4.2	6.8
AC-FT	2210	3080	3550	3690	3770	4170	2170	1320	814	979	1190	809

KANSAS RIVER BASIN

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06835500 FRENCHMAN CREEK AT CULBERTSON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.8	83.3	82.1	82.5	101	114	81.0	67.5	80.3	50.7	38.8	58.1
MAX	172	146	162	182	210	543	290	222	351	269	258	245
(WY)	1963	1963	1959	1953	1952	1960	1960	1952	1967	1962	1962	1951
MIN	27.7	46.8	49.2	42.9	57.1	62.0	31.2	18.0	13.7	2.90	2.25	1.70
(WY)	1991	1991	1984	1996	1996	1996	1972	1986	1998	1990	1986	1990

SUMMARY STATISTICS

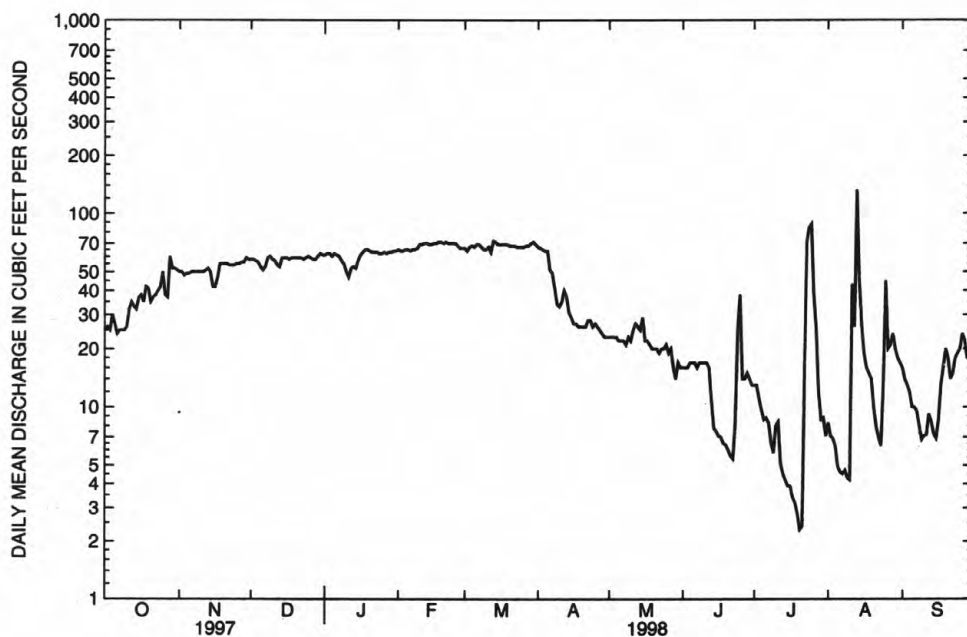
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1951 - 1998 (SINCE STORAGE IN ENDERS RESERVOIR)

ANNUAL TOTAL	15120.8	13994.8	
ANNUAL MEAN	41.4	38.3	75.8
HIGHEST ANNUAL MEAN			165
LOWEST ANNUAL MEAN			35.7
HIGHEST DAILY MEAN	233	Aug 3	132
LOWEST DAILY MEAN	1.5	Jul 24	2.3
ANNUAL SEVEN-DAY MINIMUM	2.4	Jul 19	3.1
INSTANTANEOUS PEAK FLOW			196
INSTANTANEOUS PEAK STAGE			4.69
ANNUAL RUNOFF (AC-FT)	29990	27760	54930
10 PERCENT EXCEEDS	70	68	131
50 PERCENT EXCEEDS	40	37	65
90 PERCENT EXCEEDS	11	7.4	18

* From floodmark.



FRENCHMAN CREEK AT CULBERTSON

KANSAS RIVER BASIN

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°08'45", long 100°40'22", in SW¹/₄ SE¹/₄ sec.11, T.2 N., R.30 W., Red Willow County, Hydrologic Unit 10250004, on right bank downstream from county road bridge, 5.8 mi upstream from mouth, and 3.5 mi southwest of McCook.

DRAINAGE AREA.--361 mi², of which about 351 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1946 to current year.

REVISED RECORDS.--WSP 1210: 1950. WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,502.78 ft above sea level. Prior to Oct. 12, 1962, at site 1.5 mi downstream in old channel at datum 9.00 ft lower, Oct. 12, 1962, to Apr. 11, 1963, at site 1.8 mi downstream at datum 12.75 ft lower, Apr. 12, 1963 to Apr. 22, 1982 at site 1.3 mi downstream at datum 9.00 ft lower, and Apr. 22, 1982 to May 29, 1992, at site 3.2 mi downstream at datum 17.55 ft lower.

REMARKS.--Records good except for estimated periods, which are fair. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	10	7.1	5.8	4.9	5.2	5.4	5.7	4.2	5.3	9.8	8.4
2	3.1	9.5	7.0	5.7	4.9	5.0	5.4	5.7	4.0	5.9	9.3	11
3	3.1	9.2	6.9	5.6	4.8	5.2	5.7	5.7	3.9	7.0	7.1	13
4	3.0	9.1	6.8	5.5	4.7	5.3	5.8	5.5	4.0	14	7.2	12
5	3.1	8.8	6.5	5.6	4.7	5.1	5.8	5.4	4.2	9.1	7.3	7.5
6	3.3	8.5	6.3	5.6	4.7	5.1	5.9	5.4	4.3	9.1	7.8	5.1
7	3.1	8.5	6.8	5.5	4.5	5.2	6.0	5.5	4.4	9.8	7.6	4.2
8	3.6	8.2	6.8	5.4	4.5	5.0	6.1	5.3	4.5	11	6.8	4.0
9	3.9	8.0	6.8	5.5	4.7	e4.8	6.0	5.9	4.5	10	7.1	3.8
10	4.2	7.8	6.7	5.1	6.1	e4.8	5.9	6.3	12	29	8.0	3.7
11	4.5	7.9	6.5	5.3	5.8	e4.5	6.0	6.0	15	8.4	6.6	3.6
12	9.7	7.7	6.6	5.3	5.2	e4.2	5.9	5.7	4.1	6.1	15	3.6
13	8.7	7.7	6.5	5.2	4.9	e4.5	5.9	5.6	6.1	5.1	9.1	3.4
14	6.1	7.6	6.5	5.4	4.7	e4.7	5.9	5.5	5.8	5.5	8.0	3.9
15	5.5	7.2	6.5	5.3	4.8	4.9	5.8	5.3	7.8	6.2	7.4	3.8
16	5.6	7.4	6.6	5.4	4.8	4.9	5.6	5.4	6.3	5.9	7.1	3.6
17	5.5	7.7	6.5	5.3	4.8	5.1	6.3	5.2	10	6.9	5.5	3.5
18	5.7	7.6	6.2	5.7	4.6	5.3	6.1	5.1	9.4	8.4	6.2	3.4
19	5.8	7.3	5.9	5.0	4.5	5.2	6.0	4.9	7.3	8.9	7.6	3.3
20	5.8	7.3	5.7	5.0	4.4	5.1	5.6	4.9	7.6	7.1	7.1	3.2
21	5.9	7.1	5.7	5.2	4.4	5.1	5.5	4.8	5.8	7.3	7.5	3.2
22	5.9	6.9	5.8	5.1	4.3	5.1	5.6	4.8	4.6	8.5	8.3	3.2
23	6.0	6.7	5.7	5.0	4.2	5.1	5.7	5.3	4.7	8.6	8.3	3.3
24	9.0	6.5	5.7	4.9	4.1	5.4	5.7	5.3	6.6	16	7.5	3.3
25	14	6.5	5.8	5.1	4.7	5.4	6.5	12	6.3	13	6.4	3.3
26	9.5	6.3	5.8	5.0	5.1	5.3	5.8	9.9	5.5	14	8.8	3.1
27	9.2	6.4	5.6	4.9	5.4	5.2	5.6	6.7	4.4	15	11	3.0
28	9.3	6.5	5.6	4.9	5.3	5.3	5.7	5.5	4.3	9.3	11	3.0
29	9.9	7.5	5.7	4.9	---	5.5	5.7	5.0	4.4	10	8.5	3.1
30	11	7.8	5.8	4.8	---	5.3	5.7	4.8	5.2	17	7.9	3.0
31	11	---	5.8	4.8	---	5.2	---	4.5	---	14	6.9	---
TOTAL	197.1	231.2	194.2	162.8	134.5	157.0	174.6	178.6	181.2	311.4	249.7	139.5
MEAN	6.36	7.71	6.26	5.25	4.80	5.06	5.82	5.76	6.04	10.0	8.05	4.65
MAX	14	10	7.1	5.8	6.1	5.5	6.5	12	15	29	15	13
MIN	3.0	6.3	5.6	4.8	4.1	4.2	5.4	4.5	3.9	5.1	5.5	3.0
AC-FT	391	459	385	323	267	311	346	354	359	618	495	277

e Estimated

KANSAS RIVER BASIN

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06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.26	3.67	3.58	3.54	5.79	8.00	4.28	9.84	18.2	20.5	16.9	13.8
MAX	137	7.71	7.44	7.96	31.4	209	13.3	112	85.8	100	156	302
(WY)	1947	1998	1974	1974	1960	1960	1977	1957	1947	1956	1950	1951
MIN	.071	.083	.077	.052	.048	.039	.20	.19	.23	.052	.055	.040
(WY)	1956	1956	1955	1955	1956	1956	1948	1956	1954	1955	1946	1953

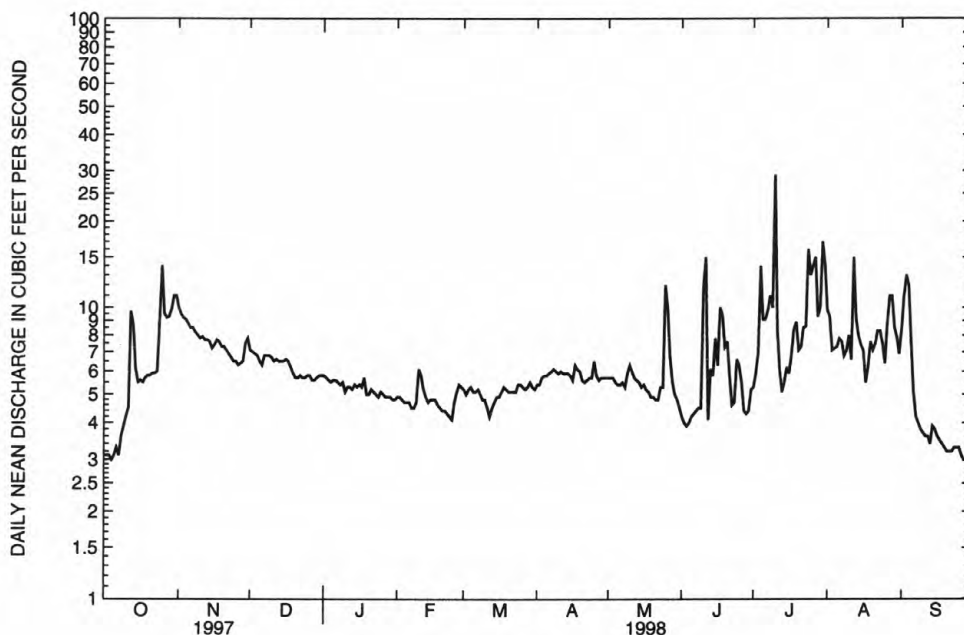
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1946 - 1998

ANNUAL TOTAL	2294.4	2311.8	
ANNUAL MEAN	6.29	6.33	9.65
MEDIAN OF ANNUAL MEANS			7.84
HIGHEST ANNUAL MEAN			35.0
LOWEST ANNUAL MEAN			1.12
HIGHEST DAILY MEAN	28 Jun 4	29 Jul 10	3950 Aug 7 1950
LOWEST DAILY MEAN	3.0 Oct 4	3.0 Oct 4	.00 Apr 25 1946
ANNUAL SEVEN-DAY MINIMUM	3.1 Oct 1	3.1 Oct 1	.00 Jun 12 1946
INSTANTANEOUS PEAK FLOW		44 Jul 10	4740 Aug 7 1950
INSTANTANEOUS PEAK STAGE		4.71 Jul 10	25.43 Aug 7 1950
ANNUAL RUNOFF (AC-FT)	4550	4590	6990
10 PERCENT EXCEEDS	8.3	9.2	11
50 PERCENT EXCEEDS	6.0	5.7	4.8
90 PERCENT EXCEEDS	4.1	4.1	.20



DRIFTWOOD CREEK NEAR MCCOOK

KANSAS RIVER BASIN

06837000 REPUBLICAN RIVER AT MCCOOK, NE

LOCATION.--Lat 40°11'15", long 100°37'05", in SW¹/₄ NE¹/₄ sec.32, T.3 N., R.29 W., Red Willow County, Hydrologic Unit 10250004, on left bank at downstream side of bridge on U.S. Highway 83 at south edge of McCook, 2.5 mi downstream from Driftwood Creek, 10.5 mi upstream from Red Willow Creek, and at mile 348.

DRAINAGE AREA.--12,240 mi², of which about 6,220 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to June 1932, October 1954 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,456.37 ft above sea level. October 1930 to June 1932, nonrecording gage on former highway bridge 300 ft upstream at different datum, and October 1954 to Mar. 13, 1959, on highway bridge 25 ft upstream at present datum. Mar. 13, 1959 to Mar. 29, 1988 at present site and datum. Mar. 29, 1988 to Oct. 31, 1989, 200 ft downstream at present datum.

REMARKS.--Records good except for periods of estimated record, which are fair. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir, Enders Reservoir (station 06832000), and Swanson Lake (station 06829000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	99	93	101	102	92	88	42	28	120	74	63
2	38	94	89	103	101	90	84	42	27	107	77	62
3	35	89	83	100	98	89	87	41	24	92	70	63
4	34	86	81	100	100	94	80	45	24	98	63	55
5	39	84	76	95	99	96	84	45	26	100	61	38
6	39	82	70	99	101	97	82	46	28	94	58	29
7	34	82	77	95	102	102	75	47	31	103	59	24
8	37	80	82	88	103	99	68	42	30	113	69	21
9	38	80	85	84	106	94	60	50	36	116	88	18
10	41	79	83	74	123	e90	57	52	115	161	94	15
11	42	80	84	79	118	e84	56	53	162	120	109	13
12	98	81	78	86	113	e80	61	55	130	75	203	13
13	78	82	83	86	111	e74	61	54	99	60	176	14
14	61	79	88	98	109	e80	56	52	79	53	181	16
15	59	71	90	e100	109	e90	48	49	77	55	120	16
16	59	72	90	e104	109	e100	46	47	76	54	107	16
17	59	80	89	e106	110	110	43	44	82	74	108	17
18	58	90	89	e100	109	113	41	42	114	97	103	18
19	59	97	88	e94	106	113	41	40	151	136	100	17
20	60	96	87	e92	108	115	39	40	154	144	99	19
21	56	97	89	e88	106	116	40	39	138	142	101	18
22	60	94	90	e86	105	116	42	38	136	148	98	16
23	63	93	92	e90	107	106	47	41	153	185	96	17
24	91	92	91	e94	104	97	51	39	149	236	91	22
25	107	92	95	e96	105	100	57	42	188	218	125	25
26	121	91	91	99	99	105	51	45	165	203	138	24
27	89	91	87	100	95	101	46	41	150	174	111	24
28	99	91	91	100	95	93	40	39	148	121	91	24
29	110	105	93	100	---	99	41	33	145	95	78	21
30	108	98	100	100	---	91	42	31	136	97	70	22
31	104	---	101	102	---	84	---	29	---	93	65	---
TOTAL	2013	2627	2705	2939	2953	3010	1714	1345	3001	3684	3083	760
MEAN	64.9	87.6	87.3	94.8	105	97.1	57.1	43.4	100	119	99.5	25.3
MAX	121	105	101	106	123	116	88	55	188	236	203	63
MIN	34	71	70	74	95	74	39	29	24	53	58	13
AC-FT	3990	5210	5370	5830	5860	5970	3400	2670	5950	7310	6120	1510

e Estimated

KANSAS RIVER BASIN

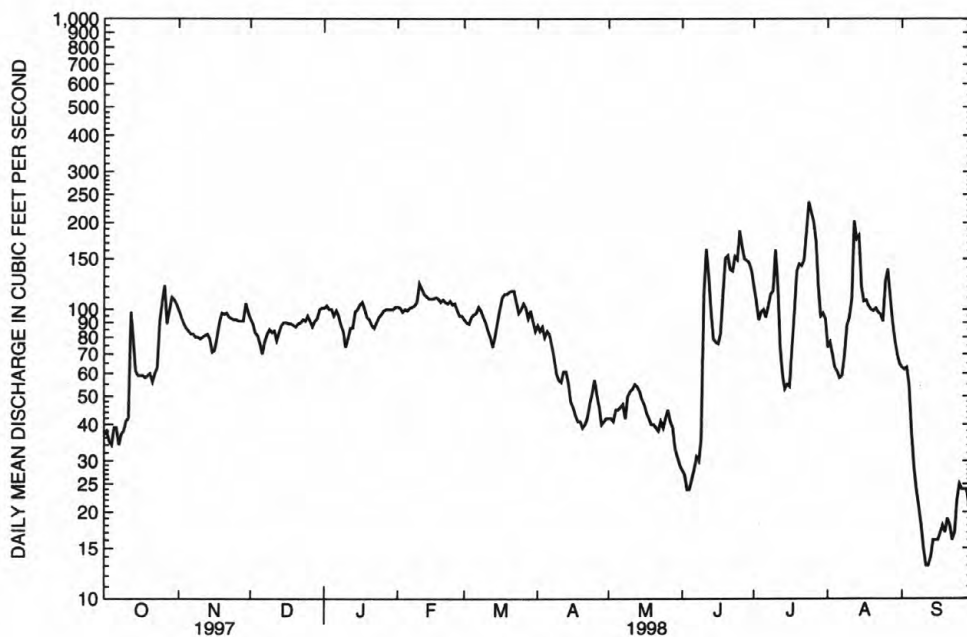
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06837000 REPUBLICAN RIVER AT MCCOOK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	101	113	110	113	152	182	165	178	194	219	177	101
MAX	466	341	321	269	398	901	577	1022	1070	1142	970	286
(WY)	1966	1966	1959	1959	1958	1960	1958	1957	1962	1962	1962	1962
MIN	30.0	62.4	51.7	59.7	75.3	77.3	57.1	22.6	39.8	104	66.1	6.03
(WY)	1992	1991	1996	1979	1995	1996	1998	1956	1992	1980	1978	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1955 - 1998	
ANNUAL TOTAL	34158		29834			
ANNUAL MEAN	93.6		81.7		151	
HIGHEST ANNUAL MEAN					383	
LOWEST ANNUAL MEAN					70.1	
HIGHEST DAILY MEAN	294	Aug 3	236	Jul 24	5020	Mar 21 1960
LOWEST DAILY MEAN	34	Oct 4	13	Sep 11	.99	Sep 9 1991
ANNUAL SEVEN-DAY MINIMUM	37	Oct 1	15	Sep 10	1.3	Sep 3 1991
INSTANTANEOUS PEAK FLOW			245	Jul 24	5890	Mar 21 1960
INSTANTANEOUS PEAK STAGE			4.58	Jul 24	9.14	Mar 21 1960
ANNUAL RUNOFF (AC-FT)	67750		59180		109100	
10 PERCENT EXCEEDS	144		117		267	
50 PERCENT EXCEEDS	93		88		110	
90 PERCENT EXCEEDS	46		34		58	



REPUBLICAN RIVER AT MCCOOK

KANSAS RIVER BASIN

06838000 RED WILLOW CREEK NEAR RED WILLOW, NE

LOCATION.--Lat 40°14'10", long 100°30'00", in NE¹/₄ NE¹/₄ sec.17, T.3 N., R.28 W., Red Willow County, Hydrologic Unit 10250007, on left bank near downstream side of bridge on U.S. Highways 6 and 34, 0.8 mi north of Red Willow and 2.1 mi upstream from mouth.

DRAINAGE AREA.--820 mi², of which about 405 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1510: 1945(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,398.64 ft above sea level. Prior to May 26, 1945, nonrecording gage at bridge 1.2 mi upstream at datum 11.16 ft higher; May 26, 1945, to Aug. 2, 1974, water-stage recorder at left downstream side of bridge, present datum; Aug. 3, 1974, to June 27, 1980, on right bank at downstream side of bridge, present datum; and June 28, 1980 to May 19, 1992, at left downstream side of bridge, present datum.

REMARKS.--Records good except for periods of estimated record and discharges under 1.0 ft³/s, which are poor. Natural flow affected by irrigation development above station, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390), and since June 1963 by Red Willow Canal which diverts 4.5 mi above station for irrigation of about 4,150 acres.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	8.0	9.7	10	9.4	8.9	8.9	11	8.0	5.5	8.5	1.5
2	7.1	7.6	9.9	10	9.3	e9.2	8.6	11	7.8	.80	9.1	5.3
3	6.2	7.2	9.7	10	9.3	9.5	8.7	11	7.6	4.1	8.9	9.0
4	6.0	7.8	9.8	12	9.3	9.7	8.8	10	8.5	6.3	8.2	19
5	6.2	7.4	e9.8	9.7	9.6	9.6	9.0	10	8.9	6.5	8.4	11
6	6.3	7.4	e8.6	9.7	9.4	9.7	8.9	10	9.2	7.1	8.4	9.9
7	6.2	7.4	e8.8	e9.2	9.6	9.7	8.9	10	9.3	.67	6.3	9.6
8	6.1	7.6	e9.6	e8.4	9.6	e9.0	8.9	10	9.3	8.1	2.3	10
9	5.8	7.6	e9.0	e7.0	9.2	e8.4	8.8	12	6.3	9.7	1.8	10
10	6.4	7.4	e9.0	5.8	10	e7.6	8.9	12	.60	20	5.2	11
11	6.8	7.4	e8.6	e7.6	9.4	e6.6	9.1	12	7.0	14	16	9.1
12	21	7.4	e9.0	e8.0	9.3	e5.6	9.0	11	7.9	11	31	6.7
13	11	7.6	e9.4	8.3	9.4	e7.4	9.1	10	7.9	10	30	6.4
14	6.6	7.9	10	9.2	9.4	e8.6	9.5	9.1	7.5	3.4	14	6.4
15	6.4	e7.4	9.9	13	9.3	9.4	9.7	9.2	18	.75	3.4	6.4
16	6.2	e6.6	9.8	11	9.7	9.0	9.3	9.0	.35	4.4	1.1	6.4
17	6.5	e6.6	9.8	11	9.6	9.2	9.3	8.8	.19	7.2	5.4	6.3
18	6.9	e7.0	9.9	13	9.5	9.3	9.5	9.2	.17	16	4.1	6.0
19	5.8	e7.4	10	11	9.1	8.9	9.7	9.4	.16	20	.53	6.2
20	5.7	7.9	10	9.5	9.4	9.2	9.3	8.7	.14	17	4.5	6.2
21	6.0	7.7	10	9.2	9.5	9.3	9.5	8.7	.11	6.9	5.0	6.1
22	5.9	7.8	10	8.9	9.5	9.0	9.5	9.7	1.7	28	1.8	6.7
23	6.2	8.0	9.7	9.1	9.5	9.1	9.8	9.3	1.7	20	1.4	7.0
24	11	8.0	9.7	9.1	9.4	9.2	9.8	9.0	.86	30	4.5	7.5
25	11	8.3	10	8.9	9.2	8.9	10	8.9	8.6	18	5.6	6.7
26	7.6	8.6	e9.4	9.1	8.9	9.4	10	9.0	18	13	8.1	6.7
27	e7.0	9.0	e9.4	9.3	9.3	9.7	9.8	8.7	8.9	18	7.6	7.0
28	e6.4	9.9	10	9.3	9.0	9.3	9.9	9.1	6.6	9.9	9.1	7.1
29	e7.0	11	9.9	9.3	---	9.2	10	8.3	10	5.9	5.2	7.5
30	e7.4	10	10	9.4	---	8.4	10	8.4	12	7.0	3.4	7.2
31	7.7	---	9.7	9.3	---	8.7	---	8.1	---	9.1	2.9	---
TOTAL	228.4	236.9	298.1	294.3	263.1	274.7	280.2	300.6	193.28	338.32	231.73	231.9
MEAN	7.37	7.90	9.62	9.49	9.40	8.86	9.34	9.70	6.44	10.9	7.48	7.73
MAX	21	11	10	13	10	9.7	10	12	18	30	31	19
MIN	5.7	6.6	8.6	5.8	8.9	5.6	8.6	8.1	.11	.67	.53	1.5
AC-FT	453	470	591	584	522	545	556	596	383	671	460	460

e Estimated

KANSAS RIVER BASIN

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06838000 RED WILLOW CREEK NEAR RED WILLOW, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.71	8.61	8.89	9.81	11.2	11.7	11.6	12.3	21.5	21.1	21.5	10.9
MAX	18.8	13.6	12.1	21.1	32.9	35.5	41.5	36.6	124	59.9	92.4	29.0
(WY)	1970	1997	1966	1962	1968	1994	1970	1973	1967	1967	1978	1978
MIN	3.84	4.98	5.95	5.46	7.15	7.28	4.98	2.87	4.56	7.44	4.02	3.22
(WY)	1978	1978	1984	1979	1962	1996	1978	1978	1992	1992	1963	1991

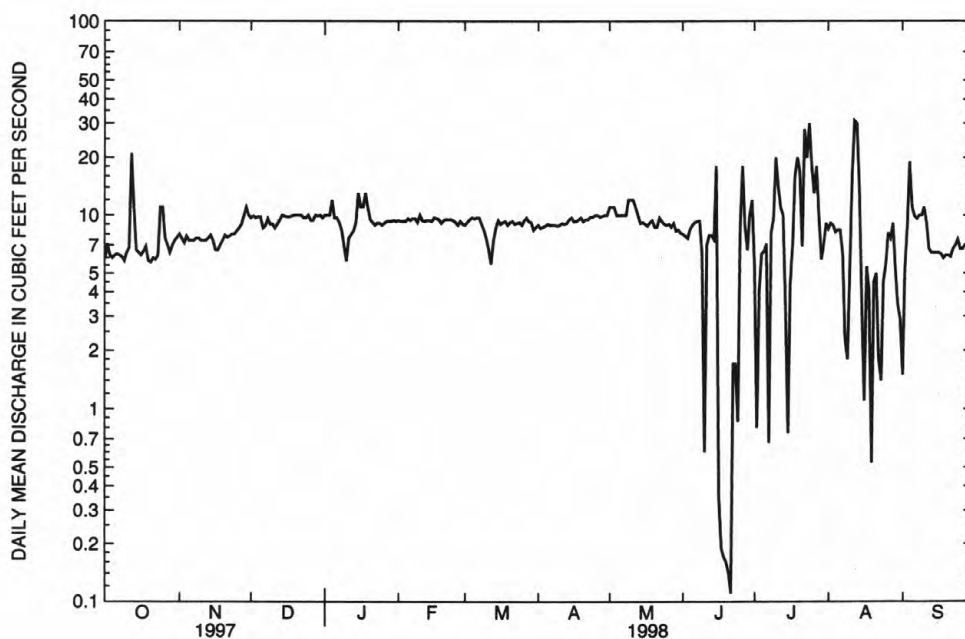
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1962 - 1998 (SINCE STORAGE IN HUGH BUTLER LAKE)

ANNUAL TOTAL	3753.4	3171.53	
ANNUAL MEAN	10.3	8.69	13.2
HIGHEST ANNUAL MEAN			25.5
LOWEST ANNUAL MEAN			7.90
HIGHEST DAILY MEAN	77 Jun 26	31 Aug 12	668 Jul 18 1962
LOWEST DAILY MEAN	1.5 Jun 12	.11 Jun 21	.00 Sep 2 1995
ANNUAL SEVEN-DAY MINIMUM	5.8 Jun 12	.40 Jun 16	.40 Jun 16 1998
INSTANTANEOUS PEAK FLOW		64 Jun 15	30000 Jun 22 1947
INSTANTANEOUS PEAK STAGE		5.29 Jun 15	18.36 Jun 22 1947
ANNUAL RUNOFF (AC-FT)	7440	6290	9540
10 PERCENT EXCEEDS	14	11	21
50 PERCENT EXCEEDS	9.5	9.0	9.4
90 PERCENT EXCEEDS	6.4	5.6	5.8



RED WILLOW CREEK NEAR RED WILLOW

KANSAS RIVER BASIN

06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE

LOCATION.--Lat 40°17'05", long 100°08'35", in NW¹/₄ SE¹/₄ sec. 28, T. 4 N., R. 25 W., Furnas County, Hydrologic Unit 10250004, on left bank 400 ft south of U.S. Highways 6 and 34, 0.5 mi downstream from Medicine Creek, 1 mi east of Cambridge, 1.3 mi upstream from Cambridge diversion dam, and at mile 315.

DRAINAGE AREA.--14,460 mi², of which about 7,780 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WDR NE-84-1: 1983(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft above sea level. Prior to July 13, 1948, nonrecording gage at site 150 ft upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station and since 1949 by regulation from upstream reservoirs.

COOPERATION.--Records provided by Nebraska Department of Water Resources and reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	132	133	132	142	124	193	78	125	290	146	156
2	42	129	133	130	138	125	190	76	110	279	145	144
3	42	128	135	131	135	122	191	76	83	258	138	e130
4	40	129	134	130	132	121	190	77	84	249	131	e50
5	40	129	139	131	134	122	190	76	83	251	125	e14
6	41	129	e135	131	135	122	191	75	66	234	124	e12
7	41	135	e135	132	136	126	202	77	62	248	115	e11
8	44	121	e135	132	137	e120	188	76	64	248	109	e10
9	45	118	137	135	142	e116	182	83	62	224	102	e10
10	45	118	135	134	162	e116	176	87	106	212	186	e10
11	46	120	131	e130	162	e118	170	88	127	178	244	e10
12	75	123	128	e125	150	e122	164	86	149	150	265	e10
13	109	122	126	e125	145	129	161	86	152	119	303	e10
14	86	124	129	e125	141	136	162	85	141	104	292	e10
15	78	e122	126	e130	139	140	159	87	135	102	300	e11
16	74	e122	128	e135	139	143	153	88	145	161	266	e11
17	74	125	126	e135	142	145	151	83	169	238	322	e11
18	75	120	123	e135	139	148	149	80	173	267	323	e11
19	72	121	119	e130	136	148	149	77	208	266	309	e11
20	71	121	124	e130	135	147	146	75	237	366	303	e11
21	71	120	131	e130	135	170	141	74	243	369	299	e11
22	71	120	133	e130	137	176	133	78	261	363	261	e11
23	74	121	132	e130	137	174	100	90	284	367	250	14
24	87	122	131	e130	137	175	93	96	296	319	246	15
25	125	125	132	e130	136	177	90	99	302	298	240	16
26	131	127	128	e135	134	189	91	100	316	306	231	16
27	128	127	130	e140	129	190	92	120	305	261	224	16
28	121	126	132	e145	127	190	92	123	289	206	202	17
29	129	137	131	150	---	192	91	143	291	164	203	19
30	138	141	134	147	---	191	86	138	309	171	194	20
31	137	---	134	145	---	192	---	132	---	165	180	---
TOTAL	2393	3754	4059	4130	3893	4606	4466	2809	5377	7433	6778	808
MEAN	77.2	125	131	133	139	149	149	90.6	179	240	219	26.9
MAX	138	141	139	150	162	192	202	143	316	369	323	156
MIN	40	118	119	125	127	116	86	74	62	102	102	10
AC-FT	4750	7450	8050	8190	7720	9140	8860	5570	10670	14740	13440	1600

e Estimated

KANSAS RIVER BASIN

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06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	157	152	159	244	301	266	313	355	372	300	161
MAX	515	425	389	384	579	1684	756	1624	1743	1613	1202	1935
(WY)	1966	1966	1966	1959	1966	1960	1958	1957	1962	1962	1962	1951
MIN	11.4	64.3	71.1	44.4	103	111	91.3	48.0	60.7	160	98.9	5.59
(WY)	1992	1991	1996	1979	1996	1991	1992	1992	1992	1952	1952	1990

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

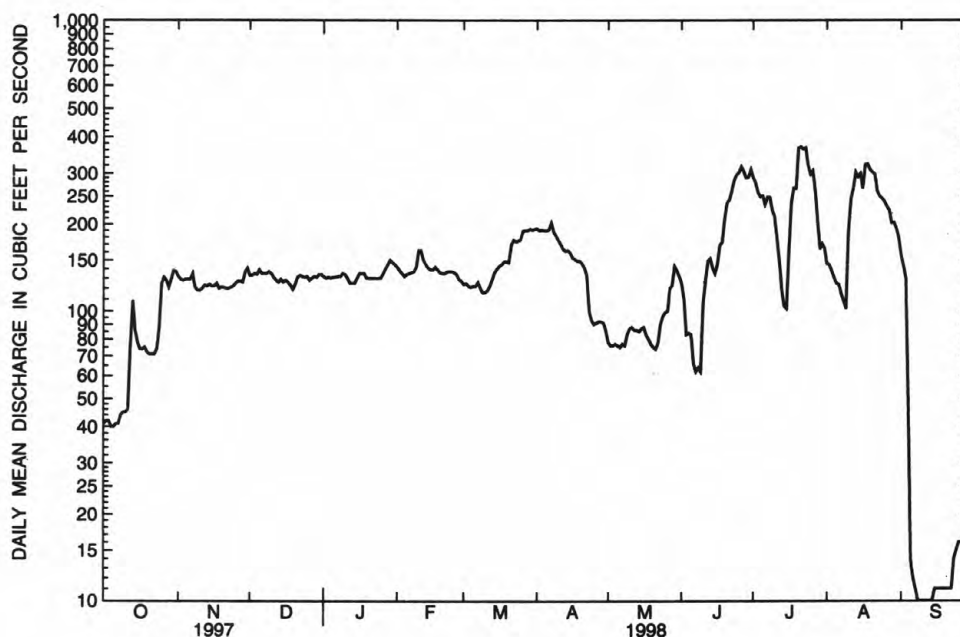
FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

(SINCE STORAGE IN HARRY STRUNK LAKE)

ANNUAL TOTAL	59299	50506	
ANNUAL MEAN	162	138	242
HIGHEST ANNUAL MEAN			686
LOWEST ANNUAL MEAN			110
HIGHEST DAILY MEAN	422 Jun 27	369 Jul 21	8610 Mar 22 1960
LOWEST DAILY MEAN	27 Sep 14	10 Sep 8	.07 Sep 27 1978
ANNUAL SEVEN-DAY MINIMUM	35 Sep 9	10 Sep 8	.11 Sep 21 1978
INSTANTANEOUS PEAK FLOW		392 Jul 20	160000 Jun 22 1947
INSTANTANEOUS PEAK STAGE		4.35 Jul 20	*16.70 Jun 22 1947
ANNUAL RUNOFF (AC-FT)	117600 100200	175300	
10 PERCENT EXCEEDS	276 248	417	
50 PERCENT EXCEEDS	139 131	170	
90 PERCENT EXCEEDS	71 46	76	

* From floodmark.



REPUBLICAN RIVER AT CAMBRIDGE

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE

LOCATION.--Lat 40°07'53", long 99°30'08", in NE¹/₄ NE¹/₄ sec.19, T.2 N., R.19 W., Harlan County, Hydrologic Unit 10250009, on right bank 18 ft downstream from bridge on State Highway 89, 200 ft downstream from Burlington Northern Inc. bridge, 2 mi west of Orleans, 2.8 mi upstream from Sappa Creek, 23 mi upstream from Harlan County Dam, and at mile 262.

DRAINAGE AREA --15,580 mi², approximately, of which about 8,880 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,972.57 ft above sea level. Prior to June 2, 1948, nonrecording gage at present site and datum.

REMARKS.--Records good except for period of estimated discharge, which is poor. Natural flow affected by irrigation development above station and regulation by upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	166	177	156	e150	177	251	151	151	27	124	80
2	59	161	171	157	e150	173	248	147	141	29	133	75
3	56	151	165	156	e140	174	249	146	135	29	133	61
4	55	146	161	143	e140	176	246	140	123	28	158	56
5	56	143	149	142	e140	178	245	142	110	32	129	53
6	56	138	148	e130	e130	176	246	148	112	34	106	60
7	56	137	147	e120	e140	e160	312	149	110	36	95	57
8	56	134	143	e110	e160	e150	304	143	102	39	86	52
9	57	134	157	e100	177	e140	280	143	102	53	75	47
10	59	131	162	e90	193	e130	260	140	98	88	65	44
11	60	129	156	e92	203	e120	252	147	95	139	55	43
12	76	129	151	e86	215	e130	244	141	100	163	64	40
13	98	132	e140	e80	209	e150	236	139	102	141	70	39
14	172	130	e160	e90	202	e160	229	144	102	106	60	35
15	148	126	e130	e110	201	e180	227	143	110	78	63	33
16	118	121	e110	e130	201	197	223	162	84	63	60	31
17	102	121	e120	e140	200	204	215	141	75	46	60	30
18	96	126	e140	e140	199	214	208	135	56	42	47	31
19	94	133	149	e140	196	207	204	128	54	42	45	31
20	92	140	149	e140	192	199	203	122	53	38	38	32
21	92	137	149	e130	191	196	198	114	51	34	45	35
22	93	140	150	e120	191	204	196	103	58	41	45	37
23	93	138	148	e110	191	217	193	196	60	38	59	37
24	101	140	151	e100	189	219	185	168	53	42	58	37
25	126	138	155	e120	192	221	167	153	45	53	52	37
26	e130	138	155	e130	190	225	161	133	36	98	55	36
27	e120	141	148	e130	184	250	156	128	31	134	59	33
28	e100	145	155	e140	181	304	152	127	32	143	55	30
29	e130	178	153	e140	---	279	151	139	35	138	63	29
30	155	180	157	e140	---	258	151	148	31	148	66	28
31	163	---	152	e150	---	253	---	174	---	134	77	---
TOTAL	2927	4203	4658	3862	5047	6021	6592	4434	2447	2256	2300	1269
MEAN	94.4	140	150	125	180	194	220	143	81.6	72.8	74.2	42.3
MAX	172	180	177	157	215	304	312	196	151	163	158	80
MIN	55	121	110	80	130	120	151	103	31	27	38	28
AC-FT	5810	8340	9240	7660	10010	11940	13080	8790	4850	4470	4560	2520

e Estimated

KANSAS RIVER BASIN

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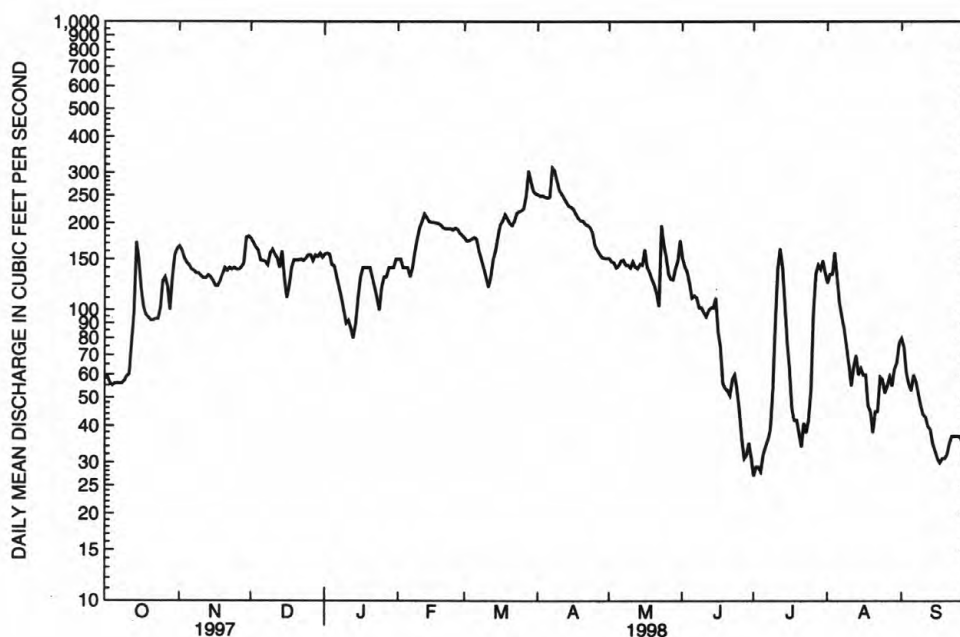
06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	132	173	172	171	297	385	334	399	482	268	182	153
MAX	840	519	438	392	772	1720	915	1528	2732	1602	1396	2026
(WY)	1966	1966	1966	1953	1949	1960	1949	1951	1948	1962	1962	1951
MIN	.000	38.5	50.4	24.2	112	144	124	54.8	56.6	10.8	3.51	.007
(WY)	1992	1979	1979	1979	1996	1991	1991	1956	1988	1991	1955	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1948 - 1998	
ANNUAL TOTAL	56076		46016			
ANNUAL MEAN	154		126		262	
HIGHEST ANNUAL MEAN					746	
LOWEST ANNUAL MEAN					78.4	
HIGHEST DAILY MEAN	425	Jun 28	312	Apr 7	18400	Jun 22 1948
LOWEST DAILY MEAN	23	Aug 1	27	Jul 1	.00	Sep 15 1952
ANNUAL SEVEN-DAY MINIMUM	27	Jul 30	30	Jun 30	.00	Sep 15 1952
INSTANTANEOUS PEAK FLOW (STAGE)			328 (3.08)	Apr 7	40600 (11.25)	Jun 22 1948
INSTANTANEOUS PEAK STAGE			*5.44	Dec 15	*12.95	Mar 8 1993
ANNUAL RUNOFF (AC-FT)	111200		91270		189700	
10 PERCENT EXCEEDS	258		202		490	
50 PERCENT EXCEEDS	151		134		165	
90 PERCENT EXCEEDS	50		41		46	

* Backwater from ice.



REPUBLICAN RIVER NEAR ORLEANS

PLATTE RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-94, October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. FT ³ /S (00061)	SPECIFIC CONDUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	BARO METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN DIS- SOLVED (MG/L) (00300)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	SODIUM DIS- SOLVED (MG/L AS NA) (00930)
FEB										
25...	1400	191	810	8.4	12.5	11.5	695	--	297	46
APR										
16	1500	223	757	8.3	12.5	13.5	710	10.8	284	46
JUN										
03...	0900	135	610	8.6	13.0	17.5	714	8.0	244	32
AUG										
27...	1300	58	492	8.7	29.5	32.0	705	11.3	207	31
SEP										
17...	1130	29	761	8.5	25.0	23.0	710	9.4	262	38

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)
FEB											
25...	96	.77	--	<.010	2.56	<.020	.091	.092	137	<10	7.6
APR											
16...	89	.73	--	<.010	1.76	.022	.074	.071	163	<10	5.7
JUN											
03...	60	.63	.460	.028	.488	.060	.053	.058	121	<10	<4.0
AUG											
27...	51	.68	--	<.010	.117	<.020	<.010	<.010	123	16	<4.0
SEP											
17...	77	.58	.520	.023	.543	.076	.074	.074	137	<10	62

KANSAS RIVER BASIN

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06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW¹/₄ NE¹/₄ sec.10, T.1 S., R.29 W., Decatur County, Hydrologic Unit 10250014, on right bank atdownstream side of bridge on U.S. Highway 83, 0.2 mi north of Cedar Bluffs, 1.0 mi south of Kansas-Nebraska State line, and at mile 107.4.

DRAINAGE AREA.--1,618 mi², of which 1324 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1510: 1947, 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft above sea level. Prior to Aug. 19, 1971, at site 0.1 mi upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi downstream at datum 5.00 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite telemeter station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

COOPERATION.--Records provided by Geological Survey, Kansas District.

PEAK DISCHARGES GREATER THAN BASE FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/sec and maximum (*):

Date	Time	Discharge (ft ³ /sec)	Gage height (ft)	Date	Time	Discharge (ft ³ /sec)	Gage height (ft)
Aug. 1	1200	*181	*6.60	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.43	.64	1.6	e3.9	3.5	6.5	6.2	4.0	.08	e152	.00
2	.00	.23	.72	1.6	5.2	e2.4	6.3	6.1	3.4	.10	e90	.00
3	.00	.18	.86	1.7	5.0	e2.9	6.9	6.1	3.0	.10	e76	.00
4	.00	.15	.82	1.7	5.6	3.9	6.2	6.1	2.8	.09	e29	.00
5	.00	.12	.77	1.6	4.0	3.5	6.5	6.1	2.6	.08	32	.00
6	.00	.11	.73	1.7	4.7	4.4	6.7	6.5	2.5	.08	44	.00
7	.00	.09	.73	1.7	4.2	4.1	12	7.1	2.4	.05	30	.00
8	.00	.09	.77	1.7	3.7	e3.4	12	7.5	2.4	.05	18	.00
9	.00	.07	.80	1.7	5.7	3.8	11	9.2	2.3	.11	11	.00
10	.00	.07	.86	1.9	5.7	e3.3	11	10	2.2	.19	8.2	.00
11	.00	.07	.90	1.9	5.0	e3.4	11	11	2.1	.17	6.3	.00
12	7.3	.07	.89	1.9	5.7	3.6	11	12	1.9	.16	6.0	.00
13	.84	.09	.89	2.1	5.0	4.4	10	13	1.6	.13	4.7	.00
14	.09	.09	.93	2.2	5.0	4.8	9.4	16	1.3	.08	4.0	.00
15	.05	.08	.97	2.1	3.9	5.3	9.3	14	1.1	.10	3.6	.00
16	.03	.08	1.0	2.2	4.1	5.5	11	14	.95	.22	4.8	.00
17	.02	.10	1.1	2.3	4.3	5.3	10	13	.86	.15	3.2	.00
18	.01	.12	1.2	2.4	4.4	5.2	7.5	12	.72	.10	2.5	.00
19	.00	.14	1.2	2.7	4.2	5.1	8.1	11	.60	.09	2.1	.00
20	.00	.14	1.2	3.0	4.2	5.3	8.5	8.3	.50	.04	2.3	.00
21	.00	.15	1.2	2.9	4.1	5.2	8.3	6.5	.36	.03	1.4	.00
22	.00	.14	1.3	2.9	4.1	5.3	8.5	5.9	.33	.03	.66	.00
23	.00	.14	1.2	2.7	4.0	5.3	8.6	5.9	.34	.03	.33	.00
24	.03	.21	1.3	2.7	4.0	5.3	8.5	5.9	.32	.05	.16	.00
25	.23	.30	1.3	2.6	4.1	5.3	8.3	6.1	.23	.04	.08	.00
26	.48	.31	1.3	2.9	3.9	5.3	7.8	5.8	.14	.12	.04	.00
27	.38	.31	1.3	3.2	3.7	5.9	6.9	5.2	.10	.13	.02	.00
28	.19	.36	1.4	3.5	3.5	6.2	6.4	4.7	.08	.11	.00	.00
29	.14	.57	1.4	3.7	---	6.2	6.2	4.9	.09	.09	.00	.00
30	.12	.60	1.5	3.8	---	6.4	6.2	5.1	.08	.15	.00	.00
31	.40	---	1.5	3.8	---	7.0	---	4.7	---	e8.8	.00	---
MEAN	.33	.19	1.05	2.40	4.46	4.73	8.55	8.25	1.38	.38	17.2	.000
MAX	7.3	.60	1.5	3.8	5.7	7.0	12	16	4.0	8.8	152	.00
MIN	.00	.07	.64	1.6	3.5	2.4	6.2	4.7	.08	.03	.00	.00
AC-FT	20	11	65	148	248	291	509	508	82	23	1060	.00

e Estimated

KANSAS RIVER BASIN

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.17	3.03	2.59	2.26	3.97	12.1	7.41	24.3	39.9	30.4	16.1	16.6
MAX	231	39.6	30.4	28.4	28.1	369	61.7	432	278	391	146	421
(WY)	1947	1966	1966	1966	1966	1960	1960	1957	1960	1951	1962	1951
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1954	1955	1955	1955	1956	1955	1955	1955	1979	1980	1955	1953

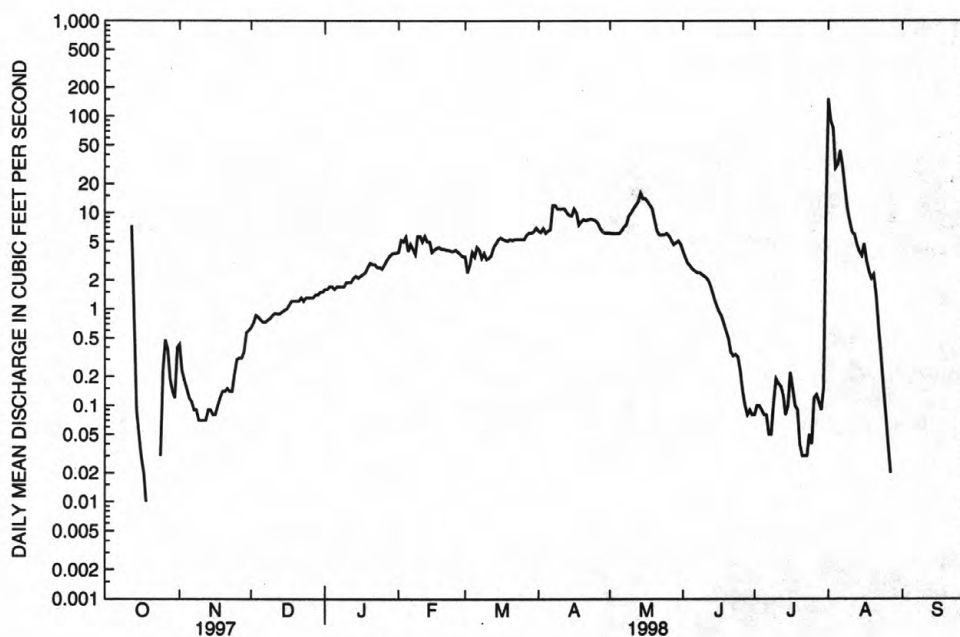
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1946 - 1998

ANNUAL MEAN	6.56	4.09	14.1
HIGHEST ANNUAL MEAN			106
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	25 Jun 5	152 Aug 1	4560 Jun 11 1960
LOWEST DAILY MEAN	.00 Jul 30	.00 Oct 1	.00 Sep 3 1946
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 30	.00 Oct 1	.00 Sep 23 1947
INSTANTANEOUS PEAK FLOW		181 Aug 1	7940 Jun 11 1960
INSTANTANEOUS PEAK STAGE		6.60 Aug 1	18.71 Jun 11 1960
ANNUAL RUNOFF (AC-FT)	4750	2960	10180
10 PERCENT EXCEEDS	14	8.4	24
50 PERCENT EXCEEDS	7.3	1.6	.04
90 PERCENT EXCEEDS	.00	.00	.00



BEAVER CREEK AT CEDAR BLUFFS, KS

KANSAS RIVER BASIN

299

06847500 SAPPAL CREEK NEAR STAMFORD, NE

LOCATION.--Lat 40°07'53", long 099°33'15", in NW¹/₄ NW¹/₄ sec. 23, T.2 N., R.20 W., Harlan County, Hydrologic Unit 10250011, on left bank 40 ft south of Burlington Northern Inc. track, 500 ft downstream from bridge on county highway, 2 mi east of Stamford, and 6.5 mi upstream from mouth.

DRAINAGE AREA.--3,840 mi², of which about 3,370 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1960. WDR NE-71-1: Calendar year totals. WRD NE-82-1: 1979(M). WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	19	25	27	31	32	41	38	28	2.9	56	8.1
2	7.8	19	25	30	30	29	39	37	28	3.4	78	8.0
3	6.6	22	25	29	33	31	39	37	24	1.8	187	7.6
4	6.0	22	25	22	31	34	39	37	24	1.5	121	7.1
5	5.6	20	26	e21	29	33	39	37	24	3.7	72	6.8
6	5.4	20	35	e19	25	32	40	37	24	2.2	52	6.6
7	5.2	20	26	e18	33	31	59	36	24	4.2	70	6.2
8	5.4	19	26	e18	32	40	59	36	25	5.0	84	6.0
9	4.8	19	27	e19	39	36	60	36	27	9.6	66	5.7
10	4.6	18	25	e20	35	43	54	36	26	37	107	5.4
11	5.2	19	24	e24	38	39	52	36	27	17	116	5.1
12	10	19	27	e25	36	43	50	36	26	13	82	4.8
13	8.2	20	29	e26	37	38	48	36	24	11	63	4.6
14	6.2	19	24	e26	36	35	46	36	24	10	62	4.1
15	6.1	19	27	e26	36	39	45	36	23	8.6	61	3.7
16	6.5	29	30	e24	36	37	44	36	22	7.6	48	4.0
17	7.6	25	26	e22	36	39	42	38	21	6.8	34	3.9
18	9.4	25	29	e21	36	39	42	37	17	6.4	28	3.7
19	8.5	21	26	e20	35	38	42	36	12	5.1	25	3.6
20	8.4	22	26	e21	35	38	41	34	10	2.8	21	3.2
21	11	24	26	e23	36	38	40	33	9.8	.72	19	3.2
22	12	19	27	27	36	37	40	32	9.0	1.5	17	3.2
23	12	19	24	32	35	37	40	31	7.1	.90	16	3.5
24	13	21	26	34	36	37	40	31	6.2	2.2	15	3.2
25	18	22	27	32	37	36	40	31	2.3	5.3	12	2.9
26	26	23	27	28	34	36	39	30	3.1	11	10	2.4
27	27	21	39	29	34	42	38	29	2.5	13	9.3	2.6
28	19	21	33	31	33	56	37	28	1.8	25	9.1	2.5
29	18	25	27	30	---	47	38	29	2.5	24	8.6	3.2
30	21	25	31	32	---	44	39	29	3.4	92	8.6	3.0
31	19	---	25	32	---	42	---	29	---	99	8.2	---
TOTAL	332.7	636	845	788	960	1178	1312	1060	507.7	434.22	1565.8	137.9
MEAN	10.7	21.2	27.3	25.4	34.3	38.0	43.7	34.2	16.9	14.0	50.5	4.60
MAX	27	29	39	34	39	56	60	38	28	99	187	8.1
MIN	4.6	18	24	18	25	29	37	28	1.8	.72	8.2	2.4
AC-FT	660	1260	1680	1560	1900	2340	2600	2100	1010	861	3110	274

e Estimated

KANSAS RIVER BASIN

06847500 SAPPA CREEK NEAR STAMFORD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.3	13.1	10.7	9.11	19.3	35.2	24.8	58.1	153	92.1	59.5	42.3
MAX	965	145	96.2	71.5	182	486	164	522	878	891	544	709
(WY)	1947	1947	1966	1966	1966	1960	1960	1949	1947	1951	1950	1951
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1954	1955	1955	1955	1956	1956	1956	1956	1981	1977	1955	1959

SUMMARY STATISTICS

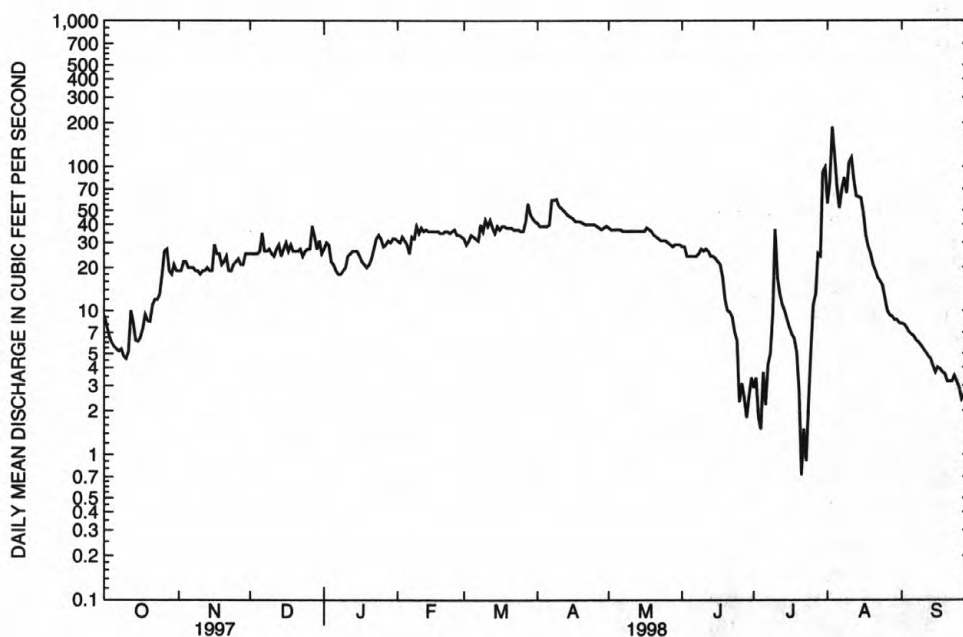
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1946 - 1998

ANNUAL TOTAL	12862.2	9757.32	
ANNUAL MEAN	35.2	26.7	46.7
MEDIAN OF ANNUAL MEANS			22.3
HIGHEST ANNUAL MEAN			229
LOWEST ANNUAL MEAN			.59
HIGHEST DAILY MEAN	250 Jun 27	187 Aug 3	16700 Jun 24 1966
LOWEST DAILY MEAN	2.6 Jul 25	.72 Jul 21	.00 Sep 12 1953
ANNUAL SEVEN-DAY MINIMUM	3.2 Jul 24	2.5 Jun 28	.00 Sep 12 1953
INSTANTANEOUS PEAK FLOW		201 Aug 3	43400 Jun 24 1966
INSTANTANEOUS PEAK STAGE		6.30 Aug 1	*22.13 Jun 24 1966
ANNUAL RUNOFF (AC-FT)	25510	19350	33830
10 PERCENT EXCEEDS	61	42	84
50 PERCENT EXCEEDS	33	26	6.5
90 PERCENT EXCEEDS	5.3	4.6	.00

* From floodmark.



SAPPA CREEK NEAR STAMFORD

KANSAS RIVER BASIN

301

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW¹/₄ NW¹/₄ sec.9, T.1 S., R.19 W., Phillips County, Hydrologic Unit 10250015, on left bank at downstream side of bridge on U.S. Highway 383, 1.0 mi south of Kansas-Nebraska State line, 2.5 mi west of Woodruff, and at mile 26.5.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft above sea level. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Records good. Flow regulated to some extent since 1964 by Keith Sebelius Lake (station 06847950), 48.4 mi upstream, and by irrigation development upstream from station. Satellite telemeter at station. Satellite telemeter station.

COOPERATION.--Records provided by Geological Survey, Kansas District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	19	17	16	16	15	22	20	9.9	8.8	22	6.1
2	9.0	21	18	16	17	14	21	20	9.9	10	20	5.3
3	8.7	24	18	16	15	15	21	20	10	12	21	5.2
4	8.6	25	17	15	15	16	22	19	10	12	20	5.3
5	9.0	22	16	16	15	15	22	19	11	11	18	5.3
6	9.7	19	16	16	15	15	23	19	11	15	15	5.1
7	10	17	15	18	17	16	65	20	11	16	14	5.0
8	9.6	16	16	16	19	17	71	20	12	15	13	4.8
9	9.1	15	16	15	14	17	63	20	12	15	12	4.7
10	9.5	15	16	14	16	17	47	20	12	16	12	4.7
11	10	15	16	14	16	15	33	20	12	19	12	4.7
12	12	15	16	14	17	16	22	21	11	15	11	4.7
13	12	15	15	14	18	17	19	20	11	14	11	4.7
14	19	14	15	14	17	17	18	18	11	11	10	4.7
15	16	14	15	14	16	18	17	17	11	11	10	4.9
16	18	15	15	15	16	19	17	17	11	162	10	5.2
17	15	14	15	15	16	20	16	18	10	60	10	4.9
18	14	15	15	15	16	20	19	19	10	36	9.8	5.0
19	13	15	16	16	15	20	19	19	10	23	9.2	5.1
20	13	15	15	16	15	20	19	17	10	22	8.9	5.2
21	14	15	16	15	15	21	19	15	9.7	21	8.7	5.3
22	14	15	16	15	15	20	19	15	9.5	21	8.1	5.3
23	14	15	16	15	15	20	19	13	9.2	21	7.9	5.3
24	15	15	16	15	15	20	19	13	8.5	21	7.6	5.6
25	19	15	16	15	15	20	19	14	5.9	21	7.3	5.8
26	22	15	17	16	15	20	19	14	5.1	185	7.2	6.0
27	26	15	16	16	15	26	19	14	5.6	371	6.8	5.9
28	22	15	17	16	15	75	19	14	7.1	139	6.4	5.8
29	28	17	16	16	---	30	19	14	7.8	47	6.1	5.8
30	18	17	16	16	---	24	20	12	8.7	49	5.7	6.2
31	17	---	16	16	---	24	---	10	---	64	6.5	---
MEAN	14.3	16.5	16.0	15.4	15.8	20.6	25.6	17.1	9.76	47.2	11.2	5.25
MAX	28	25	18	18	19	75	71	21	12	371	22	6.2
MIN	8.6	14	15	14	14	14	16	10	5.1	8.8	5.7	4.7
AC-FT	879	980	984	944	875	1270	1520	1050	581	2900	689	313

KANSAS RIVER BASIN

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.0	6.45	5.23	5.16	16.2	17.7	10.2	44.3	90.6	63.7	36.1	24.1
MAX	429	56.5	26.0	22.5	230	240	36.6	422	1041	1070	430	402
(WY)	1947	1931	1947	1931	1932	1960	1952	1949	1947	1951	1950	1951
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1956	1956	1956	1957	1957	1985	1992	1984	1984	1959	1960

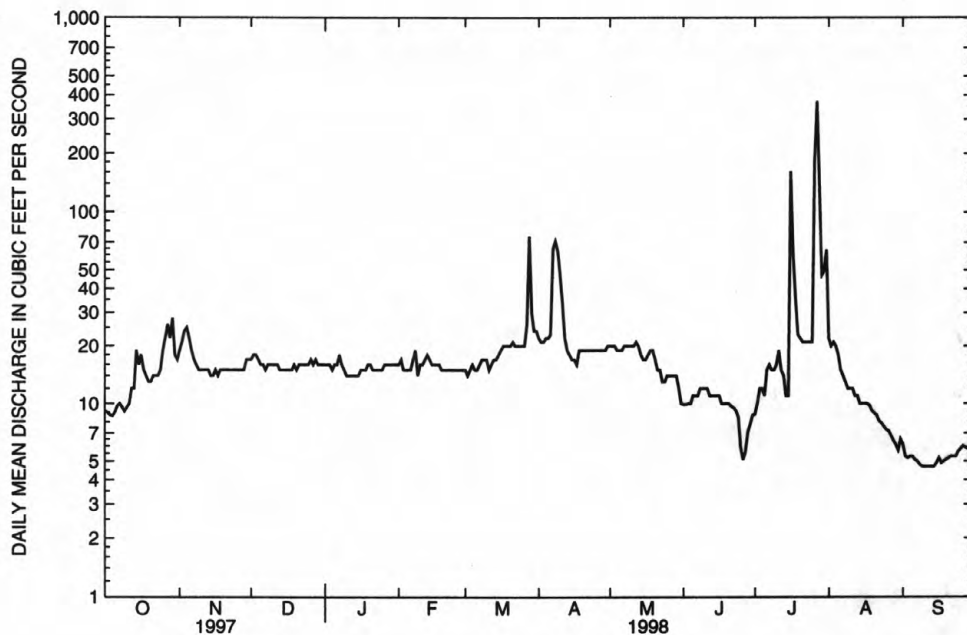
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1929 - 1998

ANNUAL MEAN	21.7	17.9	27.6	
HIGHEST ANNUAL MEAN				208
LOWEST ANNUAL MEAN				.051
HIGHEST DAILY MEAN	947	Jun 27	371	Jul 27
LOWEST DAILY MEAN	2.2	Jul 24	4.7	Sep 9
ANNUAL SEVEN-DAY MINIMUM	5.7	Aug 24	4.7	Sep 8
INSTANTANEOUS PEAK FLOW			593	Jul 27
INSTANTANEOUS PEAK STAGE			11.70	Jul 27
ANNUAL RUNOFF (AC-FT)	15700		12990	20000
10 PERCENT EXCEEDS	27		21	29
50 PERCENT EXCEEDS	18		15	4.0
90 PERCENT EXCEEDS	10		6.5	.00



PRAIRIE DOG CREEK NEAR WOODRUFF, KS

KANSAS RIVER BASIN

303

06849500 REPUBLICAN RIVER BELOW HARLAN COUNTY DAM, NE

LOCATION.--Lat 40°04'45", long 99°10'05", in SW¹/₄ sec.6, T.1 N., R.16 W., Franklin County, Hydrologic Unit 10250016, on left bank 1.4 mi west of Naponee, 1.4 mi upstream from Turkey Creek, 2.8 mi downstream from Harlan County Dam, and at mile 234.

DRAINAGE AREA.--20,820 mi², of which about 13,590 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--December 1952 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,863.38 ft above sea level (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated discharges and discharges less than 5.0 ft³/s, which are poor. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	25	11	17	7.8	e12	18	249	129	693	221	3.4
2	12	19	e10	16	6.3	e10	16	251	128	693	320	3.4
3	11	9.2	e11	15	6.3	e10	18	251	134	695	389	3.4
4	9.2	5.1	e11	16	7.6	e11	20	252	136	694	369	3.6
5	8.1	5.8	e11	e14	16	e12	19	255	137	695	338	4.0
6	7.8	5.0	e12	e13	14	e12	102	256	134	703	342	3.7
7	8.3	5.0	12	e12	13	e12	223	251	136	671	384	3.7
8	11	5.4	12	e12	12	e11	212	251	139	623	429	4.0
9	11	5.4	12	e11	12	e10	255	249	140	562	449	4.3
10	11	5.8	12	e11	16	e9.0	489	242	140	513	446	4.0
11	12	6.3	14	e11	14	e8.0	625	238	140	451	441	3.8
12	23	6.3	16	e11	14	e7.0	619	234	140	406	433	4.0
13	18	7.0	17	e10	8.8	e8.0	616	232	181	387	402	4.0
14	11	7.5	18	e9.0	4.3	e10	615	229	208	410	362	4.0
15	6.0	7.5	18	7.3	4.0	12	559	230	220	452	335	3.4
16	5.8	7.1	17	6.2	3.4	13	438	229	275	472	323	3.4
17	6.3	7.5	16	5.9	4.9	14	368	224	318	474	320	3.4
18	6.8	8.2	17	6.6	9.8	12	234	224	356	509	319	3.6
19	7.5	8.9	17	6.3	9.1	12	231	224	385	528	335	4.5
20	7.3	9.7	16	6.6	10	12	232	226	431	559	345	4.1
21	6.3	11	15	9.4	11	12	233	226	501	590	324	3.2
22	6.3	12	16	9.2	9.9	14	235	224	512	590	293	3.7
23	6.3	11	16	8.2	11	14	235	217	465	565	284	4.0
24	11	10	16	9.0	11	12	238	222	441	538	265	4.3
25	20	8.4	19	7.7	11	10	238	225	530	526	236	4.9
26	18	8.9	18	8.3	18	10	240	226	594	566	179	5.4
27	21	9.8	18	10	22	19	248	225	585	384	103	5.4
28	6.5	13	16	11	e14	38	251	185	609	268	130	5.6
29	6.3	32	16	11	---	15	250	140	635	265	83	6.2
30	6.4	17	17	8.3	---	18	249	135	667	241	5.1	6.7
31	9.7	---	16	7.9	---	21	---	130	---	237	3.1	---
TOTAL	322.9	299.8	463	316.9	301.2	400.0	8326	6952	9546	15960	9207.2	125.1
MEAN	10.4	9.99	14.9	10.2	10.8	12.9	278	224	318	515	297	4.17
MAX	23	32	19	17	22	38	625	256	667	703	449	6.7
MIN	5.8	5.0	10	5.9	3.4	7.0	16	130	128	237	3.1	3.2
AC-FT	640	595	918	629	597	793	16510	13790	18930	31660	18260	248

e Estimated

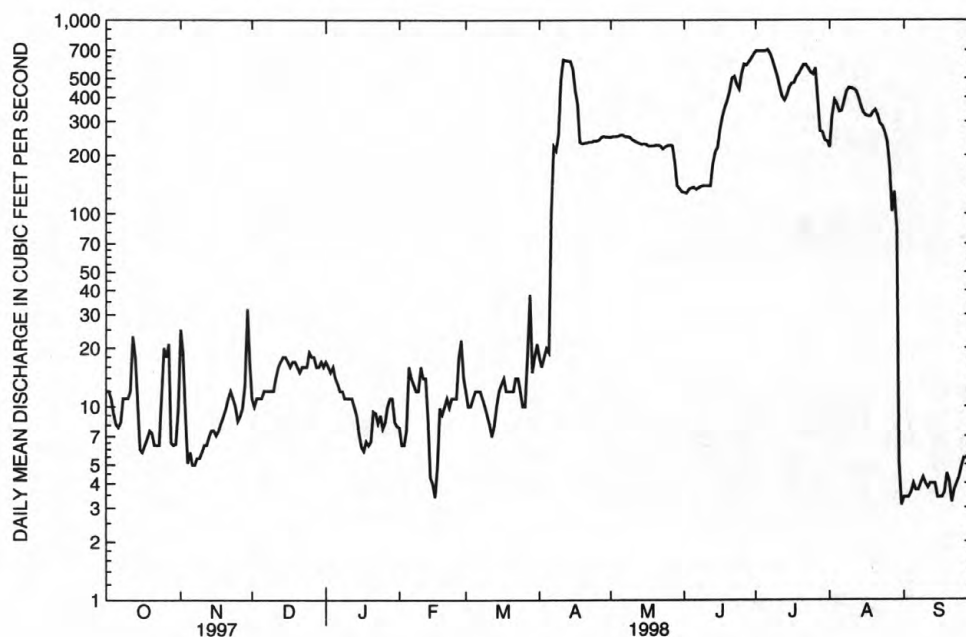
KANSAS RIVER BASIN

06849500 REPUBLICAN RIVER BELOW HARLAN COUNTY DAM, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	129	78.1	63.2	56.8	121	131	209	214	384	730	431	136
MAX	2044	985	571	535	680	941	2400	2069	1763	2761	1726	1260
(WY)	1966	1994	1994	1966	1966	1963	1960	1960	1962	1962	1962	1996
MIN	3.79	2.50	2.40	2.30	2.15	2.88	2.63	2.70	14.4	70.3	91.0	2.95
(WY)	1990	1992	1977	1991	1977	1991	1992	1992	1993	1993	1981	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1953 - 1998	
ANNUAL TOTAL	73584.7		52220.1			
ANNUAL MEAN	202		143		227	
HIGHEST ANNUAL MEAN					690	1966
LOWEST ANNUAL MEAN					37.4	1992
HIGHEST DAILY MEAN	1060	Apr 23	703	Jul 6	4210	Nov 2 1965
LOWEST DAILY MEAN	5.0	Nov 6	3.1	Aug 31	.29	Jun 3 1996
ANNUAL SEVEN-DAY MINIMUM	5.4	Nov 4	3.5	Aug 31	.38	Jun 1 1996
INSTANTANEOUS PEAK FLOW			710	Jul 6	4320	Jun 25 1957
INSTANTANEOUS PEAK STAGE			2.80	Jul 6	8.65	Jun 25 1957
ANNUAL RUNOFF (AC-FT)	146000		103600		164200	
10 PERCENT EXCEEDS	620		457		656	
50 PERCENT EXCEEDS	21		16		15	
90 PERCENT EXCEEDS	9.7		5.4		4.4	



REPUBLICAN RIVER BELOW HARLAN COUNTY DAM

KANSAS RIVER BASIN

305

06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

LOCATION.--Lat 40°00'15", long 98°07'55", in SW¹/₄ SE¹/₄ sec.32, T.1 N., R.7 W., Nuckolls County, Nebraska, Hydrologic Unit 10250016, on left bank 0.2 mi upstream from Nebraska-Kansas State line and 3.5 mi southwest of Superior, NE.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,612.46 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are poor. Canal diverts from Republican River at Courtland diversion dam in sec.7, T.1 N., R.9 W. Water is used for irrigation in Nebraska and Kansas; figures published herein represent that portion which flows into Kansas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.7	2.1	52	341	308	131
2	.00	.00	.00	.00	.00	.00	1.7	1.9	73	380	311	108
3	.00	.00	.00	.00	.00	.00	1.9	1.9	90	404	311	110
4	.00	.00	.00	.00	.00	.00	1.9	1.9	150	408	315	116
5	.00	.00	.00	.00	.00	.00	1.9	1.9	175	413	317	120
6	.00	.22	.00	.00	.00	.00	1.9	1.9	175	425	315	117
7	.00	.30	.00	.00	.00	.00	4.7	1.9	174	413	313	116
8	e40	.30	.00	.00	.00	.00	2.4	1.6	177	405	311	130
9	e83	.30	.00	.00	.00	.00	1.7	1.5	175	409	312	142
10	e83	.30	.00	.00	.00	.00	1.7	1.5	174	418	303	144
11	e83	.30	.00	.00	.00	.00	1.9	1.5	175	386	294	153
12	e83	.39	.00	.00	.00	.00	1.9	1.8	173	371	293	118
13	e83	.50	.00	.00	.00	.00	2.4	1.7	171	359	295	93
14	e83	.54	.00	.00	.00	.00	2.1	1.7	174	349	267	94
15	e83	.61	.00	.00	.00	.00	2.1	2.2	170	348	247	94
16	e83	.87	.00	.00	.00	.00	2.1	1.8	165	351	250	93
17	e83	1.1	.00	.00	.00	.00	2.1	1.7	165	358	241	91
18	e83	1.4	.00	.00	.00	.00	1.9	1.7	200	338	231	89
19	e83	1.1	.00	.00	.00	.00	1.9	1.9	227	313	230	86
20	84	e.50	.00	.00	.00	.00	1.9	1.9	249	315	234	86
21	85	.00	.00	.00	.00	.00	1.9	1.7	261	326	242	90
22	87	.00	.00	.00	.00	.00	1.9	1.9	265	347	216	90
23	90	.00	.00	.00	.00	.00	1.9	1.7	268	378	197	69
24	98	.00	.00	.00	.00	.00	1.9	1.7	265	386	190	7.1
25	139	.00	.00	.00	.00	.00	2.1	1.5	232	393	178	e.00
26	56	.00	.00	.00	.00	e.60	2.1	1.4	227	407	171	e.00
27	117	.00	.00	.00	.00	e1.0	2.1	1.3	290	412	190	e.00
28	215	.00	.00	.00	.00	1.5	2.1	1.3	319	388	189	e.00
29	229	.00	.00	.00	---	1.5	2.1	1.9	320	372	182	e.00
30	20	.00	.00	.00	---	1.5	2.1	44	331	355	179	e.00
31	.00	---	.00	.00	---	1.5	---	49	---	307	172	---
TOTAL	2173.00	8.73	0.00	0.00	0.00	7.60	62.0	143.4	6062	11575	7804	2487.10
MEAN	70.1	.29	.000	.000	.000	.25	2.07	4.63	202	373	252	82.9
MAX	229	1.4	.00	.00	.00	1.5	4.7	49	331	425	317	153
MIN	.00	.00	.00	.00	.00	.00	1.7	1.3	52	307	171	.00
AC-FT	4310	17	.00	.00	.00	15	123	284	12020	22960	15480	4930

e Estimated

KANSAS RIVER BASIN

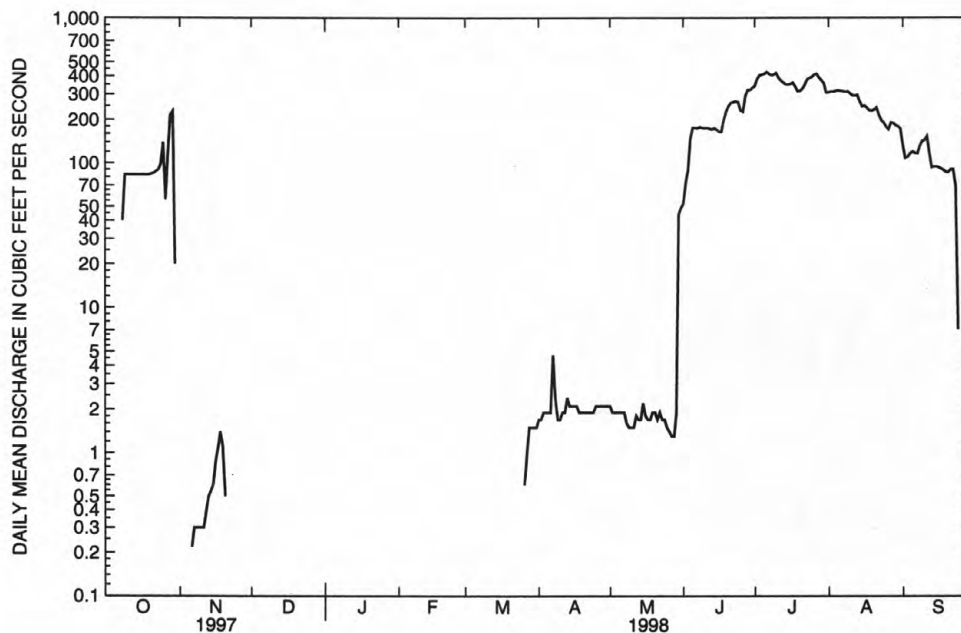
06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.2	9.89	2.75	3.39	3.52	6.36	11.4	52.8	111	349	280	63.2
MAX	464	212	73.6	84.4	82.9	87.1	97.8	237	362	627	570	205
(WY)	1958	1967	1992	1992	1992	1992	1991	1958	1988	1976	1976	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	21.2	44.4	80.3	.000
(WY)	1955	1955	1955	1955	1955	1955	1955	1957	1957	1955	1992	1977

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1955 - 1998	
ANNUAL TOTAL	29285.23		30322.83			
ANNUAL MEAN	80.2		83.1		77.7	
HIGHEST ANNUAL MEAN					138	
LOWEST ANNUAL MEAN					19.5	
HIGHEST DAILY MEAN	384 Jul 4		425 Jul 6		731 Oct 22 1957	
LOWEST DAILY MEAN	.00 Jan 1		.00 Oct 1		*.00 Oct 1 1954	
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1		.00 Oct 1		.00 Oct 1 1954	
INSTANTANEOUS PEAK FLOW					781 Sep 2 1973	
INSTANTANEOUS PEAK STAGE					5.05 Sep 2 1973	
ANNUAL RUNOFF (AC-FT)	58090		60150		56300	
10 PERCENT EXCEEDS	334		313		288	
50 PERCENT EXCEEDS	.00		1.7		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

* No flow for many days each year.



COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

KANSAS RIVER BASIN

307

06853020 REPUBLICAN RIVER AT GUIDE ROCK, NE

LOCATION.--Lat 40°03'49", long 98°19'53", in NE¹/₄ SE¹/₄ sec.9, T.1 N., R.9 W., Webster County, Hydrologic Unit 10250016, on left downstream bank at Nebraska State Highway 78 bridge, 0.2 mi downstream from Minnie Creek and 0.5 mi south of Guide Rock. Station is 3.1 river miles downstream from station 06853000, Republican River near Guide Rock, previous site, and at mile 176.

DRAINAGE AREA --22,100 mi², approximately, of which about 14,610 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1950 to current year. August 1950 to September 1984 published as Republican River near Guide Rock (06853000).

REVISED RECORDS.--WDR NE-97-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,616.15 ft above sea level, levels by U.S. Corps of Engineers. Prior to Oct. 1, 1959, at datum 12.98 ft higher, and Oct. 1, 1959 to Nov. 28, 1984, at datum 7.98 ft higher, both at site 3.1 miles upstream.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station, by regulation of upstream reservoirs, and since Nov. 14, 1952, by storage in Harlan County Lake (station 06849000).

COOPERATION.--Records provided by Nebraska Department of Water Resources and reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	231	541	200	187	184	264	475	155	40	117	54
2	104	386	331	e200	182	183	255	462	129	54	130	56
3	99	327	e280	e195	179	184	272	452	103	56	158	60
4	93	227	e215	e190	176	187	266	447	69	61	251	54
5	80	191	e180	e190	176	185	264	448	59	196	237	49
6	45	172	e185	e190	174	e180	266	446	58	430	185	47
7	18	165	e200	e185	175	e175	487	443	54	226	171	46
8	8.9	165	e200	e180	178	e175	1260	443	56	216	146	40
9	5.5	165	e195	e165	180	e170	995	449	59	354	140	29
10	5.4	159	e180	e150	201	e155	728	460	55	536	151	25
11	5.5	157	e170	e140	225	e135	785	446	58	420	128	25
12	12	158	e170	e145	236	e130	988	429	59	246	113	23
13	11	158	e190	e135	208	e145	970	417	50	169	122	23
14	7.9	e155	e185	e145	199	e165	956	414	47	97	123	22
15	5.9	e140	e195	e155	194	e190	952	438	44	89	112	22
16	e3.6	e145	200	e170	193	e200	939	457	36	118	102	21
17	e3.2	153	201	e175	190	212	793	430	54	99	93	21
18	e3.1	162	202	e175	187	220	758	416	60	69	78	20
19	e3.0	162	203	e170	184	221	592	407	45	56	53	20
20	e2.7	160	203	e170	185	216	530	404	44	72	40	19
21	e2.6	159	202	e170	186	222	508	407	37	51	58	19
22	e2.4	155	203	e165	186	227	497	409	56	83	85	18
23	2.4	154	e200	e165	189	225	489	408	95	139	90	38
24	e2.6	152	e190	e160	187	225	484	405	54	146	85	100
25	e3.0	153	e190	e170	187	226	484	405	37	166	116	90
26	e5.0	152	e185	e175	182	228	476	328	39	286	272	86
27	e8.0	153	e190	e185	178	256	464	278	48	769	581	78
28	e12	154	e195	185	183	296	468	275	22	445	262	76
29	e60	425	196	185	---	381	481	256	29	181	173	79
30	e125	1090	196	194	---	343	483	215	47	178	144	89
31	e175	---	197	193	---	283	---	177	---	160	80	---
TOTAL	1021.7	6485	6570	5372	5287	6524	18154	12346	1758	6208	4596	1349
MEAN	33.0	216	212	173	189	210	605	398	58.6	200	148	45.0
MAX	175	1090	541	200	236	381	1260	475	155	769	581	100
MIN	2.4	140	170	135	174	130	255	177	22	40	40	18
AC-FT	2030	12860	13030	10660	10490	12940	36010	24490	3490	12310	9120	2680

e Estimated

KANSAS RIVER BASIN

06853020 REPUBLICAN RIVER AT GUIDE ROCK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	214	190	164	157	257	320	376	417	493	532	251	293
MAX	2073	1245	819	588	948	1077	2484	2511	3619	4298	1712	3602
(WY)	1966	1994	1994	1952	1952	1952	1960	1960	1951	1951	1962	1951
MIN	1.19	2.41	3.13	4.11	3.86	22.5	6.86	7.04	11.5	23.3	33.8	1.97
(WY)	1992	1992	1992	1992	1992	1992	1992	1989	1992	1970	1971	1991

SUMMARY STATISTICS

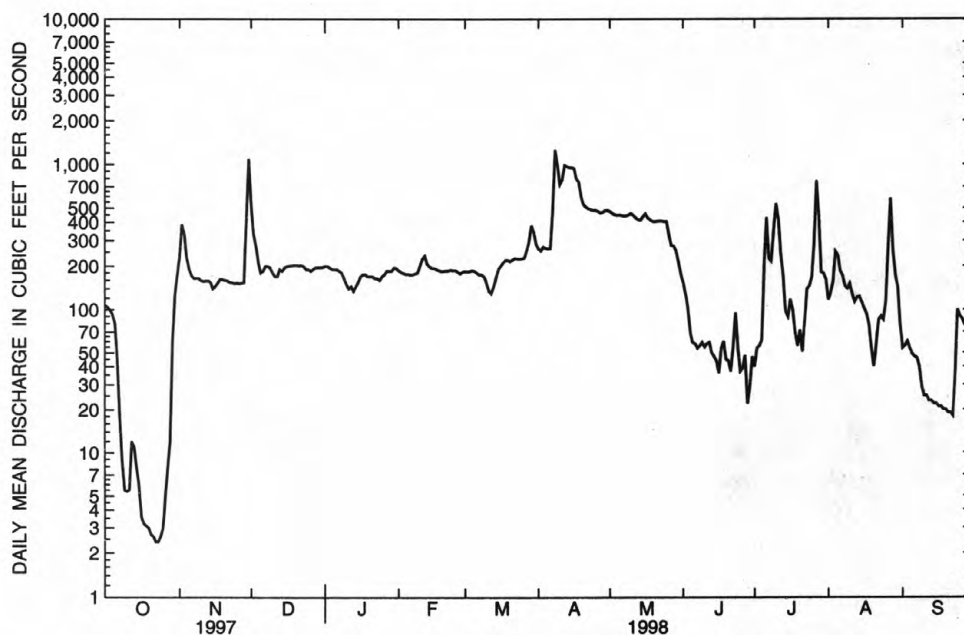
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1950 - 1998

ANNUAL TOTAL	85403.3		75670.7		304	
ANNUAL MEAN	234		207		495	
HIGHEST ANNUAL MEAN	1				1951	
LOWEST ANNUAL MEAN					52.1	
HIGHEST DAILY MEAN	1240	Apr 21	1260	Apr 8	20900	Jun 16 1957
LOWEST DAILY MEAN	2.4	Oct 22	2.4	Oct 22	.10	May 26 1964
ANNUAL SEVEN-DAY MINIMUM	2.7	Oct 19	2.7	Oct 19	.62	Oct 25 1976
INSTANTANEOUS PEAK FLOW			1430	Apr 8	29200	Jun 16 1957
INSTANTANEOUS PEAK STAGE			7.74	Apr 8	*20.73	Jun 16 1957
ANNUAL RUNOFF (AC-FT)	169400		150100		220500	
10 PERCENT EXCEEDS	424		447		701	
50 PERCENT EXCEEDS	178		175		120	
90 PERCENT EXCEEDS	28		27		24	

* Site and datum then in use.



REPUBLICAN RIVER AT GUIDE ROCK

KANSAS RIVER BASIN

309

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 39°59'33", long 97°55'53", in NE¹/₄ NE¹/₄ SE¹/₄ sec.1, T.1 S., R.6 W., in Kansas, Republic County, Hydrologic Unit 10250016, on right bank at upstream side of county highway bridge, 1.2 mi southwest of Hardy, NE, and at mile 141.2.

DRAINAGE AREA.--22,401 mi², of which about 14,901 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick." Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-09, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft above sea level. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by irrigation development upstream from station and by storage in reservoirs in Colorado, Kansas, and Nebraska. Considerable regulation since 1952 by Harlan County Lake (station 06849000). Satellite telemeter station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947, discharge, 100,000 ft³/sec, based on records for upstream stations.

COOPERATION.--Records provided by Geological Survey, Kansas District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	275	e600	259	384	224	376	599	254	82	221	129
2	113	307	535	266	e275	222	352	583	227	78	186	92
3	110	304	403	271	e270	224	417	568	194	92	184	92
4	106	310	353	260	e270	225	441	568	176	97	219	86
5	104	313	318	253	269	220	384	554	145	108	317	89
6	102	290	293	259	262	219	371	553	130	294	311	80
7	100	267	279	254	247	e210	e1580	547	127	396	251	76
8	62	258	295	248	242	e190	e1390	535	136	279	218	74
9	51	251	294	238	248	e185	e1210	547	132	273	203	71
10	48	245	282	225	267	e180	1010	545	136	516	203	58
11	47	241	270	196	298	e180	910	535	131	676	199	48
12	54	235	257	180	311	e185	988	522	125	486	161	46
13	52	232	251	e180	301	e195	1400	499	118	330	157	106
14	48	228	266	e190	278	e220	1140	483	110	232	164	68
15	46	219	271	e190	274	e240	1050	494	104	161	159	56
16	45	211	265	e200	281	268	1030	548	112	125	167	49
17	45	207	267	e230	274	279	971	515	102	132	155	45
18	45	217	269	e250	265	306	862	478	104	129	140	41
19	44	222	268	e260	260	312	814	455	122	94	133	39
20	43	219	264	e270	253	300	664	442	99	84	126	53
21	44	214	262	e270	249	308	619	436	96	81	109	50
22	45	211	264	e270	249	340	596	442	93	90	114	45
23	48	208	266	e275	246	343	605	446	103	139	122	42
24	57	206	275	e280	248	320	601	438	124	218	126	44
25	102	206	275	301	229	324	595	430	99	277	127	114
26	106	204	269	309	241	329	584	421	73	397	135	120
27	100	200	258	333	231	402	573	396	59	554	374	116
28	102	202	257	339	227	643	586	377	85	716	671	116
29	102	255	258	356	---	519	614	367	64	467	325	119
30	140	409	257	330	---	494	612	346	68	247	208	147
31266	---	257	325	---	435	---	299	---	256	164	---	---
MEAN	80.4	246	297	260	266	292	778	483	122	261	205	77.0
MAX	266	409	600	356	384	643	1580	599	254	716	671	147
MIN	43	200	251	180	227	180	352	299	59	78	109	39
AC-FT	4940	14610	18240	16000	14780	17930	46300	29690	7240	16080	12590	4580

e Estimated

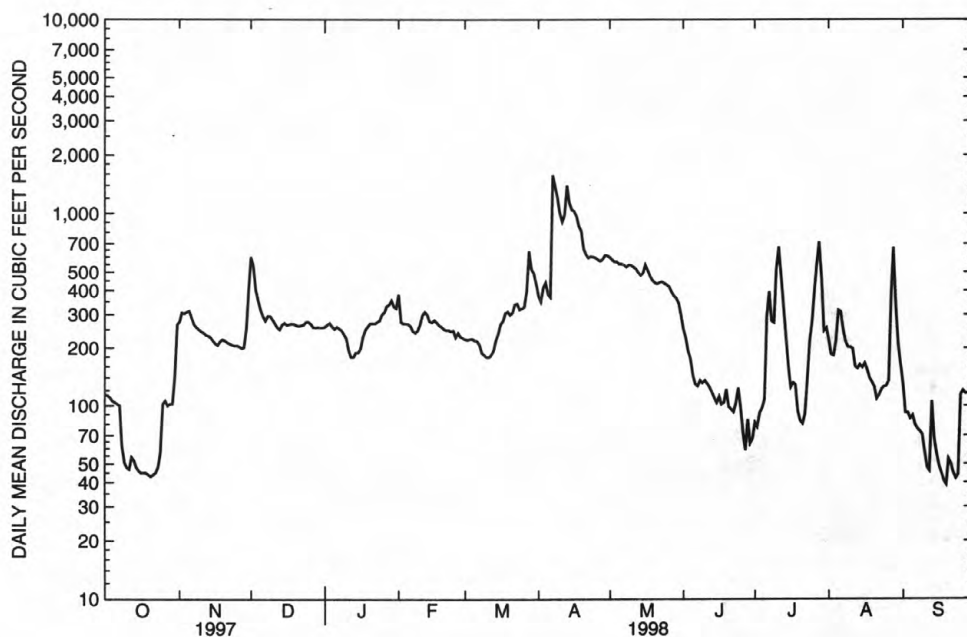
KANSAS RIVER BASIN

06853500 REPUBLICAN RIVER NEAR HARDY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	292	237	205	193	311	432	461	489	511	535	329	336
MAX	1970	1308	928	636	968	1584	2415	2523	2031	3210	1800	1455
(WY)	1966	1994	1994	1966	1966	1993	1960	1960	1960	1993	1962	1973
MIN	17.2	22.3	26.2	33.7	27.0	66.5	39.1	29.6	46.5	54.3	58.7	15.3
(WY)	1992	1992	1992	1992	1992	1991	1991	1992	1992	1991	1991	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATERYEARS 1958 - 1998	
ANNUAL MEAN	295		280		361	
HIGHEST ANNUAL MEAN					800	
LOWEST ANNUAL MEAN					72.5	
HIGHEST DAILY MEAN	1200	Apr 16	1580	Apr 7	15000	Oct 1 1983
LOWEST DAILY MEAN	43	Oct 20	39	Sep 19	4.8	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	44	Oct 16	44	Oct 16	9.0	Jun 26 1992
INSTANTANEOUS PEAK FLOW			2350	Apr 7	225000	Jun 2 1935
INSTANTANEOUS PEAK STAGE			7.10	Apr 7	19.40	Jun 2 1935
ANNUAL RUNOFF (AC-FT)	213800		203000		261500	
10 PERCENT EXCEEDS	504		550		808	
50 PERCENT EXCEEDS	243		248		172	
90 PERCENT EXCEEDS	100		74		67	



REPUBLICAN RIVER NEAR HARDY, KS

KANSAS RIVER BASIN

311

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE

LOCATION.--Lat 40°43'52", long 97°10'38", in SW¹/₄ SW¹/₄ sec.23, T.9 N., R.2 E., Seward County, HydrologicUnit 10270203, on right bank 60 ft downstream from bridge on county road, 6.2 mi northwest of Dorchester, and 22.8 mi upstream from mouth.

DRAINAGE AREA --1,192 mi².

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,403.48 ft above sea level. Prior to Apr. 14, 1970, on bridge pier 60 ft upstream at same datum.

REMARKS.--Records fair except for periods of estimated record, which are poor. Some diversion by pumping for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	526	786	104	107	105	261	124	572	151	232	98
2	105	595	933	105	108	106	229	118	283	153	555	94
3	99	574	677	105	109	107	210	117	204	150	623	92
4	94	464	437	105	105	106	180	113	180	141	675	88
5	91	342	251	106	105	107	160	108	166	154	593	87
6	89	233	193	109	104	107	150	107	151	165	358	84
7	88	173	167	111	103	110	276	108	142	174	292	83
8	87	150	151	111	100	e100	345	108	155	174	217	79
9	85	136	141	107	98	e94	384	108	167	200	175	77
10	85	128	133	103	103	e84	548	108	231	365	152	77
11	86	122	125	e98	103	e76	563	108	340	372	142	76
12	89	118	122	e90	114	e66	528	102	376	278	134	76
13	96	115	116	e80	127	e100	396	92	397	395	133	75
14	106	114	114	e78	135	179	302	94	1500	622	133	75
15	98	110	113	e82	129	136	247	91	2790	667	134	75
16	93	109	112	e86	126	128	220	94	2400	333	130	76
17	90	103	112	e92	126	131	197	96	1680	202	123	75
18	91	104	115	e96	120	136	171	90	1570	169	121	75
19	90	104	114	e98	116	136	158	105	1000	159	115	75
20	87	103	114	e100	114	140	148	110	446	157	119	85
21	86	102	115	e100	115	141	144	106	346	164	144	84
22	86	102	114	e102	112	148	137	125	287	189	141	132
23	86	101	116	104	111	160	137	247	259	171	147	259
24	88	99	116	101	109	162	137	292	262	183	131	344
25	101	97	114	99	108	247	131	578	351	197	121	208
26	101	98	109	102	105	270	126	727	271	206	117	129
27	144	99	108	103	105	292	124	642	219	200	118	106
28	129	99	109	104	105	330	124	343	199	173	113	97
29	137	175	107	108	---	355	124	1420	181	236	105	91
30	164	490	107	111	---	372	123	1110	165	264	102	88
31	306	---	107	110	---	324	---	553	---	220	100	---
TOTAL	3294	5885	6248	3110	3122	5055	6980	8244	17290	7384	6495	3160
MEAN	106	196	202	100	112	163	233	266	576	238	210	105
MAX	306	595	933	111	135	372	563	1420	2790	667	675	344
MIN	85	97	107	78	98	66	123	90	142	141	100	75
AC-FT	6530	11670	12390	6170	6190	10030	13840	16350	34290	14650	12880	6270

e Estimated

KANSAS RIVER BASIN

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	120	79.6	67.4	72.5	145	314	177	269	348	327	191	156
MAX	812	224	202	377	671	1762	887	1147	1749	1395	480	855
(WY)	1974	1997	1998	1973	1984	1993	1984	1984	1967	1986	1993	1989
MIN	35.7	33.6	26.4	25.4	40.1	41.6	50.0	60.4	43.1	46.7	34.8	33.1
(WY)	1982	1981	1977	1977	1979	1981	1981	1989	1981	1980	1976	1976

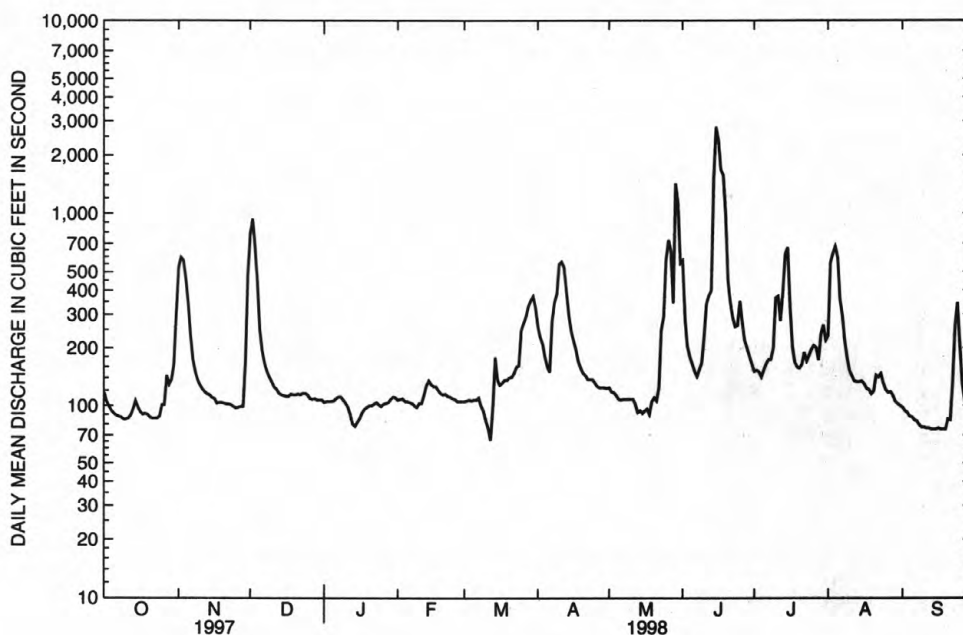
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1958 - 1998

ANNUAL TOTAL	64015	76267	
ANNUAL MEAN	175	209	189
HIGHEST ANNUAL MEAN			441
LOWEST ANNUAL MEAN			54.4
HIGHEST DAILY MEAN	4790	Jul 11	2790
LOWEST DAILY MEAN	56	Jan 11	66
ANNUAL SEVEN-DAY MINIMUM	63	Jan 8	75
INSTANTANEOUS PEAK FLOW (STAGE)			3050
INSTANTANEOUS PEAK STAGE			14.93
ANNUAL RUNOFF (AC-FT)	127000	151300	136800
10 PERCENT EXCEEDS	302	379	318
50 PERCENT EXCEEDS	104	121	82
90 PERCENT EXCEEDS	81	89	46



WEST FORK BIG BLUE RIVER NEAR DORCHESTER

KANSAS RIVER BASIN

313

06881000 BIG BLUE RIVER NEAR CRETE, NE

LOCATION.--Lat 40°35'47", long 96°57'33", in SW¹/₄ SE¹/₄ sec.3, T.7 N., R.4 E., Saline County, Hydrologic Unit 10270202, on right bank near downstream side of county road bridge, 1.8 mi south of Missouri Pacific Railroad station in Crete, 3.3 mi downstream from Walnut Creek, 3.6 mi upstream from Squaw Creek, and at mile 167.

DRAINAGE AREA.--2,710 mi².

PERIOD OF RECORD.--March 1945 to current year. Prior to Oct. 1, 1953, discharge published only for stages above 12.0 ft because of variable backwater from dam downstream until 1952 and diurnal fluctuation from powerplant upstream in 1952-53.

REVISED RECORDS.--WDR NE-94-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,311.7 ft above sea level. Prior to Jan. 20, 1954, nonrecording gage and Jan. 21, 1954 to Mar. 27, 1986, recording gage on right bank at downstream side of county road bridge at present datum. Mar. 28, 1986 to May 11, 1988 at temporary location, on right bank 250 ft downstream from bridge at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow of stream affected by ground-water and surface-water withdrawals for irrigation and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	635	1420	220	852	214	668	358	1070	502	536	215
2	197	881	1390	221	598	213	586	359	864	481	520	209
3	177	863	1250	224	365	211	521	355	622	473	812	204
4	162	774	890	220	293	209	455	350	542	461	874	198
5	152	635	610	219	276	209	393	343	509	445	903	193
6	147	497	413	216	258	207	359	339	493	472	758	191
7	140	382	339	216	247	213	448	339	475	497	538	187
8	138	317	357	224	242	e160	2480	328	506	513	471	184
9	134	278	310	215	238	e145	3840	323	654	514	392	179
10	131	253	279	e125	268	e135	2780	320	1400	575	342	179
11	133	238	257	e130	267	e125	2090	318	2100	704	311	178
12	136	227	244	e150	255	e120	1520	328	1850	679	289	178
13	144	217	233	e180	258	e135	1060	316	1360	604	278	179
14	157	206	228	204	267	e180	804	312	3000	715	270	175
15	164	202	232	203	270	215	651	317	6020	856	265	176
16	157	187	233	200	265	239	607	315	6980	824	264	174
17	152	187	232	202	264	234	726	319	5220	537	260	175
18	149	197	232	205	265	237	641	319	2800	418	241	177
19	146	193	232	200	260	236	562	312	2390	361	226	179
20	143	195	232	203	255	233	480	330	1540	347	207	244
21	143	192	234	200	249	252	436	346	1060	333	187	216
22	142	189	234	202	243	294	411	501	861	396	259	222
23	138	189	231	206	239	335	393	3420	755	738	371	275
24	143	188	238	222	234	361	381	5770	686	500	607	379
25	160	186	233	205	231	428	375	5090	683	428	438	441
26	169	183	226	203	225	604	365	3220	766	425	349	322
27	162	183	213	213	221	820	357	2390	648	423	311	245
28	217	184	219	241	219	1070	353	1910	574	410	510	224
29	237	411	214	287	---	1180	355	2750	542	407	268	211
30	306	1090	220	295	---	995	355	4340	527	1390	236	204
31	410	---	216	341	---	815	---	1670	---	712	223	---
TOTAL	5320	10559	12091	6592	8124	11024	25452	38007	47497	17140	12516	6513
MEAN	172	352	390	213	290	356	848	1226	1583	553	404	217
MAX	410	1090	1420	341	852	1180	3840	5770	6980	1390	903	441
MIN	131	183	213	125	219	120	353	312	475	333	187	174
AC-FT	10550	20940	23980	13080	16110	21870	50480	75390	94210	34000	24830	12920

e Estimated

KANSAS RIVER BASIN

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	241	154	130	140	313	712	413	566	922	673	347	324
MAX	1864	439	390	865	1576	3968	2257	2339	5808	4739	1048	2065
(WY)	1974	1974	1998	1973	1984	1993	1984	1984	1967	1986	1987	1989
MIN	46.5	41.1	60.3	52.2	66.8	86.3	92.2	84.5	70.7	48.6	28.4	51.2
(WY)	1957	1957	1977	1978	1977	1977	1967	1967	1981	1970	1955	1976

SUMMARY STATISTICS

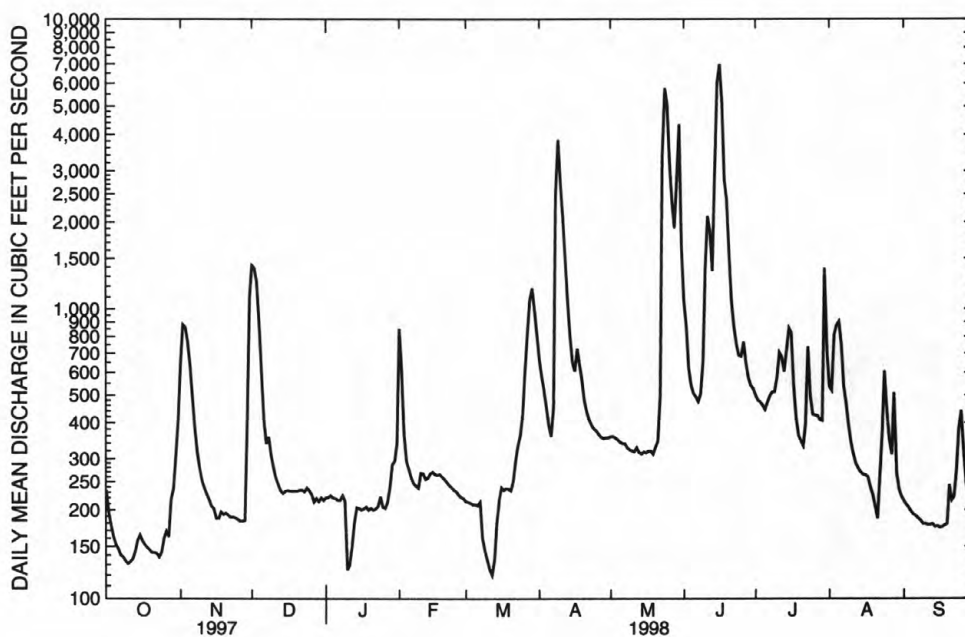
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1954 - 1998

ANNUAL TOTAL	117058	200835	
ANNUAL MEAN	321	550	411
HIGHEST ANNUAL MEAN			1030
LOWEST ANNUAL MEAN			96.6
HIGHEST DAILY MEAN	6360 Jul 12	6980 Jun 16	21400 Jun 19 1957
LOWEST DAILY MEAN	121 Aug 10	120 Mar 12	6.0 Aug 1 1980
ANNUAL SEVEN-DAY MINIMUM	136 Sep 16	137 Oct 7	11 Jul 12 1976
INSTANTANEOUS PEAK FLOW (STAGE)		7230 Jun 16	27600 (28.74) Jul 10 1950
INSTANTANEOUS PEAK STAGE		23.63 Jun 16	*29.86 Jul 3 1986
ANNUAL RUNOFF (AC-FT)	232200	398400	298100
10 PERCENT EXCEEDS	518	940	757
50 PERCENT EXCEEDS	222	278	154
90 PERCENT EXCEEDS	145	176	78

* From floodmark.



BIG BLUE RIVER NEAR CRETE

KANSAS RIVER BASIN

315

06882000 BIG BLUE RIVER AT BARNESTON, NE

LOCATION.--Lat 40°02'40", long 96°35'12", in NE¹/₄ NW¹/₄ sec.24, T.1 N., R.7 E., Gage County, Hydrologic Unit 10270202, on right bank at right downstream end of bridge on State Highway 8, 0.6 mi southwest of Barneston, 1.3 mi upstream from Plum Creek, and 4.3 mi upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,447 mi², of which about 4,370 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1932 to current year.

REVISED RECORDS.--WSP 896: 1932, 1935. WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,162.2 ft above sea level. Prior to June 9, 1941, water-stage recorder at site 0.3 mi downstream at datum 1.56 ft higher. June 9 to Nov. 17, 1941, nonrecording gage and Nov. 18, 1941, to Sept. 30, 1979, water-stage recorder at site 0.7 mi upstream at datum 2.0 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor. Low flow regulated by dam at unused powerplant 0.7 mi upstream. No large tributaries between station and Nebraska-Kansas State line. Some pump diversions for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	365	1250	2970	434	3760	404	4180	705	2240	1280	4300	522
2	355	1060	2530	560	5020	398	3040	684	1270	1030	2400	431
3	318	1160	2430	817	3440	395	2330	647	1140	825	2220	389
4	282	1320	2050	699	1780	385	1810	626	914	725	2530	358
5	260	1230	1510	572	1190	379	1500	608	721	1610	2070	341
6	244	1080	1160	554	960	377	1290	583	640	1300	1520	330
7	229	887	912	503	780	e360	1950	559	596	1980	1330	316
8	249	706	785	459	663	e340	3530	537	1050	1540	1110	296
9	267	584	730	431	608	e290	5930	529	1170	955	941	287
10	227	494	703	415	1270	e280	6170	519	1350	1910	837	281
11	230	442	588	385	2200	e275	4970	508	4200	3510	719	273
12	277	407	523	e380	1560	e270	3610	520	3640	2390	631	270
13	320	386	498	e360	1130	e290	2890	519	3100	1710	569	270
14	250	360	479	e350	908	e320	2480	534	8790	1370	528	275
15	237	340	465	e360	788	e350	1890	1110	5820	1300	497	272
16	253	318	442	e380	734	e400	1510	1800	6380	1490	475	266
17	259	310	498	e400	692	e550	1290	921	6550	1310	453	262
18	259	299	598	e390	646	e880	1260	682	6550	1020	424	261
19	259	305	620	e380	605	e1000	1260	593	4390	725	395	256
20	244	312	589	e370	574	1210	1140	547	2940	584	363	354
21	236	310	539	e360	542	1720	1040	557	2460	499	347	1030
22	233	313	528	e370	528	2730	940	564	1710	513	333	1950
23	239	305	522	e375	511	2820	852	575	1780	691	325	1870
24	241	310	513	e380	483	2240	799	1590	1990	851	383	1970
25	277	308	507	e385	472	2180	782	3670	1270	992	551	1370
26	1150	302	489	e390	450	2450	729	4160	1070	844	691	846
27	1080	298	438	e410	430	2660	692	3300	1030	990	621	718
28	789	300	452	e450	420	4810	693	2350	3250	975	640	558
29	1010	697	442	e550	---	4140	715	2020	3890	832	939	452
30	1120	3450	437	e590	---	12800	717	1820	1710	1740	897	399
31	1260	---	424	605	---	6420	---	3220	---	3640	663	---
TOTAL	13019	19843	26371	14064	33144	54123	61989	37557	83611	41131	30702	17473
MEAN	420	661	851	454	1184	1746	2066	1212	2787	1327	990	582
MAX	1260	3450	2970	817	5020	12800	6170	4160	8790	3640	4300	1970
MIN	227	298	424	350	420	270	692	508	596	499	325	256
AC-FT	25820	39360	52310	27900	65740	107400	123000	74490	165800	81580	60900	34660

e Estimated

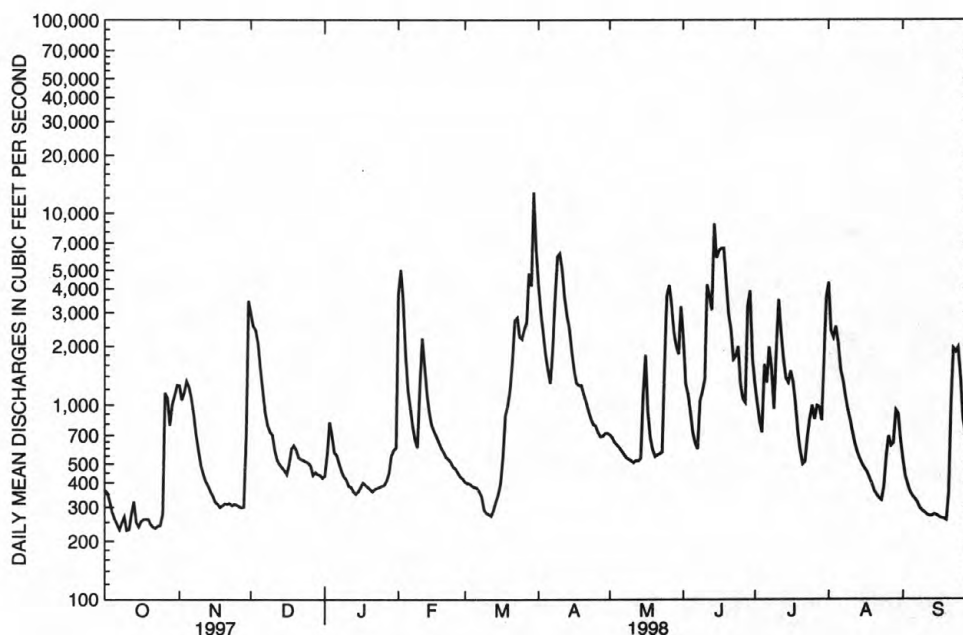
KANSAS RIVER BASIN

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	557	294	237	289	656	1398	869	1254	2076	1360	719	719
MAX	7451	1501	851	1596	2876	10560	5280	5207	10460	12270	5227	3420
(WY)	1974	1997	1998	1973	1984	1979	1984	1995	1951	1993	1954	1989
MIN	61.5	77.5	87.4	67.6	116	137	132	96.0	69.3	30.7	21.1	50.6
(WY)	1941	1937	1977	1937	1940	1968	1934	1934	1934	1934	1934	1939

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1933 - 1998	
ANNUAL TOTAL	269773		433027			
ANNUAL MEAN	739		1186		869	
HIGHEST ANNUAL MEAN					2781	1993
LOWEST ANNUAL MEAN					115	1934
HIGHEST DAILY MEAN	12300	Jun 25	12800	Mar 30	50000	Jun 9 1941
LOWEST DAILY MEAN	171	Sep 21	227	Oct 10	1.0	Nov 30 1945
ANNUAL SEVEN-DAY MINIMUM	189	Sep 16	244	Oct 5	15	Aug 3 1934
INSTANTANEOUS PEAK FLOW			19100	Mar 30	57700	Jun 9 1941
INSTANTANEOUS PEAK STAGE			20.80	Mar 30	34.30	Jun 9 1941
ANNUAL RUNOFF (AC-FT)	535100		858900		629700	
10 PERCENT EXCEEDS	1220		2850		1800	
50 PERCENT EXCEEDS	456		640		273	
90 PERCENT EXCEEDS	244		290		102	



BIG BLUE RIVER AT BARNESTON

KANSAS RIVER BASIN

317

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE

LOCATION.--Lat 40°19'58", long 98°04'00", in SW¹/₄ NW¹/₄ sec.12, T.4 N., R.7 W., Nuckolls County, Hydrologic Unit 10270206, on right bank 10 ft downstream from bridge on State Highway 14, 1 mi upstream from Walnut Creek, 3.2 mi southeast of Deweese, 6 mi northwest of Angus, and at mile 122.57.

DRAINAGE AREA.--984 mi².

PERIOD OF RECORD.--February 1953 to September 1972, October 1974 to current year.

REVISED RECORDS.--WDR NE-97-1: Drainage area.

GAGE.--Water-stage recorder and peak-stage indicator gage. Datum of gage is 1,632.67 ft above sea level. Prior to May 16, 1957, non-recording gage and Oct. 1, 1974, to Mar. 24, 1981, recording gage at present site and datum; May 16, 1957, to Sept. 30, 1972, and Mar. 25, 1981 to Mar. 24, 1982, at site 1,500 ft upstream from bridge at present datum.

REMARKS.--Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	681	475	89	122	85	117	97	95	67	973	66
2	79	525	292	90	113	85	112	97	96	63	543	65
3	74	357	193	93	104	84	111	96	85	74	556	65
4	69	255	e130	e84	99	85	108	97	79	71	548	64
5	67	192	e100	e84	94	84	107	98	79	82	498	65
6	65	150	e94	e82	93	84	106	96	79	183	305	69
7	63	126	e92	e80	e80	e80	208	93	79	283	188	66
8	62	114	e92	e76	e76	e76	463	91	95	326	147	66
9	58	107	e94	e74	e74	e74	563	96	95	329	123	63
10	57	101	e96	e70	e70	e70	361	95	92	350	296	65
11	59	98	e94	e66	e66	e66	244	96	120	591	281	67
12	70	97	e94	e60	e62	e62	182	97	194	546	133	68
13	72	96	94	e62	e70	e70	150	95	201	336	118	69
14	60	93	94	e62	e80	e80	129	97	180	187	117	73
15	55	e84	94	e64	e88	e88	118	108	221	133	108	75
16	52	e82	94	e64	111	94	108	128	231	110	108	72
17	51	e80	93	e64	103	103	103	110	171	97	102	73
18	52	86	93	e66	98	104	101	104	126	97	100	76
19	53	86	93	e66	96	100	102	102	101	94	96	76
20	50	87	91	e66	93	98	98	98	97	95	91	80
21	50	87	91	e68	92	100	96	98	90	99	100	73
22	50	87	92	e68	94	116	96	101	89	94	96	72
23	52	86	90	e70	93	124	98	100	113	98	89	72
24	57	85	91	e74	93	117	100	141	122	108	85	75
25	114	87	92	80	95	128	102	153	100	104	72	78
26	213	87	89	83	92	132	100	111	92	100	81	79
27	219	88	88	84	90	140	98	103	91	98	178	78
28	171	88	90	88	88	143	94	100	85	99	105	79
29	165	141	88	94	---	138	94	143	86	99	80	81
30	188	398	88	103	---	137	95	124	73	4450	72	82
31	415	---	88	110	---	127	---	105	---	2260	72	---
TOTAL	2948	4731	3579	2384	2529	3074	4564	3270	3457	11723	6461	2152
MEAN	95.1	158	115	76.9	90.3	99.2	152	105	115	378	208	71.7
MAX	415	681	475	110	122	143	563	153	231	4450	973	82
MIN	50	80	88	60	62	62	94	91	73	63	72	63
AC-FT	5850	9380	7100	4730	5020	6100	9050	6490	6860	23250	12820	4270

e Estimated

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.4	68.4	64.6	68.4	95.1	193	132	255	263	259	155	135
MAX	347	193	115	207	245	1140	762	1348	1145	2655	883	911
(WY)	1966	1997	1998	1984	1982	1993	1984	1965	1957	1993	1985	1969
MIN	29.1	39.3	41.7	44.6	46.7	56.5	59.3	50.5	36.0	15.6	14.0	10.7
(WY)	1992	1992	1981	1978	1981	1981	1972	1992	1988	1970	1991	1991

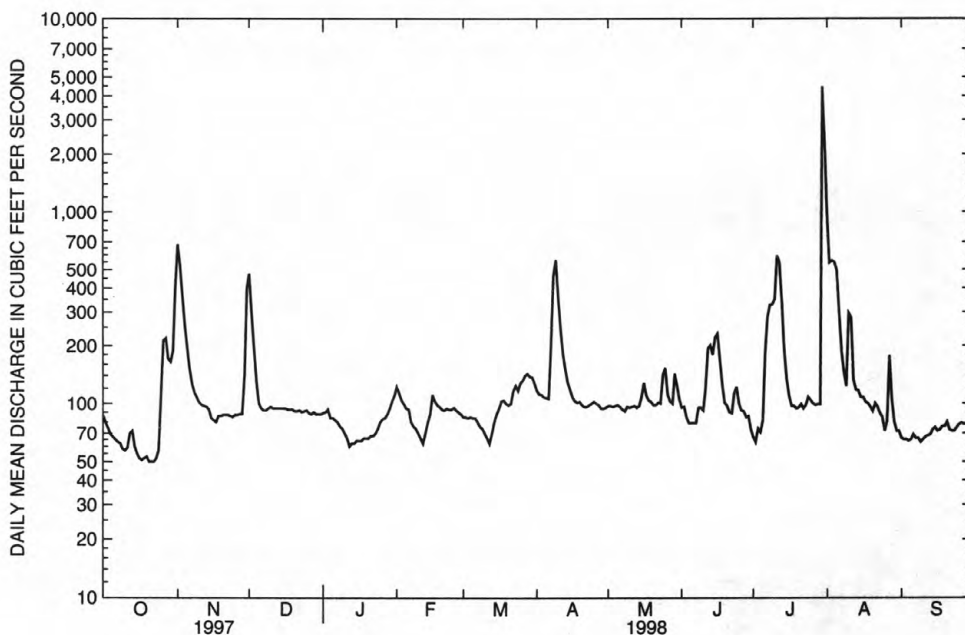
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1954 - 1998

ANNUAL TOTAL	36586		50872			
ANNUAL MEAN	100		139		148	
MEDIAN OF ANNUAL MEANS					126	
HIGHEST ANNUAL MEAN					464	
LOWEST ANNUAL MEAN					64.0	
HIGHEST DAILY MEAN	681	Nov 1	4450	Jul 30	14300	Sep 1 1969
LOWEST DAILY MEAN	11	Aug 10	50	Oct 20	3.2	Aug 11 1988
ANNUAL SEVEN-DAY MINIMUM	16	Aug 5	51	Oct 16	4.2	Aug 31 1988
INSTANTANEOUS PEAK FLOW			5710	Jul 30	25100	Aug 31 1969
INSTANTANEOUS PEAK STAGE			9.40	Jul 30	18.57	Aug 31 1969
ANNUAL RUNOFF (AC-FT)	72570		100900		107200	
10 PERCENT EXCEEDS	160		193		195	
50 PERCENT EXCEEDS	84		94		70	
90 PERCENT EXCEEDS	50		66		44	



LITTLE BLUE RIVER NEAR DEWEESE

KANSAS RIVER BASIN

319

06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE

LOCATION.--Lat 40°06'54", long 97°10'13", in NW¹/₄NE¹/₄ sec.26, T.2 N., R.2 E., Jefferson County, Hydrologic Unit 10270207, at right downstream wingwall of bridge on State Highway 15, 0.8 mi south of Fairbury, 5.2 mi upstream from Rose Creek, and at mile 62.0.

DRAINAGE AREA.--2,350 mi².

PERIOD OF RECORD.--May 1908 to September 1915, October 1928 to September 1956 (published as "near Endicott"), October 1956 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1086: 1941(M). WSP 1390: 1908(M), 1912, 1915, 1935, 1939, 1945(M). WSP 1510: 1947 (calendar year figures only). WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,277.19 ft above sea level. May 23, 1908, to Sept. 30, 1915, nonrecording gage at present site at different datum. Apr. 26, 1929 to Sept. 24, 1957, nonrecording gage or water-stage recorder at site 3.5 mi downstream at various datums. Sept. 25, 1957 to Aug. 20, 1991, water-stage recorder at present site at datum 5.0 ft higher.

REMARKS.--Records good except for periods of estimated record, which are poor. Some regulation at low stage by thermoelectric plant above station. Natural flow of stream affected by irrigation development above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	855	605	198	1890	202	469	278	209	129	2790	208
2	157	1010	681	232	1270	201	411	271	195	119	1860	183
3	141	889	600	283	541	203	375	264	161	112	1590	168
4	130	635	463	219	382	201	368	258	170	116	1410	154
5	124	489	352	229	316	201	371	248	170	141	1350	144
6	121	404	323	249	288	201	358	246	167	125	1300	136
7	117	348	280	217	265	204	789	243	167	131	1160	131
8	116	303	286	197	247	e110	3750	235	230	156	927	124
9	113	269	291	186	238	e108	2850	232	216	239	756	121
10	116	244	256	e120	315	e102	1710	234	216	620	641	120
11	123	225	252	e108	337	e98	1230	232	218	646	517	120
12	136	214	246	e106	304	e92	979	261	220	583	553	120
13	130	205	232	e102	300	e140	880	240	232	861	425	121
14	129	195	239	e110	287	e170	840	228	433	838	312	124
15	137	189	242	e130	269	e210	781	224	410	663	275	133
16	114	181	215	e140	269	248	545	220	316	458	255	128
17	122	183	208	e150	267	264	460	220	307	363	245	124
18	127	184	213	e150	256	276	412	226	297	277	214	120
19	121	185	214	e155	244	264	379	223	270	235	197	121
20	117	180	217	e160	235	260	355	213	252	197	189	310
21	77	176	214	e160	227	304	336	208	220	181	183	270
22	111	172	213	e160	226	440	322	208	199	234	176	180
23	115	170	213	e160	224	550	306	207	191	331	171	154
24	123	171	213	e165	223	528	297	206	181	266	165	147
25	160	172	216	e165	221	565	291	206	177	318	162	142
26	197	173	208	e170	216	662	278	211	171	524	180	137
27	168	172	193	e180	211	850	269	232	165	828	848	137
28	220	172	223	e200	208	1230	279	211	153	450	856	134
29	336	228	223	e220	---	1130	286	203	143	306	624	132
30	435	561	202	253	---	805	280	194	136	375	332	132
31	820	---	195	268	---	572	---	197	---	2680	251	---
TOTAL	5331	9554	8728	5542	10276	11391	21256	7079	6592	13502	20914	4475
MEAN	172	318	282	179	367	367	709	228	220	436	675	149
MAX	820	1010	681	283	1890	1230	3750	278	433	2680	2790	310
MIN	77	170	193	102	208	92	269	194	136	112	162	120
AC-FT	10570	18950	17310	10990	20380	22590	42160	14040	13080	26780	41480	8880

e Estimated

KANSAS RIVER BASIN

06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	279	175	142	157	272	502	335	554	878	594	359	359
MAX	4406	886	282	594	1004	2821	2019	2419	4735	6413	2142	2189
(WY)	1974	1997	1914	1973	1948	1987	1987	1945	1951	1993	1985	1973
MIN	44.3	68.7	74.7	75.0	93.3	103	99.8	96.6	78.1	55.4	48.3	28.7
(WY)	1992	1992	1981	1930	1981	1981	1981	1992	1934	1934	1936	1991

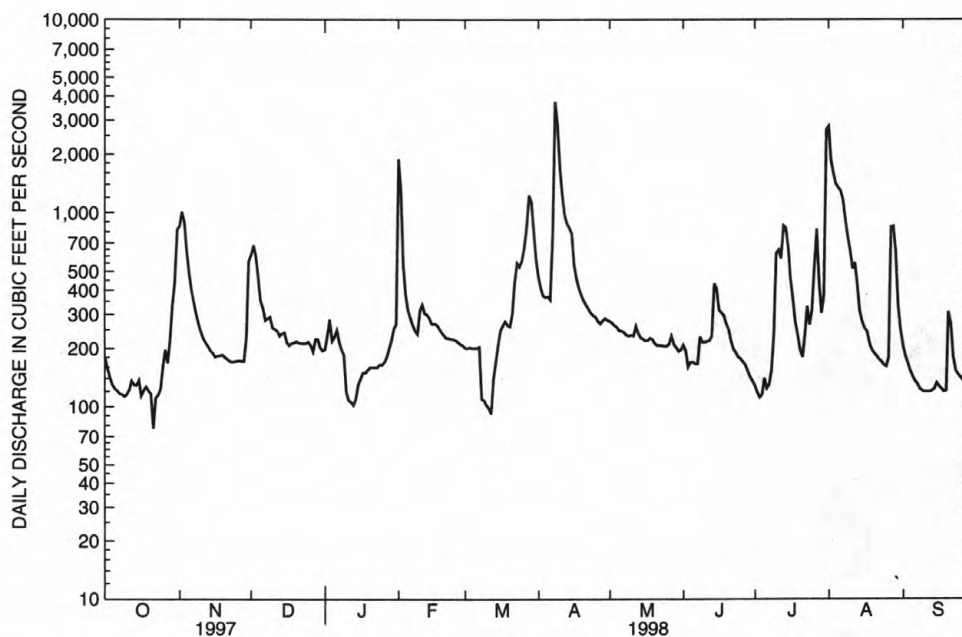
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1910 - 1998

ANNUAL TOTAL	109478	124640	
ANNUAL MEAN	300	341	387
HIGHEST ANNUAL MEAN			1239
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	12600	Jun 25	3750
LOWEST DAILY MEAN	77	Oct 21	77
ANNUAL SEVEN-DAY MINIMUM	90	Sep 16	113
INSTANTANEOUS PEAK FLOW			4560
INSTANTANEOUS PEAK STAGE			12.61
ANNUAL RUNOFF (AC-FT)	217100	247200	280700
10 PERCENT EXCEEDS	412	662	586
50 PERCENT EXCEEDS	185	220	160
90 PERCENT EXCEEDS	130	124	92



LITTLE BLUE RIVER NEAR FAIRBURY

KANSAS RIVER BASIN

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06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°58'48", long 97°00'16", NE¹/₄ SW¹/₄ sec.8, T.1 S., R.4 E., Washington County, Hydrologic Unit 10270207, on right bank 2 ft downstream from bridge on county road, 0.6 mi west of Hollenberg, 1.75 mi downstream from Nebraska-Kansas State line, and at mile 43.1.

DRAINAGE AREA.--2,752 mi².

PERIOD OF RECORD.--March 1973 to February 1974 (discharge measurements only), March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,216.10 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are poor. Discharge measurements made prior to 1974 water year are published in table of miscellaneous sites in WDR NE-73.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	935	663	221	1650	265	800	397	345	379	3320	236
2	207	1030	678	241	2190	255	678	372	341	353	1930	204
3	183	1000	655	293	923	277	637	351	330	333	1640	185
4	165	718	515	311	526	261	631	337	305	334	1350	172
5	156	558	392	261	379	263	697	322	327	362	1250	160
6	151	454	313	280	329	258	656	325	331	362	1190	155
7	148	389	274	261	309	289	1050	325	332	388	1130	156
8	147	341	280	242	289	272	5120	320	476	409	921	149
9	142	300	305	221	283	185	4660	315	539	495	736	144
10	139	272	276	149	445	e180	2630	320	504	950	634	141
11	140	250	259	128	519	e175	1800	321	629	1000	565	140
12	160	236	247	e125	409	e170	1400	358	548	866	492	142
13	157	228	218	e120	375	e190	1410	355	465	1420	529	145
14	146	218	226	e122	366	e200	1250	334	1020	1120	383	155
15	151	208	233	e130	341	e220	1330	376	724	928	321	166
16	151	197	234	e150	334	e250	871	341	611	724	294	163
17	121	195	223	e155	335	e300	702	333	560	609	277	156
18	155	201	225	e155	327	e350	617	343	543	517	255	153
19	134	202	229	e160	314	e400	569	348	522	444	229	151
20	129	200	230	e165	303	452	529	335	496	399	218	339
21	118	193	233	e165	293	474	498	393	455	373	211	580
22	107	191	234	e170	293	646	470	372	423	374	200	334
23	125	188	232	e170	289	790	453	345	401	486	198	219
24	132	187	237	e175	286	881	436	340	384	507	197	190
25	178	187	237	e175	288	893	421	340	371	481	188	176
26	283	187	231	e180	279	976	400	337	366	707	193	168
27	261	188	208	e190	280	1230	392	374	388	1100	515	163
28	228	188	218	e200	278	1960	405	370	800	841	745	165
29	446	224	225	e240	---	1810	432	349	941	626	678	161
30	526	466	224	e280	---	1840	420	336	411	683	422	164
31	843	---	216	322	---	1030	---	328	---	1420	299	---
TOTAL	6363	10331	9170	6157	13232	17742	32364	10712	14888	19990	21510	5732
MEAN	205	344	296	199	473	572	1079	346	496	645	694	191
MAX	843	1030	678	322	2190	1960	5120	397	1020	1420	3320	580
MIN	107	187	208	120	278	170	392	315	305	333	188	140
AC-FT	12620	20490	18190	12210	26250	35190	64190	21250	29530	39650	42670	11370

e Estimated

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	334	247	188	179	352	847	589	785	973	1111	571	400
MAX	2163	1113	424	576	1059	3816	2379	2302	4373	9014	2572	1320
(WY)	1987	1997	1993	1984	1993	1993	1987	1995	1984	1993	1985	1977
MIN	45.3	81.1	102	98.5	115	118	125	108	151	111	72.5	32.0
(WY)	1992	1992	1977	1977	1992	1981	1981	1992	1981	1991	1991	1991

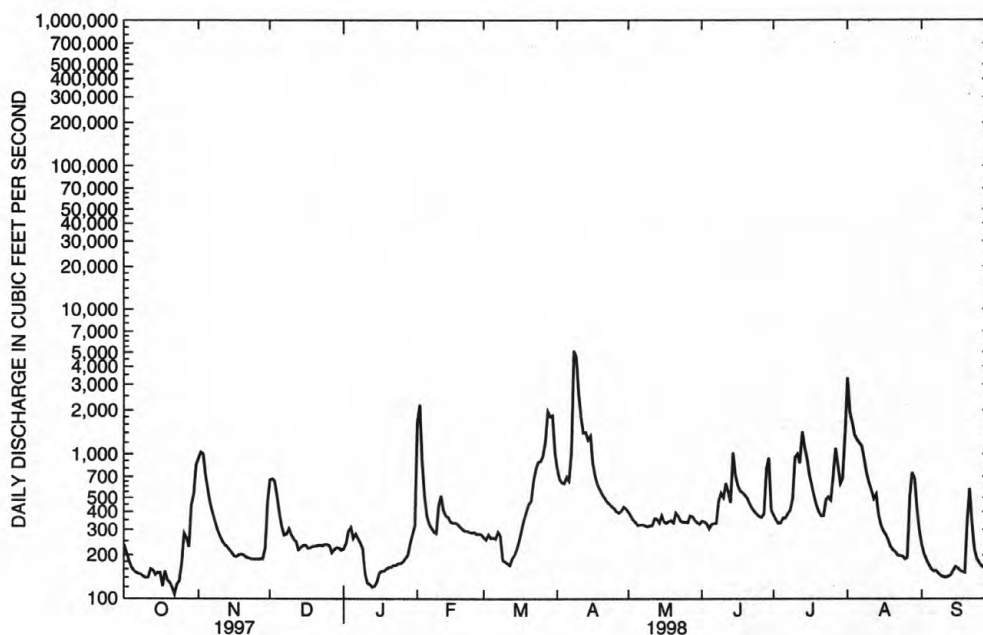
SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1975 - 1998

ANNUAL TOTAL	128954	168191	
ANNUAL MEAN	353	461	549
MEDIAN OF ANNUAL MEANS			481
HIGHEST ANNUAL MEAN			1891
LOWEST ANNUAL MEAN			195
HIGHEST DAILY MEAN	13200 Jun 25	5120 Apr 8	39300 Jul 26 1992
LOWEST DAILY MEAN	100 Sep 20	107 Oct 22	26 Oct 1 1991
ANNUAL SEVEN-DAY MINIMUM	108 Sep 16	127 Oct 17	27 Sep 27 1991
INSTANTANEOUS PEAK FLOW		6240 Apr 8	47800 Jul 26 1992
INSTANTANEOUS PEAK STAGE		9.25 Apr 8	21.21 Jul 26 1992
ANNUAL RUNOFF (AC-FT)	255800	333600	398000
10 PERCENT EXCEEDS	484	925	923
50 PERCENT EXCEEDS	230	325	212
90 PERCENT EXCEEDS	150	156	108



LITTLE BLUE RIVER AT HOLLENBERG, KS

Measurements of streamflow at points other than gaging stations are given in the following table. Some measurements were made during periods of base flow when streamflow is primarily from ground-water storage and may be correlated with the simultaneous discharge of a nearby stream where continuous records are available to give a picture of the low-flow potentiality of the stream.

Discharge measurements made at miscellaneous sites during water year 1998

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Platte River basin						
Horse Creek (06677500)	North Platte River	Lat 41°56'21", long 103°59'13", in SE ¹ / ₄ NE ¹ / ₄ sec.25, T.23 N.,R.58 W., Scotts Bluff County, at county road bridge, 3.2 mi northeast of Lyman.	1,707	**1931-94	07-23-98	76
Dry Sheep Creek (06677985)	Sheep Creek	Lat 42°00'58", long 103°58'23", in SW ¹ / ₄ SE ¹ / ₄ SE ¹ / ₄ sec.30,T.24N.,R.57W. Sioux county, at county road bridge, 4.4 mi northwest of Morrill.	---	1997-	02-26-97	9.5
					04-23-97	8.6
					05-20-97	6.6
					06-18-97	6.0
					09-23-97	11
					03-16-98	9.6
		08-18-98	8.3			
Sheep Creek (06677995)	North Platte River	Lat 41°58'14", long 103°57'14", in SE ¹ / ₄ SE ¹ / ₂ sec.8, T.23 N., R.57 W., Scotts Bluff County, at county road bridge, 1.5 mi northweat of Morrill.	---	1996-97	03-16-98	62
					08-19-98	2.0
North Platte (06678500)	Platte River	Lat 41°56'12", long 103°55'44", in SW ¹ / ₄ NW ¹ / ₄ sec.27, T.23 N., R.57W., Scotts Bluff County, at highway bridge, 2 mi south of Morrill.	24,100	1917-23 1996-97	11-24-97	457
					12-15-97	389
					01-20-98	373
					05-13-98	292
					05-25-98	348
					06-09-98	742
					06-23-98	342
					07-23-98	244
					08-04-98	323
					08-18-98	100
		08-25-98	278			
		09-16-98	281			
*Akers Draw (06678610)	North Platte River	Lat 41°58'33", long 103°53'29", in NW ¹ / ₄ SW ¹ / ₄ sec.12, T.23 N., R.57W., Scotts Bluff County, at county road bridge, 2 mi northeast of Morrill.	---	1949-64 1996-97	03-16-98	11
					08-19-98	12
*Dane Creek (06788495)	North Loup River	Lat 41°36'31", long 98°56'36", in NE ¹ / ₄ NE ¹ / ₄ sec.20, T.19 N., R.14 W.Valley County, at bridge on State Highway 11 at northwest edge of Ord.	---	1962 1977-97	11-10-97	1.3
					05-01-98	2.1
**Mira Creek (06788990)	North Loup River	Lat 41°29'54", long 98°46'46", in SE ¹ / ₄ SW ¹ / ₄ sec.26, T.18 N.,R.13 W.,Valley County, at bridge on State Highway 11 at west edge of North Loup.	---	1977-97	11-10-97	3.2
					05-01-98	7.1

* Also published with additional data elsewhere in this report.

** Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest stage partial record stations during water year 1998

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (feet)	Dis-charge (ft ³ /s)
Kansas River basin							
06814500	North Fork Big Nemaha R, at Humboldt, NE	Lat 40° 09' 25", long 95° 56' 40", in NW1/4 NE1/4 sec. 10, T. 2N., R. 13 E., Richardson County, on right bank on bridge on State Highway 105 at south edge of Humboldt.	548	*1952-96 1997-98	03-30-98	23.12	38,900
06838200	Coon Creek at Indianola, NE	Lat 40° 14' 03", long 100 ° 25' 37", in NW1/4 NE1/4 sec.13, T.3 N., R.28 W., Red Willow County, at bridge on U.S. Highways 6 and 34, 0.5 mile west of Indianola.	69	1961-98		below gage	<50
06838550	Dry Creek at Bartley, NE	Lat 40° 15' 02", long 100° 19' 02", in SW1/4 SE1/4 sec.1, T.3 N., R.27 W., Red Willow County, at bridge on U.S. Highway 6 and 34, 0.5 mile west of Bartley.	42	1961-98		below gage	<5
06850000	Turkey Creek at Naponee, NE	Lat 40° 04' 34", long 99° 08' 17", in SW1/4 SW1/4 sec.4, T.1 N., R.16 W., Franklin County, on downstream side of county bridge at east side of Naponee.	129	*1948-53 a1954-61 b1962-77 a1978-89 1991-98		below gage	<300
06881450	Indian Creek at Beatrice, NE	Lat 40° 17' 08", long 96° 44' 47", in SE1/4 NE1/4 sec. 28, T.4 N., R.6 E., Gage County, at bridge on U.S. Higway 77 at north edge of Beatrice.	74.7	1960-89, 1991-98	03-30-98	10.88	1,360

* Operated as a continuous-record gaging station.

a Discharge measurements published in table for miscellaneous sites.

b Discharge measurements published in table for low flow partial record sites.

LOW-FLOW INVESTIGATIONS

325

KANSAS RIVER BASIN

Low-flow investigations made in the Big Blue and Little Blue River basins in Nebraska during water year 1998 to obtain data on ground-water/surface-water relationships.

BIG BLUE RIVER BASIN

<i>Location</i>	<i>Observation of zero flow or measured discharge in cubic feet per second October 20, 1997</i>
Big Blue River 1.5 miles north of DeWitt in SW1/4 NE1/4 sec. 12, T.5 N., R.4 E. -----	171
Clatonia Creek 1 mile northeast of DeWitt in NW1/4 NW1/4 sec. 17, T.5 N., R.5 E. -----	1.1
Turkey Creek 1.5 miles west of DeWitt in SE1/4 NW1/4 sec. 15, T.5 N., R.4 E -----	24.6
Turkey Creek 0.5 miles south of DeWitt in SE1/4 NW1/4 sec. 24, T.5 N., R.4 E. -----	28.2
Turkey Creek 1.5 miles southeast of DeWitt in NW1/4 SW1/4 sec. 29, T.5 N., R.5 E -----	28.2
Big Blue River 2.5 miles southeast of DeWitt in NW1/4 NE1/4 sec. 33, T.5 N., R.5 E -----	189
Soap Creek 3.5 miles southeast of DeWitt in SE1/4 SW1/4 sec. 27, T.5 N., R.5 E. -----	0.19
Unnamed tributary to Big Blue River 1 mile north of Hoag in NW1/4 NE1/4 sec. 10, T.4 N., R.5 E -----	0
Snake Creek 2 miles northeast of Hoag in NW1/4 NW1/4 sec. 1, T.4 N., R.5 E -----	0
Big Blue River 1 mile east of Hoag in NE1/4 NW1/4 sec. 13, T.4 N., R.5 E. -----	208
Cub Creek 2 miles south of Hoag in SW1/4 SW1/4 sec. 24, T.4 N., R.5 E -----	1.32
Bottle Creek 1.5 miles northwest of Beatrice in NW1/4 SW1/4 sec. 30, T.4 N., R.6 E -----	.08
Unnamed tributary to Big Blue River 0.5 miles northwest of Beatrice in SW1/4 SW1/4 sec. 29, T.4 N., R.6 E. -----	.26
Indian Creek at Beatrice in SE1/4 SE1/4 sec. 28, T.4 N., R.6 E -----	4.5
Big Blue River at Beatrice in SW1/4 NW1/4 sec. 3, T.3 N., R.6 E. (Gage) -----	219

LITTLE BLUE RIVER BASIN

October 10, 1997

Little Blue River 2.7 miles south of Alexandria in SE1/4 SE1/4 sec. 23, T.3 N., R.1 W. -----	90.0
Big Sandy Creek 0.8 miles south of Alexandria in SE1/4 SE1/4 sec. 11, T.3 N., R.1 W. -----	22.7
Big Sandy Creek 1.2 miles west of Powell in SE1/4 SE1/4 sec. 16, T.3 N., R.1 E -----	27.1
Little Blue River 1.2 miles southwest of Powell in SE1/4 SE1/4 sec. 22, T.3 N., R.1 E -----	122
Little Sandy Creek 2.0 miles east of Powell in NW1/4 NE1/4 sec. 19, T.3 N., R.2 E. -----	1.1
Whiskey Creek 2.1 miles northwest of Fairbury in SW1/4 SE1/4 sec. 33, T.3 N., R.2 E -----	.13
Little Blue River 1.3 miles northwest of Fairbury in NW1/4 NE1/4 sec. 9, T.2 N., R.2 E. -----	125
Trib. to Little Blue River 0.8 miles southwest of Fairbury in NE1/4 SW1/4 sec. 22, T.2 N., R.2 E. -----	0
Little Blue River 0.8 miles south of Fairbury in NW1/4 NE1/4 sec. 26, T.2 N., R.2 E. (Gage) -----	122
Brawner Creek 0.4 miles southeast of Fairbury in SE1/4 NE1/4 sec. 23, T.2 N., R.2 E. -----	0
Rose Creek 4.0 miles southwest of Endicott in NW1/4 NW1/4 sec. 12, T.1 N., R.2 E. -----	8.6
Smith Creek 0.2 miles northwest of Endicott in NW1/4 SE1/4 sec. 5, T.1 N., R.3 E. -----	.15
Little Blue River 0.3 miles south of Endicott in SE1/4 SW1/4 sec. 4, T.1 N., R.3 E. -----	142
Rock Creek 0.3 miles southeast of Endicott in SE1/4 SE1/4 sec. 4, T.1 N., R.3 E -----	.13
Coon Creek 2.6 miles northwest of Steele City in NW1/4 NE1/4 sec. 15, T.1 N., R.3 E -----	.53
Little Blue River 0.5 miles south of Steele City in NW1/4 NW1/4 sec. 30, T.1 N., R.4 E. -----	148
Little Blue River 0.6 miles west of Hollenberg in NE1/4 SW1/4 sec. 8, T.1 S., R.4 E. (Gage) -----	138

326 ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE INST. (FT ³ /S) (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)
------	------	--	--	--	--	--	---	---	--

VALLEY COUNTY

06788495 DANE C AT ORD, NEBR. (LAT 41 36 31N LONG 098 56 36W)

NOV	10...0910	1.3	896	8.0	-3.5	3.5	55	390	343
MAY	01...0840	2.1	870	7.9	13.0	11.5	65	380	313

06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)

NOV	10...1050	3.2	767	8.2	-1.0	2.0	16	340	341
MAY	01...1040	7.1	842	8.3	21.0	13.0	22	380	359

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
------	---	--	--	---	---	---	--	---	--	---

06788495 DANE C AT ORD, NEBR. (LAT 41 36 31N LONG 098 56 36W)

NOV	10	564	1.95	.77	120	23	22	26	99	17	.25
MAY	01	537	3.04	.73	110	25	21	6.4	130	15	.24

06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)

NOV	10	483	4.22	.66	100	22	26	16	63	11	.27
MAY	01	517	9.88	.70	100	30	31	4.4	100	17	.23

DATE	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)
------	---	--	--	---	--	--	--	--	--	--

06788495 DANE C AT ORD, NEBR. (LAT 41 36 31N LONG 098 56 36W)

NOV	10	37	2.66	.025	2.68	.893	.684	.681	64	40	350
MAY	01	29	1.67	.139	1.81	2.82	1.71	1.65	68	28	676

06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)

NOV	10	33	--	<.010	.835	.032	.414	.435	84	9.8	497
MAY	01	14	.094	.014	.108	.091	.363	.329	84	<10	592

GROUND-WATER LEVELS

327

ADAMS COUNTY

403403098244001. Local number 7N 10W 23AB.

LOCATION.--Lat 40°34'03", long 98°24'40", NW¹/₄ NE¹/₄ sec.23, T.7 N., R.10 W., Hydrologic Unit 10270206, 0.5 mi west of the west junction of Routes 281 and 6, in the south part of Hastings. Owner: Henry Fricke.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 8 in, depth 155 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,927 ft. Measuring point: Top of casing 1.0 ft above land-surface datum.

REMARKS.--Large amounts of ground water are pumped from municipal and industrial wells located east and northeast of the well and from irrigation wells in other directions.

PERIOD OF RECORD.--August 1934 to October 1938; August 1948 to December 1950; January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 99.95 ft below land-surface datum, Jan. 22, Mar.14, 1935; lowest, 128.82 ft below land-surface datum, July 10, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 07	116.40	DEC 05	113.11	FEB 13	112.38	APR 09	113.63	JUN 09	111.55	AUG 10	112.72
NOV 13	114.22	JAN 15	112.54	MAR 25	111.46	MAY 12	111.64	JUL 14	112.52	SEP 02	113.11

BLAINE COUNTY

414958100061501. Local number 22N 24W 33CA.

LOCATION.--Lat 41°49'58", long 100°06'15", NE¹/₄ SW¹/₄ sec. 33, T. 22 N., R. 24 W., Hydrologic Unit 10210001, approximately 500 ft west of junction of State Highways 91 and 2 north of Dunning. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 13 ft, screened 11 to 13 ft.

DATUM.--Altitude of land-surface datum is 2,618 ft. Measuring point: Top of casing 1.40 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.04 ft below land-surface datum, Mar. 8, 1950; lowest, 6.97 ft below land-surface datum, Aug. 8, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 01	4.32	JAN 06	3.68	APR 09	3.06	JUL 01	3.60				
NOV 24	3.48	FEB 18	3.56	MAY 07	3.69	SEP 11	4.76				

BOONE COUNTY

413323098074501. Local number 18N 7W 4CA.

LOCATION.--Lat 41°33'23", long 98°07'45", NE¹/₄ SW¹/₄ sec.4, T.18 N., R.7 W., Hydrologic Unit 10210010, at junction of State Highways 52 and 56 approximately 1 mi east of Cedar Rapids. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in. depth 22 ft. screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,762 ft. Measuring point: Top of casing 2.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1936 to October 1942; April 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.15 ft below land-surface datum, May 17, 1984; lowest, 15.17 ft below land-surface datum, Oct. 26, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

BOX BUTTE COUNTY

420945102551501. Local number 25N 48W 4DDD.

LOCATION.--Lat 42°09'45", long 102°55'15", SE¹/₄ SE¹/₄ SE¹/₄ sec.4, T.25 N., R.48 W., Hydrologic Unit 10150003, approximately 3.6 mi south and 2.8 mi east of Berea. Owner: U.S. Geological Survey.

AQUIFER.--Marsland Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 204 ft, screened 190 to 193 ft.

DATUM.--Altitude of land-surface datum is 4,032.95 ft. Measuring point: Top of pipe 2.00 ft above land-surface datum.

REMARKS.--Water levels in vicinity of well are affected by large withdrawals of ground water for irrigation use. Casing was broken off below the land surface during the summer of 1986. Well was cleaned and repaired during the spring of 1988.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.14 ft below land-surface datum, Jan. 25, 1950; lowest, 109.80 ft below land-surface datum, Oct. 07, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 07	109.80	MAR 23	109.70								

GROUND-WATER LEVELS

329

BUFFALO COUNTY

404618098504401. Local number 9N 14W 1DC.

LOCATION.--Lat 40°46'18", long 98°50'44", SW¹/₄ SE¹/₄ sec.1, T.9 N., R.14 W., Hydrologic Unit 10200102, 1.3 mi north of the intersection of Route 30 and the North-South range-line road on the east side of Gibbon, then 0.5 mi west on section-line road. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 38 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,060.43 ft. Measuring point: Top of casing 0.80 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage from nearby irrigation wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.46 ft below land-surface datum, June 26, 29, 1998; lowest, 29.22 ft below land-surface datum, Aug. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	19.47	18.86	18.34	18.00	17.82	17.72	17.14	15.04	13.37	13.34	13.60	15.16
10	19.50	18.70	18.31	18.04	17.80	17.79	16.82	14.85	13.14	13.44	13.42	15.19
15	19.46	18.64	18.15	17.91	17.69	17.62	16.35	14.71	12.95	13.63	13.48	15.23
20	19.34	18.45	18.23	17.91	17.74	17.60	15.94	14.52	12.72	15.27	14.00	15.07
25	19.21	18.39	18.12	17.85	17.57	17.44	15.53	13.87	12.60	14.32	14.04	14.97
EOM	18.91	18.35	18.13	17.79	17.75	17.20	15.29	13.60	12.83	13.94	14.86	15.05

WATER YEAR 1998: HIGHEST 12.46 JUN 26, 29, 1998
 LOWEST 19.53 OCT 9, 1997

BUFFALO COUNTY

404345098560001. Local number 9N 14W 19DD.

LOCATION.--Lat 40°43'45", long 98°56'00", SE¹/₄ SE¹/₄ sec. 19, T.9 N., R.14 W., Hydrologic Unit 10200102, 4.7 mi west-southwest of Gibbon on U.S. Highway 30. Owner: Robert D. Lewis.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 54 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,102.16 ft. Measuring point: Hole in pump base 0.70 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumping of well and of nearby wells for irrigation supplies.

PERIOD OF RECORD.--October 1930 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.55 ft below land-surface datum, June 9, 1931; lowest, 35.20 ft below land-surface datum, Aug. 30, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	27.54	APR 28	24.51								

GROUND-WATER LEVELS

BUTLER COUNTY

411420097173002. Local number 15N 1E 27DD2.

LOCATION.--Lat 41°14'20", long 97°17'30", SE¹/₄ SE¹/₄ sec.27, T.15 N., R.1 E., Hydrologic Unit 10270201, 2 mi north of the northeast corner of Rising City. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 210.0 ft, perforated 199 to 210 ft.

DATUM.--Altitude of land-surface datum is 1,618 ft. Measuring point: Top of platform, at land-surface datum.

REMARKS.--Replacement for 411420097173001, local number 15N-1E-27DD, period of record June 1958 to January 1977. Water levels in well affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 95.62 ft below land-surface datum, June 6, 1995; lowest, 174.50 ft below land-surface datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
01	106.94	---	---	---	---	---	---	---	---	---	---	117.02
02	---	---	---	---	---	---	98.23	---	---	---	---	---
04	---	---	---	---	---	98.61	---	---	---	---	---	---
05	105.88	101.24	99.95	99.23	98.89	98.63	98.33	97.85	98.62	---	---	115.82
06	---	---	---	---	---	---	---	---	---	122.64	---	---
07	---	101.30	---	---	---	---	---	---	---	---	---	---
09	---	---	---	---	---	---	---	---	97.91	---	---	---
10	104.83	101.12	99.78	99.13	98.76	98.85	98.20	100.23	98.01	134.65	---	112.60
14	---	---	---	---	---	---	---	---	---	---	142.07	---
15	103.84	100.71	99.75	99.10	98.73	98.67	97.99	99.04	97.67	133.20	---	110.12
19	---	---	---	---	98.63	---	---	---	---	---	---	---
20	103.08	100.48	99.61	98.99	98.64	98.50	98.11	99.59	97.70	117.15	---	---
25	102.17	100.35	99.37	98.94	98.61	98.47	97.95	98.42	97.65	---	---	---
EOM	101.53	100.01	99.32	98.87	98.46	98.26	97.99	98.94	105.63	---	---	---

WATER YEAR 1998: HIGHEST 97.67 JUN. 15, 1998
 LOWEST *145.67 AUG 16, 1998

* Lowest recorded reading before float stuck.

424100103243501. Local number 31N 52W 3DC.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 39 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,685 ft. Measuring point: Edge of iron plate 1.07 ft above land-surface datum.

PERIOD OF RECORD.--August 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land-surface datum, May 30, 1948; lowest, 22.60 ft below land-surface datum, Nov. 5, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	WATER		WATER		WATER		WATER		WATER		
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 13	19.01	MAR 17	19.25								

404949099445701. Local number 10N 21W 18DDD.

LOCATION.--Lat 40°49'49", long 99°44'57", SE¹/₄ SE¹/₄ SE¹/₄ sec. 18, T. 10 N., R. 21 W., Hydrologic Unit 10200101, 3.5 mi north of the intersection of Route 21 and U.S. Highway 30 in Lexington. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 120 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,420.58 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumpage from nearby irrigation wells and by seepage from irrigation canals.

PERIOD OF RECORD.--July 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.20 ft below land-surface datum, July 24-25, 1993; lowest, 21.50 ft below land-surface datum, July 16, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	9.96	9.31	9.65	10.04	10.44	10.74	10.51	10.67	10.66	12.85	8.80	10.09
10	10.07	9.32	9.73	10.11	10.48	10.76	10.47	10.76	10.50	14,18	10.18	9.84
15	9.98	9.43	9.72	10.15	10.50	10.74	10.45	10.83	10.42	13.51	10.13	10.07
20	9.81	9.41	9.83	10.24	10.57	10.78	10.49	10.97	10.43	13.80	11.68	10.27
25	9.77	9.48	9.87	10.29	10.54	10.70	10.50	10.98	10.41	9.95	11.55	10.33
EOM	9.43	9.57	9.98	10.34	10.66	10.61	10.57	10.84	12.09	9.04	9.20	10.59

WATER YEAR 1998:	HIGHEST	8.76	AUG 6-7, 1998
	LOWEST	14.18	JUL 10-11, 1998

GROUND-WATER LEVELS

DUNDY COUNTY

400155101521302. Local number 1N 40W 29BB2.

LOCATION.--Lat 40°01'55", long 101°52'13", NW¹/₄ NW¹/₄ sec.29, T.1 N., R.40 W., Hydrologic Unit 10250002, 3.5 mi east of Haigler on U.S. Highway 34 and 0.5 mi north. Well is within 0.5 mi of Republican River. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 48.8 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,205 ft. Measuring point: South side of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 400155101521301, local number 1N 40W 29BB1 with period of record from May 1946 to June 1975. Water levels in well are affected by pumping from nearby irrigation wells, evapotranspiration, and changes in stage of Republican River.

PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.41 ft below land-surface datum, June 21, 1984; lowest, 27.84 ft below land-surface datum, July 31, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	---	24.23	19.71	18.86	18.48	18.23	18.77	22.43	19.55	27.33	---	---
10	21.33	20.53	19.47	18.77	18.45	18.21	23.15	19.66	24.81	---	---	---
15	20.70	19.95	19.31	18.69	18.39	18.11	19.74	19.15	36.31	---	---	---
20	25.50	19.69	19.21	18.64	18.36	18.06	18.88	18.97	21.27	27.71	---	---
25	20.74	23.97	19.09	18.59	18.32	22.25	18.57	22.78	23.17	---	---	---
EOM	20.17	20.39	18.97	18.52	18.29	18.32	23.34	20.03	26.90	27.84	---	---

WATER YEAR 1998: HIGHEST 17.99 MAR 24, 1998
 LOWEST 27.84 JUL 31, 1998

FILLMORE COUNTY

402504097432201. Local number 5N 4W 12BDC.

LOCATION.--Lat 40°25'04", long 97°43'22", SW¹/₄ SE¹/₄ NW¹/₄ sec.12, T. 5 N., R. 4 W., Hydrologic Unit 10270206, one-half block south of fire station on principal north-south street in Shickley. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 260.0 ft, perforated 100 to 260 ft.

DATUM.--Altitude of land-surface datum is 1651 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Replacement for 402450097434001, local number 5N 4W 12BC, period of record October 1956 to September 1977. Water levels in well affected by pumping from nearby municipal and irrigation wells.

PERIOD OF RECORD.--June 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 90.85 ft below land-surface datum, June 8, 1978; lowest, 101.53 ft below land-surface datum, Sept. 9, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	96.27	DEC 16	95.79	FEB 24	94.56	APR 9	94.07	JUN 2	93.15	AUG 10	95.05
NOV 13	95.98	JAN 19	95.08	MAR 18	94.16	MAY 4	93.38	JUL 13	94.46	SEP 15	95.31

GROUND-WATER LEVELS

335

FILLMORE COUNTY

403800097300701. Local number 8N 2W 26AD.

LOCATION.--Lat 40°38'00", long 97°30'07", SE¹/₄ NE¹/₄ sec.26, T.8 N., R.2 W., Hydrologic Unit 10270203, 2.5 mi west on Route 6 from the principal street of Exeter, then 0.4 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, perforated 25 to 40 ft.

DATUM.--Altitude of land-surface datum is 1,610 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Perched aquifer, water levels affected by infiltration and deep percolation of applied irrigation water pumped from deeper aquifer.

PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.03 ft below land-surface datum, Mar. 24, 1987; lowest, 24.16 ft below land-surface datum, July 10, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	5.88	DEC 05	1.87	FEB 20	2.52	APR 06	1.89	JUN 02	4.23	SEP 02	5.49
NOV 11	2.81	JAN 07	2.58	MAR 04	3.37	MAY 12	3.88	AUG 07	3.19		

GARFIELD COUNTY

414718099083201. Local number 21N 16W 14CB.

LOCATION.--Lat 41°47'18", long 99°08'32", NW¹/₄ SW¹/₄ sec.14, T.21 N., R.16 W., Hydrologic Unit 10210007, 5 mi east and 1 mi north of Burwell. Owner: Frank Smolik.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 154 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,174 ft. Measuring point: Hole in turbine base 2.00 ft above land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--October 1950 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.07 ft below land-surface datum, Oct. 13, 1983; lowest, 24.92 ft below land-surface datum, Oct. 28, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	23.50	MAY 4	24.49								

GOSPER COUNTY

403626099451401. Local number 7N 21W 6BC.

LOCATION.--Lat 40°36'28", long 99°45'14", SW¹/₄ NW¹/₄ sec. 2, T.7 N., R.21 W., Hydrologic Unit 10200101, 1 mi west and 2 mi north of Smithfield. Owner: Andy Larson Estate.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 132 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,466.95 ft. Measuring point: Top of casing 0.40 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping from nearby irrigation wells and by infiltration and deep percolation from nearby irrigation canal.

PERIOD OF RECORD.--September 1934 to July 1940; January 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.19 ft below land-surface datum, May 5, 1997; lowest, 117.80 ft below land-surface datum, Sept. 26, 1935.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

HALL COUNTY

405315098304302. Local number 11N 11W 25CC2.

LOCATION.--Lat 40°53'15", long 98°30'43", SW¹/₄ SW¹/₄ sec.25, T.11 N., R.11 W., Hydrologic Unit 10200103, 1.0 mi north and 2.0 mi west of Alda. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 65 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,924.0 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Replacement for 405315098304301, local number 11N 11W 25CC, period of record October 1946 to November 1977. Water levels in wells affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.-- April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.46 ft below land-surface datum, July 16, 1996; lowest, 25.98 ft below land-surface datum, Aug. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	14.57	14.32	14.01	13.85	13.82	13.84	13.66	12.76	11.63	11.15	11.73	12.24
10	14.61	14.22	13.98	13.89	13.80	13.92	13.54	12.71	11.56	11.19	11.74	12.35
15	14.60	14.18	13.90	13.85	13.75	13.84	13.18	12.70	11.45	11.25	11.75	12.41
20	14.53	14.05	13.94	13.83	13.80	13.82	13.05	12.65	11.25	11.31	11.86	12.40
25	14.48	14.00	13.89	13.84	13.72	13.72	12.91	11.97	11.18	11.55	11.90	12.37
EOM	14.39	13.99	13.91	13.79	13.82	13.66	12.84	11.67	11.14	11.68	12.12	12.45

WATER YEAR 1998:	HIGHEST	11.10	JUN 29-30, 1998
	LOWEST	14.62	OCT 14, 1997

337

404836097584101 Local number 10N 6W 27ACAA.

[illegible]

GROUND-WATER LEVELS

HARLAN COUNTY

400920099215501. Local number 2N 18W 9BCC.

LOCATION.--Lat 40°09'20", long 99°21'55", SW¹/₄ SW¹/₄ NW¹/₄ sec. 9, T.2 N., R.18 W., Hydrologic Unit 10250009, 3.5 mi north of the junction of Route 3 and U.S. Highway 183 in Alma. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 170 ft, perforated from 140 to 170 ft.

DATUM.--Altitude of land-surface datum is 2,120 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.39 ft below land-surface datum, May 11, 1966; lowest, 109.96 ft below land-surface datum, Sept. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	89.70	89.39	89.08	88.75	88.62	88.51	88.29	89.03	88.33	106.04	95.15	92.69
10	89.71	89.29	89.08	88.84	88.58	88.62	88.36	88.26	93.14	98.36	95.80	91.25
15	89.65	89.33	88.90	88.70	88.47	88.46	88.22	88.27	90.20	95.29	104.99	90.45
20	89.55	89.09	89.03	88.66	88.55	88.42	88.24	88.68	99.14	106.72	105.79	90.33
25	89.38	89.09	88.88	88.67	88.35	88.27	88.18	88.25	105.14	101.56	99.52	90.12
EOM	89.25	89.07	88.94	88.58	88.54	88.33	88.11	88.25	106.64	94.38	92.37	90.14

WATER YEAR 1998: HIGHEST 87.99 APR 24, MAY 11, 1998
 LOWEST 107.26 JUL 1, 1998

HOLT COUNTY

421605098203001. Local number 27N 9W 34DA.

LOCATION.--Lat 42°16'05", long 98°20'30", NE¹/₄ SE¹/₄ sec.34, T.27 N., R.9 W., Hydrologic Unit 10220001, 0.5 mi north of Ewing. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 17 ft, screened 15 to 17 ft.

DATUM.--Altitude of land-surface datum is 1,841 ft. Measuring point: Top of casing 1.10 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Apr. 9, 1984; lowest, 9.90 ft below land-surface datum, Sept. 1, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.23	JAN 06	7.90	APR 13	6.40	JUL 06	7.34				
DEC 01	8.12	MAR 23	7.39	JUN 02	7.65	SEP 23	8.68				

423148098300601. Local number 30N 10W 32DAA.

WATER YEAR 1998:	HIGHEST	29.82	JUL 9-10, 1998
	LOWEST	33.56	OCT 1, 1997

LOCATION.--Lat 40°38'33", long 96°38'55", NE¹/₄ SE¹/₄ SE¹/₄ sec.20, T.8 N., R.7 E., Hydrologic Unit 10200203, 0.5 mi east and 1.1 mi south of Roca. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 33 ft, casing perforated below water table.

REMARKS.--Water level not measured during 1984 water year.

REVISED RECORDS.--WDR NE-97: Highest water level above land-surface datum.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +.16 ft above land-surface datum, Mar. 27, 1960; lowest, 12.28 ft below land-surface datum, Oct. 17, 1979.

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 17	4.99	MAY 11	2.93								

LANCASTER COUNTY

LOCATION.--Lat 40°47'06", long 96°41'30", SE¹/₄ SE¹/₄ SW¹/₄ sec.36, T.10 N., R.6 E., Hydrologic Unit 10200203, in Irvingdale Park on the north side of Van Dorn Street between 19th and 20th Streets in Lincoln. Owner: City of Lincoln.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 170 ft, casing perforated below water table.

REMARKS.--Recorder removed in January 1983. Well measured in spring and fall thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.07 ft below land-surface datum, Oct. 26, 1987; lowest 71.19 ft below land-surface datum, Sept. 5, 1956.

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 06	47.77	MAY 11	47.21								

343

414058103054001. Local number 20N 50W 28BBC.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.25 in, depth 28 ft, screened 25 to 28 ft.

DATUM.--Altitude of land-surface datum is 3,675 ft. Measuring point: Top of casing 2.0 ft above land-surface datum.

REMARKS.--Replacement for well 414107103054501, local number 20N-50W-28BB with period of record September 1934 to November 1942; November 1944 to November 1980.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.88 ft below land-surface datum, May 10, 1983; lowest, 15.95 ft below land-surface datum, Mar. 25, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

NUCKOLLS COUNTY

400240098111301. Local number 1N 8W 23AB.

LOCATION.--Lat 40°02'40", long 98°11'13", NW¹/₄ NE¹/₄ sec.23, T.1 N., R.8 W., Hydrologic Unit 10250016, 0.5 mi south and 0.5 mi west of Bostwick. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 18 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,598.15 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft below land-surface datum, July 29, 1951; lowest, 7.91 ft below land-surface datum, July 8-9, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PHELPS COUNTY

403123099261501. Local number 6N 19W 2AA.

LOCATION.--Lat 40°31'23", long 99°26'15", NE¹/₄ NE¹/₄ sec.2, T.6 N., R.19 W., Hydrologic Unit 10200101, 10 mi east of Bertrand. Owner: Central Nebraska Public Power and Irrigation District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 151 ft, screened 149 to 151 ft.

DATUM.--Altitude of land-surface datum is 2,360.81 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by seepage losses from nearby irrigation canal.

PERIOD OF RECORD.--March 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.59 ft below land-surface datum, Oct. 15, 1996; lowest, 123.70 ft below land-surface datum, Mar. 9, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
JAN 14	35.25	MAY 20	34.85								

PLATTE COUNTY

412955097192001. Local number 18N 1E 28CD.

LOCATION.--Lat 41°29'55", long 97°19'20", SE¹/₄ SW¹/₄ sec.28, T.18 N., R.1 E., Hydrologic Unit 10200201, 3 mi south and 8.5 mi east of Platte Center. Owner: Loup River Public Power District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in, depth 99 ft, screened 97 to 99 ft.

DATUM.--Altitude of land-surface datum is 1,511.8 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1935 to August 1940; March 1942 to November 1953; November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.30 ft below land-surface datum, Mar. 27, Apr. 24, 1940; lowest, 72.81 ft below land-surface datum, Oct. 9, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

345

403855097072501. Local number 8N 3E 19ADA.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 151 ft, perforated 142 to 151 ft.

DATUM.--Altitude of land-surface datum is 1,496 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 93.32 ft below land-surface datum, May 31, 1988; lowest, 107.15 ft below land-surface datum, Aug. 05, 1977 (corrected)

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 07	98.10	DEC 05	97.40	FEB 06	96.71	APR 06	95.05	JUN 02	95.59	AUG 03	97.58
NOV 11	97.50	JAN 07	96.98	MAR 04	96.49	MAY 08	95.90	JUL 09	97.31	SEP 16	98.07

410308096190701. Local number 13N 10E 32DBBA.

LOCATION.--Lat 41°03'08", long 96°19'07", NE¹/₄ NW¹/₄ NW¹/₄ SE¹/₄ sec.32, T.13N., R.10 E., Hydrologic Unit 10200202, 0.5 mi south of northern end of Platte River Island 2.5 mi northeast of Ashland and approximately 1 mi south of U.S. Highway 6 and Linoma Beach Road. Owner: City of Lincoln, NE.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 83 ft, screened 43 to 83 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1056.4 ft. Measuring point: Top of casing 4.40 ft above land-surface datum.

REMARKS.--Water levels in well affected by Platte River stages. GOES system installed 1992.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, +2.13 ft above land-surface datum, July 25, 1993; lowest, 7.70 ft below land-surface datum, Nov. 4-5, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	3.79	3.28	3.31	3.37	3.40	3.76	2.69	3.26	3.48	2.57	3.57	4.28
10	3.84	3.38	3.49	3.68	2.73	3.79	1.68	3.54	2.12	2.94	3.59	4.21
15	3.40	3.39	3.26	3.20	3.36	2.36	2.33	3.36	1.79	3.69	3.82	4.12
20	3.58	3.45	3.27	2.33	3.48	2.29	2.43	3.57	1.47	4.06	4.09	3.93
25	3.67	3.33	3.45	1.98	3.56	3.10	2.94	2.84	2.30	3.71	3.54	3.99
EOM	3.18	3.09	3.45	2.34	3.62	2.27	3.04	3.37	3.35	4.12	4.11	4.03

WATER YEAR 1998:	HIGHEST	.81	JUN	19, 1998
	LOWEST	4.21	JUL	22, 1998

SAUNDERS COUNTY

410558096210601. Local number 13N 9E 13ADBA.

LOCATION.--Lat 41°05'58", long 96°21'06", NE¹/₄ NW¹/₄ SE¹/₄ NE¹/₄ sec.13, T.13 N., R.9E., Hydrologic Unit 10200202, approximately 3.75 mi north and .85 mi east of Ashland. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 91 ft., screened 80 to 91 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,075 ft. Measuring point: Top of casing 4.40 ft above land-surface datum.

REMARKS.--Well drilled June 1990. Starting in April 1991, recorder instrument set to read depth below measuring point.

PERIOD OF RECORD.--August 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.77 ft below land-surface datum, Mar 13, 1993; lowest, 14.39 ft below land-surface datum, Oct. 1, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	12.99	12.23	11.66	12.08	11.67	11.88	11.01	11.32	11.06	11.10	12.01	11.88
10	13.09	12.23	11.70	12.13	11.65	11.84	10.65	11.40	10.68	11.14	12.14	11.96
15	13.04	12.29	11.84	12.18	11.54	11.84	10.75	11.45	9.95	11.35	12.27	12.01
20	13.04	12.31	11.90	12.14	11.58	11.67	10.95	11.33	10.26	11.66	12.50	12.04
25	12.82	12.32	11.95	12.07	11.63	11.39	11.10	10.65	10.60	11.77	11.58	11.96
EOM	12.40	12.18	12.04	11.99	11.74	10.99	11.23	10.86	10.89	11.93	11.78	12.00

WATER YEAR 1998:	HIGHEST	13.09	OCT 10-11, 1997
	LOWEST	9.74	JUN 16, 1998

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410428096211001. Local number 13N 9E 24DDCC.

LOCATION.--Lat 41°04'28", long 96°21'10", SW¹/₄ SW¹/₄ SE¹/₄ SE¹/₄ sec.24, T.13 N., R.9E., Hydrologic Unit 10200202, 2 mi north on Highway 63 and .8 mi east of Ashland. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 55 ft., screened 45 to 55 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,064 ft. Measuring point: Top of casing 4.5 ft above land-surface datum.

REMARKS.--Water levels affected by nearby pumping of municipal wells. Starting in April 1991, recorder instrument set to read depth below measuring point.

PERIOD OF RECORD.--August 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +4.20 ft above land-surface datum, Mar 12, 1993; lowest, 18.61 ft below land-surface datum, Oct. 15, 1991.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	5.08	4.46	3.56	4.74	3.61	4.19	2.42	2.59	2.36	2.82	3.62	3.50
10	5.15	4.17	3.87	4.88	3.72	4.28	1.92	2.59	1.76	2.96	3.60	3.76
15	5.31	4.28	4.07	4.81	3.72	4.26	2.06	2.65	1.26	3.33	3.47	3.89
20	5.51	4.52	4.28	4.71	3.78	4.04	2.41	2.63	2.06	3.70	3.88	3.83
25	4.94	4.35	4.45	4.62	3.87	3.48	2.46	1.83	2.21	3.50	3.41	3.77
EOM	4.39	3.79	4.64	4.35	4.04	2.59	2.63	2.08	2.72	3.70	3.48	3.89

WATER YEAR 1998:	HIGHEST	1.13	JUN 15, 1998
	LOWEST	5.51	OCT 20, 1997

SAUNDERS COUNTY

410334096211601. Local number 13N 9E 36ABAA.

LOCATION.--Lat 41°03'34", long 96°21'16", NE¹/₄ NE¹/₄ NW¹/₄ NE¹/₄ sec.36, T.13 N., R.9E., Hydrologic Unit 10200202, 1 mi north and .65 mi east of Ashland. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 56 ft., screened 45 to 56 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,065 ft. Measuring point: Top of casing 4.0 ft above land-surface datum.

REMARKS.--Water levels affected by passage of trains on nearby railroad track. Starting in April 1991, recorder instrument set to read depth below measuring point.

PERIOD OF RECORD.--August 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +2.55 ft. above land-surface datum, Jul 23, 1993; lowest, 21.40 ft below land-surface datum, Oct. 30, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	15.41	12.76	10.43	9.99	11.00	9.91	6.76	6.74	5.12	4.89	9.95	10.99
10	15.65	12.64	10.14	10.19	10.67	10.02	4.88	8.02	3.72	5.32	10.24	11.47
15	15.69	12.49	9.83	10.30	9.53	9.95	5.33	7.65	.71	6.16	10.52	12.01
20	15.58	12.19	9.87	10.78	9.46	9.83	5.95	7.27	2.03	6.96	12.11	12.32
25	15.10	12.02	9.79	11.28	9.40	8.05	6.10	3.44	2.97	7.71	9.97	12.36
EOM	13.50	11.40	10.01	11.58	9.63	6.78	6.27	4.29	3.94	9.92	10.57	12.95

WATER YEAR 1998:	HIGHEST	-0.07	JUN 15, 1998
	LOWEST	15.71	OCT 14, 1997

GROUND-WATER LEVELS

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SAUNDERS COUNTY

410527096203201. Local number 13N 10E 18CDBD.

LOCATION.--Lat 41°05'27", long 96°20'32", SE¹/₄ NW¹/₄ SE¹/₄ SW¹/₄ sec.18, T.13 N., R.10E., Hydrologic Unit 10200202, 3.15 mi north and 1.3 mi east of Ashland. Northern end of city's north well field. Located on Nebraska National Guard camp approximately 600 ft from right bank of Platte River. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 56 ft., screened 45 to 56 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,065 ft. Measuring point: Top of casing 4.0 ft above land-surface datum.

REMARKS.--Water levels affected by nearby pumping and Platte River stage. Starting in April 1991, recorder instrument set to read depth below measuring point.

PERIOD OF RECORD.--August 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +1.15 ft above land-surface datum, Mar. 10, 1993; lowest, 10.93 ft below land-surface datum, Sept. 10 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	6.92	6.29	6.00	6.66	6.38	6.89	5.53	6.22	6.39	6.31	6.52	6.76
10	6.81	6.40	6.21	6.53	6.60	7.00	4.47	6.46	5.36	5.90	6.42	6.90
15	6.57	6.48	6.47	6.47	6.67	---	5.08	6.45	4.76	6.60	6.57	7.02
20	6.63	6.54	6.50	6.38	6.74	---	5.44	6.50	4.78	7.06	6.86	6.71
25	6.63	6.42	6.63	5.89	6.46	6.21	5.94	5.56	5.73	6.75	6.18	6.42
EOM	6.17	5.92	6.68	6.18	6.60	5.16	6.07	6.07	6.45	6.73	6.67	6.42

WATER YEAR 1998: HIGHEST 4.42 APR 10, 1998
 LOWEST 7.89 JUL 22, SEP 16, 1998

SAUNDERS COUNTY

410427096202501. Local number 13N 10E 19CDDD.

LOCATION.--Lat 41°04'27", long 96°20'25", SE¹/₄ SE¹/₄ SE¹/₄ SW¹/₄ sec.19, T.13 N., R.10E., Hydrologic Unit 10200202, 2 mi north and 1.4 mi east of Ashland. Located on Nebraska National Guard camp approximately 400 ft from right bank of Platte River. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 56 ft., screened 45 to 56 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,065 ft. Measuring point: Top of casing 4.0 ft above land-surface datum.

REMARKS.--Water levels affected by Platte River stage. Starting in April 1991, recorder instrument set to read depth below measuring point. GOES system installed in September 1992.

PERIOD OF RECORD.--August 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.18 ft above land-surface datum, July 10, 1993; lowest, 17.38 ft below land-surface datum, Oct. 27, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	10.94	9.16	9.11	10.71	8.78	10.42	7.87	8.24	8.78	8.58	9.92	9.74
10	11.10	9.09	9.40	11.09	8.94	10.55	6.84	8.50	7.82	8.27	9.92	9.55
15	10.74	9.11	9.67	10.77	9.31	9.77	7.21	8.56	7.32	9.06	9.82	9.91
20	10.76	9.15	9.93	10.40	9.51	9.44	7.76	8.92	6.95	10.03	10.07	10.09
25	10.46	9.04	10.30	10.09	9.84	9.23	8.11	8.52	7.40	9.89	9.47	9.60
EOM	9.49	8.89	10.56	9.77	10.18	7.94	8.19	8.61	8.12	9.94	9.51	9.85

WATER YEAR 1998:	HIGHEST	6.79	JUN 20, 1998
	LOWEST	11.18	JAN 13, 1998

GROUND-WATER LEVELS
SAUNDERS COUNTY

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410340096202201. Local number 13N 10E 30CDDA.

LOCATION.--Lat 41°03'40", long 96°20'22", NE¹/₄ SE¹/₄ SE¹/₄ SW¹/₄ sec.30, T.13 N., R.10E., Hydrologic Unit 10200202, 1.1 mi north and 1.5 mi east of Ashland on Lincoln north well field by Nebraska National Guard Camp. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 70 ft., screened 55 to 70 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,059 ft. Measuring point: Top of casing 6.6 ft above land-surface datum (changed from 4.10 ft on 04-25-94).

REMARKS.--Water levels in area affected by nearby pumping of municipal wells. Starting in April 1991, recorder instrument set to read depth below measuring point. GOES system installed in August 1994.

PERIOD OF RECORD.--August 1990 to current year.

REVISED RECORDS.--WDR NE-96: Water levels for 1995 water year,

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +4.13 ft above land-surface datum, July 24, 1993; lowest, 26.00 ft below land-surface datum, Oct. 11, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	19.21	13.92	11.78	14.57	15.27	9.94	13.36	13.69	12.85	11.86	15.53	18.35
10	18.53	13.06	11.72	14.65	13.11	9.28	13.36	12.67	12.10	13.15	15.86	19.05
15	18.75	12.48	13.29	15.60	12.28	9.61	13.05	12.13	6.92	13.60	16.42	19.21
20	17.67	12.07	14.16	15.67	12.10	9.51	12.28	12.44	6.78	15.12	17.83	19.27
25	17.25	11.80	14.39	15.83	11.60	9.32	14.40	12.08	8.31	15.65	18.50	18.63
EOM	15.07	11.89	14.33	15.78	10.71	12.24	15.17	12.91	10.00	15.96	18.59	19.42

WATER YEAR 1998:	HIGHEST	4.57	JUN 15-16, 1998
	LOWEST	19.35	OCT 4, 1997

LOCATION.--Lat 41°04'01", long 96°19'52", NW¹/₄ NE¹/₄ NE¹/₄ SE¹/₄ sec.30, T.13 N., R.10E., Hydrologic Unit 10200202, 1.5 mi north and 1.9 mi east of Ashland. Near Administration building for Nebraska National Guard camp, approximately 75 ft from right bank of Platte River. Owner: City of Lincoln.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 71 ft., screened 60 to 71 ft., casing perforated below water table.

REMARKS.--Water levels affected by Platte River stage. Starting in April 1991, recorder instrument set to read depth below measuring point.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +.29 ft above land-surface datum, Feb. 22, 1997; lowest, 11.92 ft below land-surface datum, Sep 6, 1991.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	9.08	8.99	8.73	9.11	7.77	8.47	7.73	8.23	8.88	7.73	8.58	9.71
10	9.05	8.79	8.89	9.42	7.96	8.18	6.80	8.57	7.20	7.97	8.56	9.63
15	8.11	8.80	8.78	8.96	8.50	7.20	7.68	8.53	6.72	8.91	8.91	9.58
20	8.83	8.88	8.67	8.21	8.55	7.42	7.53	8.66	7.15	9.45	9.26	9.31
25	8.92	8.79	8.89	7.83	8.58	7.82	8.14	7.85	7.43	8.87	8.68	9.34
EOM	8.37	8.55	8.93	7.11	8.52	7.26	8.08	8.62	8.58	9.27	9.43	9.36

WATER YEAR 1998:	HIGHEST	5.66	JUN	19, 1998
	LOWEST	9.95	JAN	13, 1998

410314096201101. Local number 13N 10E 31ACDB.

WATER YEAR 1998:	HIGHEST	6.73	JUN	15-19, 1998
	LOWEST	19.47	OCT	10, 13-14, 1997

SAUNDERS COUNTY

410303096192901. Local number 13N 10E 32CABC.

LOCATION.--Lat 41°03'03", long 96°19'29", SW¹/₄ NW¹/₄ NE¹/₄ SW¹/₄ sec.32, T.13 N., R.10E., Hydrologic Unit 10200202, 2.0 mi north and 0.6 mi south of Ashland. One-sixth mile south of highway 6 gate for Willow Point Community Housing. Northern end of Willow Point lake, approximately 400 feet from right bank of Platte River. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 86 ft., screened 51 to 86 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,056 ft. Measuring point: Top of casing 3.60 ft above land-surface datum.

REMARKS.--Water levels affected by nearby pumping of municipal wells and Platte River stage. Starting in April 1991, recorder instrument set to read depth below measuring point. GOES unit installed in September 1992.

PERIOD OF RECORD.--December 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.18 ft below land-surface datum, July 25, 1993; lowest, 11.81 ft below land-surface datum, Oct 23, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	8.06	7.99	8.45	6.36	5.66	7.99	5.99	6.47	6.86	5.88	7.43	8.24
10	7.45	8.17	8.65	6.36	6.34	8.28	5.08	6.93	5.48	6.02	7.23	8.31
15	7.04	8.32	7.19	6.42	6.97	7.75	5.55	6.98	4.51	7.28	7.71	8.44
20	7.02	8.52	6.87	5.90	7.38	7.44	5.89	7.05	4.38	7.89	7.52	7.96
25	6.97	8.50	6.68	5.51	7.54	7.67	6.50	6.42	5.19	7.15	7.53	7.39
EOM	7.85	8.41	6.63	5.38	7.67	6.13	6.40	6.95	6.37	7.23	7.99	7.31

WATER YEAR 1998:	HIGHEST	3.76	JUN 19-20,	1998
	LOWEST	8.70	NOV 21,	1997

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410307096193801. Local number 13N 10E 32CBAB.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

DATUM.--Altitude of land-surface datum is 1,060 ft. Measuring point: Top of casing 3.8 ft above land-surface datum.

PERIOD OF RECORD.--November 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +2.83 ft above land-surface datum, July 24, 25, 1993; lowest, 13.97 ft below land-surface datum, Sep 7, 1991.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	11.11	9.33	9.58	4.38	4.67	10.32	4.95	6.48	6.58	5.46	6.93	8.98
10	8.75	9.51	9.57	3.71	6.58	10.84	3.84	7.70	4.57	5.50	6.78	9.26
15	7.78	9.74	7.50	4.40	7.82	10.75	5.41	8.11	2.35	6.80	8.15	9.86
20	7.60	10.27	6.38	3.66	8.94	10.40	6.09	8.09	2.75	8.54	8.23	9.53
25	7.30	10.08	5.65	3.41	9.34	10.84	7.44	7.32	3.93	8.13	8.11	8.33
EOM	8.93	9.92	5.39	3.57	9.63	5.56	6.86	7.72	6.11	7.88	8.43	7.85

WATER YEAR 1998:	HIGHEST	1.15	JUN 15, 1998
	LOWEST	11.34	OCT 3, 1997

GROUND-WATER LEVELS

SAUNDERS COUNTY

411005096281502. Local number 14N 8E 24ACD2.

LOCATION.--Lat 41°10'05", long 96°28'15", SE¹/₄ SW¹/₄ NE¹/₄ sec.24, T.14 N., R.8 E., Hydrologic Unit 10200203, 4 mi south from the intersection of Routes 92 and 692 near Mead, then 0.65 mi east and 0.4 mi south to the south end of load line 2 of the Mead Field Station. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 80 ft, screened 60 to 80 ft.

DATUM.--Altitude of land-surface datum is 1,171 ft. Measuring point: Top of casing 0.5 ft above land-surface datum.

REMARKS.--Replacement for well 411005096281501, local number 14N-8E-24ACD1, with period of record July 1964 to November 1970. Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--April 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.22 ft below land-surface datum, Mar. 31, 1988; lowest, 46.98 ft below land-surface datum, Sept. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
01	---	---	43.09	---	---	---	---	42.59	42.29	---	---	41.98
02	---	---	---	---	---	---	42.73	---	---	---	---	---
05	43.26	43.29	43.10	42.97	42.87	42.81	42.72	---	42.54	42.18	42.09	41.97
06	---	---	---	---	---	---	---	---	---	42.15	---	---
07	---	43.25	---	---	---	---	---	---	---	---	---	---
10	43.28	43.24	43.08	42.99	42.85	42.84	42.74	---	42.53	42.10	42.05	41.93
11	---	---	---	---	---	---	---	---	---	---	42.05	---
15	43.28	43.23	43.03	42.93	42.82	42.78	42.68	---	42.47	42.12	42.01	41.95
20	43.27	43.14	43.07	42.89	42.82	42.75	42.69	---	42.41	42.02	42.05	41.92
23	---	---	---	42.91	42.80	---	---	---	---	---	---	---
25	43.25	43.10	43.02	42.90	42.75	42.71	42.68	---	42.35	42.06	42.03	41.86
EOM	43.18	43.10	43.05	42.86	42.80	42.69	---	---	42.25	42.11	42.02	41.88

WATER YEAR 1998:	HIGHEST	41.83	SEP	30, 1998
	LOWEST	43.29	NOV	5-6, 1997

SEWARD COUNTY

405406097115001. Local number 11N 2E 21DD.

LOCATION.--Lat 40°54'06", long 97°11'50", SE¹/₄ SE¹/₄ sec.21, T.11 N., R.2 E., Hydrologic Unit 10270201, 4.5 mi west of Seward. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 123 ft, perforated 112 to 123 ft.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 73.25 ft below land-surface datum, May 31 1988; lowest, 90.17 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	78.14	77.22	76.66	76.32	76.12	75.87	75.57	75.32	75.74	76.17	78.98	78.67
10	78.00	77.24	76.56	76.32	75.99	76.04	75.38	75.54	75.55	76.83	78.85	78.63
15	77.84	77.02	76.65	76.33	75.95	76.04	75.34	75.78	75.29	77.74	78.41	78.28
20	77.72	76.94	76.56	76.19	75.82	75.75	75.57	75.93	75.28	78.82	79.05	77.89
25	77.36	76.83	76.39	76.14	75.82	75.69	75.49	75.95	75.27	78.63	78.57	77.66
EOM	77.24	76.63	76.35	76.08	75.67	74.95	75.46	75.73	75.61	78.66	79.03	77.30

WATER YEAR 1998:	HIGHEST	74.29	MAR.	27, 1998
	LOWEST	79.05	AUG.	20, 1998

VALLEY COUNTY

412955099123201. Local number 18N 16W 30CC.

LOCATION.--Lat 41°29'55", long 99°12'32", SW¹/₄ SW¹/₄, sec.30, T.18 N., R.16 W., Hydrologic Unit 10210003, 4 mi west and 5 mi north of Arcadia. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 0.75 in, depth 15 ft, screened from 13 to 15 ft.

DATUM.--Altitude of land-surface datum is 2,217.61 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by evapotranspiration.

PERIOD OF RECORD.--August 1949 to June 1956; June 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, May 3, 1983; lowest, 5.90 ft below land-surface datum, Mar. 1, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

GROUND-WATER LEVELS

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WEBSTER COUNTY

400423098314001. Local number 1N 11W 11AB.

LOCATION.--Lat 40°04'23", long 98°31'40", NW¹/₄ NE¹/₄ sec.11, T.1 N., R.11 W., Hydrologic Unit 10250016, 1 mi south and 0.25 mi west of intersection of U.S. Highways 136 and 281 in Red Cloud. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 16.9 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,686 ft. Measuring point: Top of casing 1.1 ft above land-surface datum.

PERIOD OF RECORD.--May 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, July 11-12, 1951; lowest, 10.56 ft below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 6	3.67										

YORK COUNTY

404618097482201. Local number 9N 4W 5CCC.

LOCATION.--Lat 40°46'18", long 97°48'22", SW¹/₄ SW¹/₄ sec.5, T.9 N., R.4 W., Hydrologic Unit 10270203, 0.5 mi south of Henderson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,708 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

REMARKS.--Replacement for well 404620097482501, local number 9N 4W 6DD with period of record May 1959 to September 1981 located on east side of highway across from old well.

PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 71.44 ft below land-surface datum, June 5, 1998; lowest, 87.52 ft below land-surface datum, Aug. 20, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	73.83	DEC 15	72.73	FEB 19	72.30	APR 06	71.63	JUN 05	71.44	AUG 07	72.84
NOV 11	73.34	JAN 07	72.57	MAR 06	72.19	MAY 06	71.54	JUL 14	71.60	SEP 01	73.57

GROUND-WATER LEVELS

YORK COUNTY

405305097351503. Local number 11N 2W 31BA3.

LOCATION.--Lat 40°53'05", long 97°35'15", NE¹/₄ NW¹/₄ sec.31, T.11 N., R.2 W., Hydrologic Unit 10270203, south edge of York County Fairgrounds on the north side of York. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 165 ft, perforated below water table.

DATUM.--Altitude of land-surface datum is 1,659 ft. Measuring point: Top of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 405305097351501, local number 11N 2W 31BA1, with period of record October 1957 to January 1969. Water levels in well affected by withdrawals from nearby municipal well and by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 79.57 ft below land-surface datum, Apr. 6, 1998; lowest, 120.81 ft below land-surface datum, July 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	81.59	DEC 12	80.31	FEB 19	79.82	APR 06	79.57	JUN 05	80.28	AUG 07	83.63
NOV 07	80.58	JAN 07	79.97	MAR 04	79.94	MAY 06	79.77	JUL 06	83.54	SEP 01	83.11

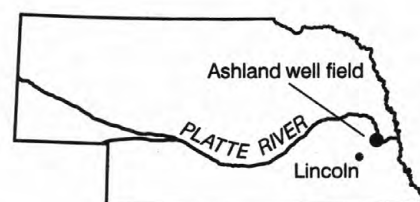
CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

ASHLAND WELL FIELD STUDY

COUNTIES: Sarpy, Saunders



WELL NUMBER	ILOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
SARPY COUNTY								
410159096181001	12N 10E 4CDAA1	41 01 59 N	096 18 10 W	09-01-98	1300	112SDGV	1052	--
410233096181801	12N 10E 4BADB1	41 02 33 N	096 18 18 W	09-01-98	1500	--	1052	--
410312096183901	13N 10E 32ADDD1	41 03 12 N	096 18 39 W	09-02-98	1030	112SDGV	1056	46.00
410324096191801	13N 10E 32BADC1	41 03 24 N	096 19 18 W	09-01-98	1400	112SDGV	1060	--
SAUNDERS COUNTY								
410303096192901	13N 10E 32CABC1	41 03 03 N	096 19 29 W	09-01-98	1100	112SDGV	1056	86.00
410427096202501	13N 10E 19CDDD1	41 04 27 N	096 20 25 W	09-01-98	1200	112SDGV	1065	56.00
410612096220601	13N 9E 14AAAA1	41 06 12 N	096 22 06 W	09-02-98	1130	110QRNR	1071	98.00
410703096205301	13N 10E 7BBBB1	41 07 03 N	096 20 53 W	09-02-98	1330	110QRNR	1075	96.00
				09-04-98	1030	110QRNR	1075	96.00
410707096220601	13N 9E 2DDDD1	41 07 07 N	096 22 06 W	09-02-98	1230	110QRNR	1077	130.00

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Ashland Well Field Study--Continued

DATE	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (° C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO ₃) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)
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SARPY COUNTY

09-01-98	660	7.6	10.5	.42	70	17	42	1	8.8	195	9.5	120
09-01-98	598	7.9	11.5	.26	64	15	32	.9	8.8	197	5.0	90
09-02-98	480	7.6	11.5	.24	47	16	28	.9	7.8	174	9.1	54
09-01-98	584	7.7	13.5	.18	70	13	32	.9	7.1	190	8.2	93

SAUNDERS COUNTY

09-01-98	550	7.8	14.0	.14	47	14	44	1	9.5	153	5.0	100
09-01-98	692	7.8	6.00	.97	62	18	53	2	8.0	181	5.3	140
09-02-98	575	7.2	12.0	.18	70	14	78	2	10	219	25	140
09-02-98	436	7.2	12.0	.24	--	--	--	--	--	--	--	--
09-04-98	436	7.0	12.0	.25	50	9.4	22	.7	5.5	149	27	63
09-02-98	798	7.2	12.5	.21	61	20	69	2	9.8	252		

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	BERYL- ARSENIC DIS- SOLVED (μ G/L AS AS) (01000)	CHRO- BIUM, DIS- SOLVED (μ G/L AS BA) (01005)	LITHIUM, DIS- SOLVED (μ G/L AS BE) (01010)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	CADMIUM DIS- SOLVED (μ G/L AS CD) (01025)	MIUM, DIS- SOLVED (μ G/L AS CR) (01030)	COBALT, DIS- SOLVED (μ G/L AS CO) (01035)
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SARPY COUNTY

09-01-98	19	.4	30	422	.57	7	180	<1.0	85.1	<8	<14	<12
09-01-98	15	.4	27	374	.51	7	210	<1.0	76.5	<8	<14	<12
09-02-98	14	.3	13	285	.39	3	210	<1.0	49.1	<8	<14	<12
09-01-98	16	.4	32	379	.52	4	180	<1.0	66.2	<8	<14	<12

SAUNDERS COUNTY

09-01-98	17	.5	31	357	.49	7	80	<1.0	106	<8	<14	<12
09-01-98	21	.5	20	428	.58	7	97	<1.0	113	<8	<14	<12
09-02-98	39	.8	31	521	.71	6	55	<1.0	223	<8	<14	<12
09-02-98	--	--	--	--	--	--	--	--	--	--	--	--
09-04-98	7.3	.3	30	279	.38	4	82	<1.0	43.0	<8	<14	<12
09-02-98	18	.7	32	502	.68	3	48	<1.0	134	<8	<14	<12

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Ashland Well Field Study--Continued

DATE	COPPER, DIS- SOLVED (μ G/L AS CU) (01040)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	LEAD, DIS- SOLVED (μ G/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	LITHIUM DIS- SOLVED (μ G/L AS LI) (01130)	MERCURY DIS- SOLVED (μ G/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)
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SARPY COUNTY

09-01-98	<10	49	<100	330	22	<.1	<60	<40	2	<4	450	12
09-01-98	<10	200	<100	1100	20	<.1	<60	<40	2	<4	400	<10
09-02-98	<10	510	<100	440	13	<.1	<60	<40	<1	<4	340	<10
09-01-98	<10	40	<100	58	18	<.1	<60	<40	<1	<4	400	<10

SAUNDERS COUNTY

09-01-98	<10	12	<100	38	25	<.1	<60	<40	<1	<4	350	<10
09-01-98	<10	<10	<100	<4	22	<.1	<60	<40	1	<4	470	<10
09-02-98	<10	2800	<100	230	62	<.1	<60	<40	<1	<4	870	<10
09-02-98	--	--	--	--	--	--	--	--	--	--	--	--
09-04-98	<10	130	<100	540	15	<.1	<60	<40	<1	<4	340	<10
09-02-98	<10	2500	<100	350	46	<.1	<60	<40	<1	<4	610	<10

DATE	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	AMETRYN WATER, DISS, REC, (μ G/L) (38401)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	BROMO- DI- CHLORO- METHANE TOTAL (μ G/L) (32101)	BUTA- CHLOR, WATER, DISS, REC (μ G/L) (04026)	BUTYL- ATE, WATER, DISS, REC (μ G/L) (04028)	CYANA- ZINE, WATER, DISS, REC (μ G/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μ G/L) (04040)	DEISO- PROPYL ATRAZIN WATER, DISS, REC (μ G/L) (04038)
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SARPY COUNTY

09-01-98	29	<.05	<.05	E.025	.15	--	<.05	<.05	<.20	.08	E.033
09-01-98	32	<.05	<.05	<.05	.45	--	<.05	<.05	E.082	.09	.06
09-02-98	<20	<.05	<.05	<.05	.29	--	<.05	<.05	E.069	.09	E.047
09-01-98	34	<.05	<.05	<.05	.30	--	<.05	<.05	E.032	.09	E.038

SAUNDERS COUNTY

09-01-98	<20	<.05	<.05	E.025	.80	--	<.05	<.05	E.052	.23	.10
09-01-98	<20	<.05	<.05	<.05	.39	--	<.05	<.05	E.036	.17	E.041
09-02-98	<20	<.05	<.05	<.05	<.05	<3.0	<.05	<.05	<.20	<.05	<.05
09-02-98	--	--	--	--	--	<3.0	--	--	--	--	--
09-04-98	<20	<.05	<.05	<.05	<.05	--	<.05	<.05	<.20	<.05	<.05
09-02-98	<20	<.05	<.05	<.05	<.05	<3.0	<.05	<.05	<.20	<.05	<.05

WATER-QUALITY DATA. WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Ashland Well Field Study--Continued

	DI-BROMOMETHANE	1,2-DICHLOROETHANE	METOLACHLOR WATER	METRIBUZIN SENCOR WATER	PRO-METON, WATER DISS,	PRO-METRYN, WATER DISS,	PROP-AZINE WATER DISS	PROP-CHLOR, WATER DISS,	SIMATRYN, WATER DISS,	SIMAZINE, WATER DISS,	TRIFLURALIN, WATER DISS,
DATE	RECOVER (μ G/L) (30217)	TOTAL (μ G/L) (32103)	DISSOLV (μ G/L) (39415)	DISSOLV (μ G/L) (82630)	REC (μ G/L) (04037)	REC (μ G/L) (04036)	REC (μ G/L) (38535)	REC (μ G/L) (04024)	REC (μ G/L) (04030)	REC (μ G/L) (04035)	REC (μ G/L) (04023)

SARPY COUNTY

[illegible]

SAUNDERS COUNTY

[illegible][illegible]

SARPY COUNTY

[illegible]

SAUNDERS COUNTY

[illegible]

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Ashland Well Field Study--Continued

[illegible]

SARPY COUNTY

09-01-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-01-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-02-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-01-98	--	--	<.05	--	--	<.05	--	--	--	--	--

SAUNDERS COUNTY

09-01-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-01-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-02-98	<3.0	<3.0	<.05	<3.0	<3.0	<.05	<3.0	<3.0	<3.0	<3.0	<3.0
09-02-98	<3.0	<3.0	--	<3.0	<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0
09-04-98	--	--	<.05	--	--	<.05	--	--	--	--	--
09-02-98	<3.0	<3.0	<.05	<3.0	<3.0	<.05	<3.0	<3.0	<3.0	<3.0	<3.0

DATE	DIBROMO CHLORO- PROPANE	1,2- DIBROMO ETHANE	DI- CHLORO- DI- FLUORO- METHANE	1,1-DI- CHLORO- ETHANE	CIS-1,2 -DI- CHLORO- ETHENE	TRANS- 1,2-DI- CHLORO- ETHENE	1,1-DI- CHLORO- ETHYL- ENE	1,2-DI- CHLORO- PROPANE	1,3-DI- CHLORO- PROPANE	2,2-DI CHLORO- PRO- PANE	1,1-DI CHLORO- PRO- PENE
	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE	WHOLE
	TOT.REC	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)	(µ G/L)
	(82625)	(77651)	(34668)	(34496)	(77093)	(34546)	(34501)	(34541)	(77173)	(77170)	(77168)

SARPY COUNTY

[illegible]

SAUNDERS COUNTY

[illegible]

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Ashland Well Field Study--Continued

DATE	CIS 1,3-DI- CHLORO- PROPENE TOTAL (μ G/L) (34704)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (μ G/L) (34699)	DIPHEN- AMID, WATER, DISS, REC (μ G/L) (04033)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (μ G/L) (34516)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (μ G/L) (77562)	ETHANE 12DICL SURROG VOC UNFLTRD REC PERCENT (99832)	ETHYL- BENZENE TOTAL (μ G/L) (34371)	FREON- 113 WATER UNFLTRD REC (μ G/L) (77652)	HEXA- CHLORO- BUT- ADIENE TOTAL (μ G/L) (39702)	HEXA- ZINONE, WATER, DISS, REC (μ G/L) (04025)	ISO- PROPYL- BENZENE WATER WHOLE REC (μ G/L) (77223)
------	--	---	---	--	--	---	---	---	--	---	--

SARPY COUNTY

09-01-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-01-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-02-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-01-98	--	--	<.05	--	--	--	--	--	--	<.05	--

SAUNDERS COUNTY

09-01-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-01-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-02-98	<3.0	<3.0	<.05	<3.0	<3.0	119	<3.0	<3.0	<3.0	<.05	<3.0
09-02-98	<3.0	<3.0	--	<3.0	<3.0	119	<3.0	<3.0	<3.0	--	<3.0
09-04-98	--	--	<.05	--	--	--	--	--	--	<.05	--
09-02-98	<3.0	<3.0	<.05	<3.0	<3.0	117	<3.0	<3.0	<3.0	<.05	<3.0

DATE	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (μ G/L) (77356)	METHANE BROMO- CHLORO- WAT UNFLTRD REC (μ G/L) (77297)	METHYL- BROMIDE TOTAL (μ G/L) (34413)	METHYL- CHLO- RIDE TOTAL (μ G/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (μ G/L) (34423)	METHYL TERT- BUTYL ETHER WAT UNF REC (μ G/L) (78032)	NAPHTH- ALENE TOTAL (μ G/L) (34696)	SI- CLOATE, WATER, DISS, REC (μ G/L) (04031)	STYRENE TOTAL (μ G/L) (77128)	TER- BACIL, WATER, DISS, REC (μ G/L) (04032)	TETRA- CHLORO- ETHYL- ENE TOTAL (μ G/L) (34475)
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SARPY COUNTY

09-01-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-01-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-02-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-01-98	--	--	--	--	--	--	--	<.05	--	<.05	--

SAUNDERS COUNTY

09-01-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-01-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.05	<3.0	<.05	<3.0
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	--	<3.0
09-04-98	--	--	--	--	--	--	--	<.05	--	<.05	--
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.05	<3.0	<.05	<3.0

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Ashland Well Field Study--Continued

DATE	TOLUENE TOTAL (µ G/L) (34010)	TOLUENE P-CHLOR WATER UNFLTRD REC (µ G/L) (77277)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (µ G/L) (77613)	1,1,1- TRI- CHLORO- ETHANE TOTAL (µ G/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (µ G/L) (34511)	TRI- CHLORO- ETHYL- ENE TOTAL (µ G/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (µ G/L) (34488)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (µ G/L) (77443)	VERNO- LATE, WATER, DISS, REC (µ G/L) (04034)	VINYL CHLO- RIDE TOTAL (µ G/L) (39175)	XYLENE WATER UNFLTRD REC (µ G/L) (81551)
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SARPY COUNTY

09-01-98	--	--	--	--	--	--	--	--	<.05	--	--
09-01-98	--	--	--	--	--	--	--	--	<.05	--	--
09-02-98	--	--	--	--	--	--	--	--	<.05	--	--
09-01-98	--	--	--	--	--	--	--	--	<.05	--	--

SAUNDERS COUNTY

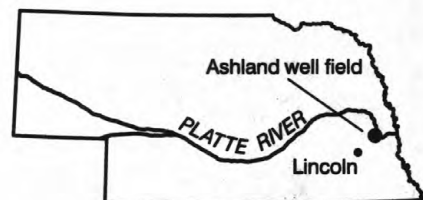
09-01-98	--	--	--	--	--	--	--	--	<.05	--	--
09-01-98	--	--	--	--	--	--	--	--	<.05	--	--
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.05	<1.0	<3.0
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	--	<1.0	<3.0
09-04-98	--	--	--	--	--	--	--	--	<.05	--	--
09-02-98	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<.05	<1.0	<3.0

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

CITY OF LINCOLN
HERBICIDE STUDY

COUNTIES: Sarpy, Saunders



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)				
SARPY COUNTY												
06801000	PLATTE R NR ASHLAND NE	41 03 44 N	096 19 28 W	04-29-98	1100	--	1040	--				
				05-04-98	1345	--	1040	--				
				05-16-98	1300	--	1040	--				
				05-16-98	1500	--	1040	--				
				05-16-98	1700	--	1040	--				
				05-17-98	0800	--	1040	--				
				05-17-98	1000	--	1040	--				
				05-26-98	1200	--	1040	--				
				05-26-98	1700	--	1040	--				
				05-26-98	1900	--	1040	--				
				05-26-98	2100	--	1040	--				
				05-27-98	0600	--	1040	--				
				410254096185501	13N 10E 32DCBB1	41 02 54 N	096 18 55 W	05-04-98	1130	112SDGV	1054	84.50
								05-20-98	1400	112SDGV	1054	84.50
05-21-98	1400	112SDGV	1054					84.50				
05-22-98	1320	112SDGV	1054					84.50				
05-23-98	1315	112SDGV	1054					84.50				
05-24-98	1315	112SDGV	1054					84.50				
05-30-98	1215	112SDGV	1054					84.50				
05-31-98	1215	112SDGV	1054					84.50				
06-01-98	1220	112SDGV	1054					84.50				
06-02-98	1220	112SDGV	1054					84.50				
06-03-98	1220	112SDGV	1054					84.50				
SAUNDERS COUNTY												
410322096191701	13N 10E 32BACD1	41 03 22 N	096 19 17 W					05-04-98	1100	112SDGV	1055	86.00
								05-20-98	1300	112SDGV	1055	86.00
				05-21-98	1300	112SDGV	1055	86.00				
				05-22-98	1300	112SDGV	1055	86.00				
				05-23-98	1300	112SDGV	1055	86.00				
				05-24-98	1300	112SDGV	1055	86.00				
				05-30-98	1200	112SDGV	1055	86.00				
				05-31-98	1200	112SDGV	1055	86.00				
				06-01-98	1200	112SDGV	1055	86.00				
				06-02-98	1200	112SDGV	1055	86.00				
				06-03-98	1200	112SDGV	1055	86.00				
				410341096201101	13N 10E 30DCDB1	41 03 41 N	096 20 11 W	05-04-98	1200	112SDGV	1060	82.00
								05-21-98	1700	112SDGV	1060	82.00
								05-31-98	1230	112SDGV	1060	82.00
410703096205301	13N 10E 7BBBB1	41 07 03 N	096 20 53 W	05-04-98	1240	110QRNR	1075	96.00				
				05-21-98	1745	110QRNR	1075	96.00				
				05-31-98	1630	110QRNR	1075	96.00				

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Herbicide Study--Continued

DATE	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (°C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH ₄) (71846)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
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SARPY COUNTY

04-29-98	612	8.4	10.0	11	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-16-98	502	8.7	20.5	9.3	--	--	--	--	--	--	--	--
05-16-98	514	8.8	22.5	9.7	--	--	--	--	--	--	--	--
05-16-98	534	8.9	23.5	10	1.2	.02	.03	190	49	16	39	9.1
05-17-98	582	8.6	20.5	7.7	--	--	--	--	--	--	--	--
05-17-98	580	8.7	20.5	8.1	--	--	--	--	--	--	--	--
05-26-98	570	8.5	19.0	9.5	--	--	--	--	--	--	--	--
05-26-98	578	8.7	21.0	11	--	--	--	--	--	--	--	--
05-26-98	604	8.7	21.5	10	1.3	<.02	--	210	56	18	43	11
05-26-98	612	8.6	21.5	9.7	--	--	--	--	--	--	--	--
05-27-98	562	8.4	20.0	8.1	--	--	--	--	--	--	--	--
05-04-98	616	8.0	12.5	1.2	--	--	--	--	--	--	--	--
05-20-98	604	7.3	15.5	.22	--	--	--	--	--	--	--	--
05-21-98	604	7.1	15.5	.25	.89	.02	.03	210	59	14	38	10
05-22-98	599	7.5	16.0	.20	--	--	--	--	--	--	--	--
05-23-98	596	7.6	16.5	.17	--	--	--	--	--	--	--	--
05-24-98	593	7.5	17.0	.21	--	--	--	--	--	--	--	--
05-30-98	597	7.6	16.5	.44	--	--	--	--	--	--	--	--
05-31-98	596	7.3	16.5	.49	1.2	.09	.12	210	59	15	37	11
06-01-98	595	7.7	17.0	.44	--	--	--	--	--	--	--	--
06-02-98	598	7.7	17.5	.23	--	--	--	--	--	--	--	--
06-03-98	603	7.7	17.5	.27	--	--	--	--	--	--	--	--

SAUNDERS COUNTY

05-04-98	634	7.8	14.5	1.1	--	--	--	--	--	--	--	--
05-20-98	607	7.6	18.0	.42	--	--	--	--	--	--	--	--
05-21-98	606	7.4	18.0	--	.62	.03	.03	200	54	15	43	10
05-22-98	603	7.7	18.0	.4	--	--	--	--	--	--	--	--
05-23-98	598	7.7	18.5	.53	--	--	--	--	--	--	--	--
05-24-98	595	7.7	19.0	.23	--	--	--	--	--	--	--	--
05-30-98	595	7.7	19.5	.52	--	--	--	--	--	--	--	--
05-31-98	595	7.5	19.5	.51	1.1	.09	.11	200	54	16	39	11
06-01-98	593	7.8	19.5	.52	--	--	--	--	--	--	--	--
06-02-98	592	7.9	19.5	.25	--	--	--	--	--	--	--	--
06-03-98	596	7.8	20.0	.19	--	--	--	--	--	--	--	--
05-04-98	560	8.5	13.5	3.6	--	--	--	--	--	--	--	--
05-21-98	595	6.9	--	--	.25	.05	.07	220	66	13	34	9.9
05-31-98	594	6.8	--	--	.32	.09	.12	210	65	13	34	10
05-04-98	445	8.2	12.5	.05	--	--	--	--	--	--	--	--
05-21-98	446	6.8	12.0	.15	<.05	.06	.08	170	51	9.5	22	5.8
05-31-98	447	6.8	12.0	.16	.05	.09	.11	160	50	9.5	20	5.8

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Herbicide Study--Continued

DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CA _{CO} ₃) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)	CHLO- SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF DIS- SOLVED (MG/L AS SIO ₂) (00955)	CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (μ G/L AS AS) (01000)	BARIUM, DIS- SOLVED (μ G/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (μ G/L AS BE) (01010)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	CADMIUM DIS- SOLVED (μ G/L AS CD) (01025)
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SARPY COUNTY

04-29-98	--	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-16-98	--	--	--	--	--	--	--	--	--	--	--	--
05-16-98	--	--	--	--	--	--	--	--	--	--	--	--
05-16-98	151	.4	110	16	.5	13	348	4	110	<1.0	78.4	<8
05-17-98	--	--	--	--	--	--	--	--	--	--	--	--
05-17-98	--	--	--	--	--	--	--	--	--	--	--	--
05-26-98	--	--	--	--	--	--	--	--	--	--	--	--
05-26-98	--	--	--	--	--	--	--	--	--	--	--	--
05-26-98	172	.7	110	17	.5	18	387	5	120	<1.0	87.4	<8
05-26-98	--	--	--	--	--	--	--	--	--	--	--	--
05-27-98	--	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-20-98	--	--	--	--	--	--	--	--	--	--	--	--
05-21-98	173	24	110	17	.4	24	378	5	180	<1.0	85.0	<8
05-22-98	--	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	--	--	--	--	--	--	--
05-31-98	179	20	94	15	.4	24	368	5	180	<1.0	75.8	<8
06-01-98	--	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	--	--	--	--	--	--	--

SAUNDERS COUNTY

05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-20-98	--	--	--	--	--	--	--	--	--	--	--	--
05-21-98	158	13	120	19	.5	22	380	6	170	<1.0	85.0	<8
05-22-98	--	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	--	--	--	--	--	--	--
05-31-98	168	10	100	16	.3	22	367	4	170	<1.0	86.1	<8
06-01-98	--	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-21-98	179	47	110	14	.4	22	375	3	120	<1.0	69.2	<8
05-31-98	174	56	110	14	.3	22	371	3	120	<1.0	68.2	<8
05-04-98	--	--	--	--	--	--	--	--	--	--	--	--
05-21-98	151	49	65	8.1	.4	30	283	4	84	<1.0	44.2	<8
05-31-98	147	41	60	7.2	.4	30	273	3	81	<1.0	43.4	<8

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Herbicide Study--Continued

DATE	CHROMIUM, DIS- SOLVED (μ G/L AS CR) (01030)	COBALT, DIS- SOLVED (μ G/L AS CO) (01035)	COPPER, DIS- SOLVED (μ G/L AS CU) (01040)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	LEAD, DIS- SOLVED (μ G/L AS PB) (01049)	MANGANESE, DIS- SOLVED (μ G/L AS MN) (01056)	LITHIUM, DIS- SOLVED (μ G/L AS LI) (01130)	MERCURY TOTAL RECOVERABLE (μ G/L AS HG) (71900)	MERCURY DIS- SOLVED (μ G/L AS HG) (71890)	MOLYBDENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)
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SARPY COUNTY

04-29-98	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-16-98	--	--	--	--	--	--	--	--	--	--	--
05-16-98	--	--	--	--	--	--	--	--	--	--	--
05-16-98	<14	<12	<10	<10	<100	<4	21	--	<.1	<60	<40
05-17-98	--	--	--	--	--	--	--	--	--	--	--
05-17-98	--	--	--	--	--	--	--	--	--	--	--
05-26-98	--	--	--	--	--	--	--	--	--	--	--
05-26-98	--	--	--	--	--	--	--	--	--	--	--
05-26-98	<14	<12	<10	<10	<100	<4	21	<.1	--	<60	<40
05-26-98	--	--	--	--	--	--	--	--	--	--	--
05-27-98	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-20-98	--	--	--	--	--	--	--	--	--	--	--
05-21-98	<14	<12	<10	<10	<100	330	21	<.1	--	<60	<40
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	--	--	--	--	--	--
05-31-98	<14	<12	<10	<10	<100	320	21	<.1	--	<60	<40
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	--	--	--	--	--	--

SAUNDERS COUNTY

05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-20-98	--	--	--	--	--	--	--	--	--	--	--
05-21-98	<14	<12	<10	<10	<100	140	22	<.1	--	<60	<40
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	--	--	--	--	--	--
05-31-98	<14	<12	<10	<10	<100	140	23	<.1	--	<60	<40
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-21-98	<14	<12	<10	<10	<100	33	18	<.1	--	<60	<40
05-31-98	<14	<12	<10	<10	<100	28	19	<.1	--	<60	<40
05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-21-98	<14	<12	<10	180	<100	530	15	<.1	--	<60	<40
05-31-98	<14	<12	<10	150	<100	520	16	<.1	--	<60	<40

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Herbicide Study--Continued

DATE	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	AMETRYN WATER, DISS, REC, (μ G/L) (38401)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)	CYANA- ZINE, WATER, DISS, REC (μ G/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μ G/L) (04040)
SARPY COUNTY											
04-29-98	--	--	--	--	--	.05	<.05	<.05	.12	<.05	.08
05-04-98	--	--	--	--	--	--	--	--	--	--	--
05-16-98	--	--	--	--	--	4.35	.60	<.05	9.64	2.82	.38
05-16-98	--	--	--	--	--	2.55	2.76	<.05	6.10	1.48	.35
05-16-98	3	<4	370	<10	<20	3.52	.54	<.05	7.66	3.33	.33
05-17-98	--	--	--	--	--	.61	.25	<.05	2.54	.66	.19
05-17-98	--	--	--	--	--	.86	.32	<.05	3.70	.91	.23
05-26-98	--	--	--	--	--	1.46	.38	--	7.80	--	.74
05-26-98	--	--	--	--	--	--	--	--	--	--	--
05-26-98	2	<4	460	13	28	--	--	--	--	--	--
05-26-98	--	--	--	--	--	<.05	<.390	--	7.76	--	.83
05-27-98	--	--	--	--	--	--	--	--	--	--	--
05-04-98	--	--	--	--	--	<.05	<.05	<.05	.31	<.05	.08
05-20-98	--	--	--	--	--	.19	<.05	<.05	1.51	.38	.12
05-21-98	3	<4	390	<10	<20	.16	<.05	<.05	1.23	.33	.10
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	.35	.08	--	3.82	--	.41
05-31-98	3	<4	390	<10	<20	.22	.06	--	3.27	--	.36
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	.16	<.05	--	3.52	--	.36
SAUNDERS COUNTY											
05-04-98	--	--	--	--	--	<.05	<.05	<.05	.21	<.05	.08
05-20-98	--	--	--	--	--	.20	<.05	<.05	1.49	.39	.14
05-21-98	3	<4	380	10	<20	.19	<.05	<.05	1.24	.35	.11
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	--	--	--	--	--	.37	.09	--	4.35	--	.45
05-31-98	3	<4	400	<10	<20	.33	.09	--	4.79	--	.52
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	--	--	--	--	--	.18	<.05	--	4.49	--	.56
05-04-98	--	--	--	--	--	<.05	<.05	<.05	.18	<.05	.06
05-21-98	<1	<4	380	<10	<20	<.05	<.05	<.05	.11	.09	<.05
05-31-98	<1	<4	370	<10	<20	<.05	<.05	--	<.05	--	<.05
05-04-98	--	--	--	--	--	<.05	<.05	--	<.05	--	<.05
05-21-98	<1	<4	350	<10	<20	<.05	<.05	<.05	<.05	<.05	<.05
05-31-98	<1	<4	350	<10	70	<.05	<.05	--	<.05	--	<.05

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

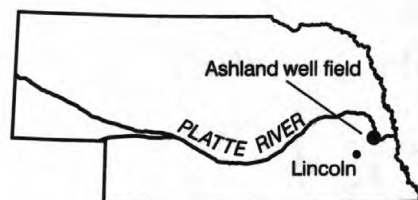
City of Lincoln, Herbicide Study--Continued

DATE	DEISO- PROPYL ATRAZIN WATER, DISS, REC (µ G/L) (04038)	METO- LACHLOR WATER DISSOLV (µ G/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (µ G/L) (82630)	PRO- METON, WATER, DISS, REC (µ G/L) (04037)	PRO- METRYN, WATER, DISS, REC (µ G/L) (04036)	PROP- CHLOR, WATER, DISS, REC (µ G/L) (04024)	PROP- AZINE WATER, DISS, REC (µ G/L) (38535)	SI- MAZINE, WATER, DISS, REC (µ G/L) (04035)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)
SARPY COUNTY											
04-29-98	<.05	.13	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-04-98	--	--	--	--	--	--	--	--	4.1	--	--
05-16-98	.19	4.72	<.05	<.05	<.05	<.05	.09	<.05	--	-61.9	-8.22
05-16-98	.14	2.76	.06	<.05	<.05	<.05	.07	<.05	--	--	--
05-16-98	.18	3.99	.05	<.05	<.05	<.05	.07	<.05	20	--	--
05-17-98	.09	1.76	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-17-98	.11	2.68	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-26-98	.45	3.60	--	--	<.05	<.05	.07	<.05	--	--	--
05-26-98	--	--	--	--	--	--	--	--	--	--	--
05-26-98	--	--	--	--	--	--	--	--	5.2	--	--
05-26-98	.48	3.45	--	--	<.05	<.05	.08	.07	--	--	--
05-27-98	--	--	--	--	--	--	--	--	--	--	--
05-04-98	<.05	.11	<.05	<.05	<.05	<.05	<.05	<.05	1.1	--	--
05-20-98	<.05	.69	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-21-98	.06	.48	<.05	<.05	<.05	<.05	<.05	<.05	3.3	-63.5	-8.61
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	.24	1.55	--	--	<.05	<.05	<.05	<.05	--	--	--
05-31-98	.22	1.24	--	--	<.05	<.05	<.05	<.05	4.1	--	--
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	.16	1.18	--	--	<.05	<.05	<.05	<.05	--	--	--
SAUNDERS COUNTY											
05-04-98	<.05	.08	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-20-98	.07	.69	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-21-98	.07	.52	<.05	<.05	<.05	<.05	<.05	<.05	2.8	-64.8	-8.57
05-22-98	--	--	--	--	--	--	--	--	--	--	--
05-23-98	--	--	--	--	--	--	--	--	--	--	--
05-24-98	--	--	--	--	--	--	--	--	--	--	--
05-30-98	.27	1.69	--	--	<.05	<.05	<.05	<.05	--	--	--
05-31-98	.31	1.80	--	--	<.05	<.05	.05	<.05	7.9	--	--
06-01-98	--	--	--	--	--	--	--	--	--	--	--
06-02-98	--	--	--	--	--	--	--	--	--	--	--
06-03-98	.32	1.39	--	--	<.05	<.05	<.05	.05	--	--	--
05-04-98	.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	--	--	--
05-21-98	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	2.1	-57.0	-7.34
05-31-98	<.05	<.05	--	--	<.05	<.05	<.05	<.05	3.3	--	--
05-04-98	<.05	<.05	--	--	<.05	<.05	<.05	<.05	4.8	--	--
05-21-98	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	1.1	-65.3	-8.65
05-31-98	<.05	<.05	--	--	<.05	<.05	<.05	<.05	1.6	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

**CITY OF LINCOLN
OZONATION STUDY**
COUNTIES: Sarpy, Saunders



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
SARPY COUNTY								
06801000	PLATTE R NR ASHLAND NE	41 03 44 N	096 19 28 W	08-17-98	1200	--	1040	--
				08-21-98	1200	--	1040	--
				08-31-98	1100	--	1040	--
				09-04-98	1200	--	1040	--
				09-14-98	1030	--	1040	--
				09-18-98	1130	--	1040	--
410254096185501	13N 10E 32DCBB1	41 02 54 N	096 18 55 W	08-17-98	1330	112SDGV	1054	84.50
				08-21-98	1330	112SDGV	1054	84.50
				08-31-98	1200	112SDGV	1054	84.50
				09-04-98	1400	112SDGV	1054	84.50
				09-14-98	1200	112SDGV	1054	84.50
				09-18-98	1300	112SDGV	1054	84.50
SAUNDERS COUNTY								
410322096191701	13N 10E 32BACD1	41 03 22 N	096 19 17 W	08-17-98	1300	112SDGV	1055	86.00
				08-21-98	1300	112SDGV	1055	86.00
				08-31-98	1130	112SDGV	1055	86.00
				09-04-98	1300	112SDGV	1055	86.00
				09-14-98	1115	112SDGV	1055	86.00
				09-18-98	1215	112SDGV	1055	86.00
410341096201101	13N 10E 30DCDB1	41 03 41 N	096 20 11 W	08-21-98	1100	112SDGV	1060	82.00
				09-04-98	1115	112SDGV	1060	82.00
				09-18-98	1100	112SDGV	1060	82.00
410703096205301	13N 10E 7BBBB1	41 07 03 N	096 20 53 W	08-21-98	1030	110QRNR	1075	96.00
				09-04-98	1040	110QRNR	1075	96.00
				09-18-98	1015	110QRNR	1075	96.00

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Ozonation Study--Continued

DATE	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (° C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
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SARPY COUNTY

08-17-98	512	7.9	26.0	7.5	42	14	39	9.7	92	16	.38	25
08-21-98	441	8.3	25.5	6.9	37	12	36	8.9	85	14	.39	24
08-31-98	439	8.6	25.5	7.8	51	13	30	10	63	13	.44	32
09-04-98	456	8.6	25.5	8.5	47	13	36	9.9	78	15	.41	30
09-14-98	559	8.6	24.0	10.1	40	16	46	9.9	110	19	.45	25
09-18-98	503	8.4	23.5	9.1	40	15	46	9.6	110	17	.44	27
08-17-98	568	7.7	17.5	.1	57	14	36	9.7	91	15	.41	26
08-21-98	578	7.6	20.0	.1	58	15	37	9.7	93	15	.46	27
08-31-98	436	7.8	20.5	.1	59	15	35	9.8	87	15	.46	27
09-04-98	540	7.6	22.0	.1	54	14	33	10	80	14	.43	26
09-14-98	555	7.4	20.0	.1	55	14	35	10	90	15	.47	27
09-18-98	564	7.4	19.5	.2	56	13	38	9.9	95	16	.46	28

SAUNDERS COUNTY

08-17-98	522	7.7	20.5	.1	54	15	31	11	75	13	.40	26
08-21-98	548	7.7	22.5	.5	56	16	30	11	80	13	.43	27
08-31-98	424	7.7	22.0	.1	59	16	31	11	82	14	.44	29
09-04-98	528	7.6	23.5	.1	51	14	32	10	79	14	.42	27
09-14-98	558	7.4	19.5	.2	53	14	33	10	84	14	.44	28
09-18-98	526	7.5	23.5	.1	50	14	33	11	81	14	.43	28
08-21-98	575	7.4	17.5	2.9	63	13	34	9.3	100	14	.45	23
09-04-98	545	6.8	16.0	2.6	64	13	35	8.9	110	16	.43	23
09-18-98	595	7.4	16.0	2.4	64	13	35	9.4	110	15	.44	23
08-21-98	536	6.9	13.5	.2	64	12	28	6.8	66	10	.40	34
09-04-98	436	7.0	12.0	.3	--	--	--	--	--	--	--	--
09-18-98	435	6.8	12.0	.1	51	9.6	23	5.6	63	6.9	.34	31

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Ozonation Study--Continued

DATE	ARSENIC DIS- SOLVED (µ G/L AS AS) (01000)	BARIUM, DIS- SOLVED (µ G/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (µ G/L AS BE) (01010)	BORON, DIS- SOLVED (µ G/L AS B) (01020)	CADMIUM DIS- SOLVED (µ G/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µ G/L AS CR) (01030)	COBALT, DIS- SOLVED (µ G/L AS CO) (01035)	COPPER, DIS- SOLVED (µ G/L AS CU) (01040)	IRON, DIS- SOLVED (µ G/L AS FE) (01046)	LEAD, DIS- SOLVED (µ G/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (µ G/L AS MN) (01056)
SARPY COUNTY											
08-17-98	7	99	<1.0	85	<8.0	<14	<12	<10	<10	<100	<4.0
08-21-98	6	86	<1.0	74	<8.0	<14	<12	<10	16	<100	14
08-31-98	9	104	<1.0	74	<8.0	<14	<12	<10	<10	<100	<4.0
09-04-98	8	102	<1.0	81	<8.0	<14	<12	<10	<10	<100	<4.0
09-14-98	6	106	<1.0	89	<8.0	<14	<12	<10	<10	<100	<4.0
09-18-98	7	103	<1.0	87	<8.0	<14	<12	<10	<10	<100	<4.0
08-17-98	8	152	<1.0	79	<8.0	<14	<12	<10	<10	<100	386
08-21-98	7	168	<1.0	86	<8.0	<14	<12	<10	<10	<100	400
08-31-98	8	129	<1.0	89	<8.0	<14	<12	<10	<10	<100	197
09-04-98	7	142	<1.0	74	<8.0	<14	<12	<10	<10	<100	219
09-14-98	7	166	<1.0	76	<8.0	<14	<12	<10	<10	<100	481
09-18-98	7	181	<1.0	83	<8.0	<14	<12	<10	<10	<100	608
SAUNDERS COUNTY											
08-17-98	8	154	<1.0	76	<8.0	<14	<12	<10	<10	<100	285
08-21-98	7	173	<1.0	84	<8.0	<14	<12	<10	<10	<100	268
08-31-98	8	164	<1.0	86	<8.0	<14	<12	<10	<10	<100	317
09-04-98	7	168	<1.0	78	<8.0	<14	<12	<10	<10	<100	292
09-14-98	7	159	<1.0	79	<8.0	<14	<12	<10	<10	<100	325
09-18-98	7	150	<1.0	78	<8.0	<14	<12	<10	<10	<100	224
08-21-98	3	115	<1.0	70	<8.0	<14	<12	<10	<10	<100	36
09-04-98	3	109	<1.0	68	<8.0	<14	<12	<10	<10	<100	39
09-18-98	3	112	<1.0	73	<8.0	<14	<12	<10	<10	<100	33
08-21-98	3	116	<1.0	56	<8.0	<14	<12	<10	300	<100	742
09-04-98	--	--	--	--	--	--	--	--	--	--	--
09-18-98	4	86	<1.0	46	<8.0	<14	<12	<10	130	<100	558

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

City of Lincoln, Ozonation Study--Continued

DATE	LITHIUM DIS- SOLVED (μ G/L AS LI) (01130)	MERCURY DIS- SOLVED (μ G/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (μ G/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (μ G/L AS V) (01085)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)
SARPY COUNTY											
08-17-98	22	<.1	<60	<40	2	<4.0	369	15	<20	-58.4	-7.53
08-21-98	18	<.1	<60	<40	1	<4.0	320	<10	<20	-50.6	-6.78
08-31-98	21	<.1	<60	<40	2	<4.0	338	15	<20	-54.6	-7.02
09-04-98	22	<.1	<60	<40	2	<4.0	344	13	<20	-55.8	-7.03
09-14-98	25	<.1	<60	<40	3	<4.0	374	11	<20	-60.8	-7.42
09-18-98	23	<.1	<60	<40	1	<4.0	382	11	<20	-65.2	-7.81
08-17-98	21	<.1	<60	<40	2	<4.0	386	13	<20	-60.0	-8.16
08-21-98	21	<.1	<60	<40	2	<4.0	385	10	<20	-61.2	-8.11
08-31-98	24	<.1	<60	<40	2	<4.0	379	11	<20	-58.9	-7.86
09-04-98	20	<.1	<60	<40	2	<4.0	355	<10	<20	-56.8	-7.72
09-14-98	21	<.1	<60	<40	2	<4.0	350	<10	<20	-58.5	-7.77
09-18-98	20	<.1	<60	<40	1	<4.0	359	<10	<20	-60.9	-7.85
SAUNDERS COUNTY											
08-17-98	21	<.1	<60	<40	2	<4.0	398	10	<20	-58.4	-7.97
08-21-98	19	<.1	<60	<40	2	<4.0	408	12	<20	-57.8	-7.80
08-31-98	22	<.1	<60	<40	1	<4.0	400	<10	<20	-57.9	-7.94
09-04-98	19	<.1	<60	<40	2	<4.0	362	<10	<20	-55.7	-7.56
09-14-98	20	<.1	<60	<40	1	<4.0	368	11	<20	-58.2	-7.83
09-18-98	19	<.1	<60	<40	<1	<4.0	378	11	<20	-56.7	-7.46
08-21-98	19	<.1	<60	<40	1	<4.0	367	<10	<20	-57.9	-7.52
09-04-98	19	<.1	<60	<40	2	<4.0	366	<10	<20	-60.0	-7.76
09-18-98	20	<.1	<60	<40	2	<4.0	374	<10	<20	-59.4	-7.80
08-21-98	17	<.1	<60	<40	<1	<4.0	424	<10	22	--	--
09-04-98	--	--	--	--	--	--	--	--	--	--	--
09-18-98	14	<.1	<60	<40	<1	<4.0	348	<10	<20	-66.5	-8.71

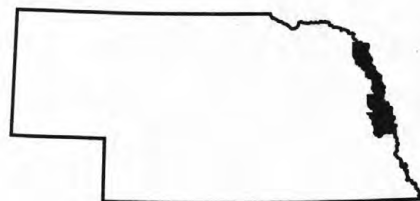
CHEMICAL ANALYSES OF GROUND WATER

(Local identifier: indicates location by township, range, and section. Geologic unit: 110 SDGV, Quaternary sand and gravel deposits, undifferentiated; 111 ALVM, Holocene alluvium; 112 SDGV, Pleistocene sand and gravel deposits; 121 OGLL, Pliocene Ogallala Formation; 122 ARKR, Miocene Arikaree Group; 123 BRUL, Oligocene Brule Formation; 123 CDRN, Oligocene Chadron Formation; 123 CDRNB, Oligocene Chadron Formation, basal sand and gravel; 211 FXHL, Upper Cretaceous Fox Hills Formation; 211 LNCE, Upper Cretaceous Lance Formation.)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

PAPIO-MISSOURI STUDY

COUNTIES: Burt, Dakota, Douglas, Sarpy,
Thurston, Washington



STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	DATE	TIME
BURT COUNTY						
415924096130901	23N 11E 6DCDD1	41 59 24 N	096 13 09 W	--	07-27-98	1500
415608096091501	23N 11E 27DA1	41 56 08 N	096 09 15 W	110QRNR	07-27-98	1730
414200096133801	20N 11E 18CDBC1	41 42 00 N	096 13 38 W	110QRNR	07-28-98	1300
414020096130601	20N 11E 30DCAA1	41 40 20 N	096 13 06 W	112SDGV	07-28-98	1400
414413096105401	20N 11E 4ACBA1	41 44 13 N	096 10 54 W	110QRNR	07-30-98	1600
415052096085401	22N 11E 26CDAC1	41 50 52 N	096 08 54 W	--	08-03-98	1530
414256096071601	20N 11E 12DBDD1	41 42 56 N	096 07 16 W	110QRNR	08-04-98	1145
414601096130001	21N 11E 30A1	41 46 01 N	096 13 00 W	110QRNR	08-04-98	1315
415705096122601	23N 11E 20CBAC1	41 57 05 N	096 12 26 W	--	10-14-98	1300
DAKOTA COUNTY						
422524096250701	28N 9E 4CDBC1	42 25 24 N	096 25 07 W	112SDGV	07-09-98	1130
422301096262201	28N 9E 20CBDD1	42 23 01 N	096 26 22 W	110QRNR	07-27-98	1130
422524096332801	28N 7E 1DBDD1	42 25 24 N	096 33 28 W	110QRNR	07-29-98	0930
421640096221401	27N 9E 26DCDD1	42 16 40 N	096 22 14 W	110QRNR	07-29-98	1100
422033096274701	27N 8E 1DAAA1	42 20 33 N	096 27 47 W	112SDGV	07-30-98	1130
DOUGLAS COUNTY						
411855095551901	16N 13E 35BDCB1	41 18 55 N	095 55 19 W	112SDGV	08-06-98	1115
SARPY COUNTY						
410457095523501	13N 14E 19 1	41 04 57 N	095 52 35 W	112SDGV	07-08-98	1030
THURSTON COUNTY						
420746096195701	25N 10E 19ABDD1	42 07 46 N	096 19 57 W	112SDGV	07-27-98	1400
WASHINGTON COUNTY						
412716095584201	17N 13E 8CABC1	41 27 16 N	095 58 42 W	--	07-29-98	1330
413959096074901	20N 11E 36ABBB1	41 39 59 N	096 07 49 W	--	07-29-98	1530
413625096082601	18N 12E 5BBDA1	41 36 25 N	096 08 26 W	110QRNR	08-06-98	1330
413621096083502	19N 11E 23ACAA1	41 36 21 N	096 08 35 W	110QRNR	10-08-98	1130
412643096012401	17N 12E 14ADAC1	41 26 43 N	096 01 24 W	--	10-08-98	1300

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Papio-Missouri Study--Continued

DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (° C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	AMETRYN WATER, DISS, REC, (μ G/L) (38401)	ATRAZINE, WATER, DISS, REC (μ G/L) (39632)
BURT COUNTY										
07-27-98	--	794	7.2	11.5	1.5	.817	--	--	--	--
07-27-98	--	702	7.5	12.0	2.0	<.050	--	--	--	--
07-28-98	168.00	587	7.7	13.5	2.1	5.75	--	--	--	--
07-28-98	63.00	498	7.7	16.0	2.1	<.050	--	--	--	--
07-30-98	101.00	916	7.4	11.5	1.5	<.050	--	--	--	--
08-03-98	110.00	595	7.5	17.0	3.2	.060	--	--	--	--
08-04-98	104.00	1280	7.1	12.0	.3	<.050	<.0500	<.050	<.050	<.050
08-04-98	95.00	830	7.1	13.5	2.3	.091	<.0500	<.050	<.050	<.050
10-14-98	60.00	517	6.9	12.5	1.3	.062	--	--	--	--
DAKOTA COUNTY										
07-09-98	162.00	1330	7.2	13.0	.8	<.050	--	--	--	--
07-27-98	105.00	1260	6.9	11.5	.6	<.050	<.0500	<.050	<.050	<.050
07-29-98	130.00	1200	7.1	11.5	.3	<.050	--	--	--	--
07-29-98	103.00	1110	7.7	11.5	2.4	<.050	--	--	--	--
07-30-98	153.00	1100	7.2	11.5	.2	<.050	--	--	--	--
DOUGLAS COUNTY										
08-06-98	80.00	1380	7.1	14.0	.2	<.050	--	--	--	--
SARPY COUNTY										
07-08-98	97.00	1130	7.2	15.0	--	<.050	--	--	--	--
THURSTON COUNTY										
07-27-98	93.00	677	7.7	11.0	.9	<.050	--	--	--	--
WASHINGTON COUNTY										
07-29-98	--	1210	7.3	12.0	.5	2.33	--	--	--	--
07-29-98	--	1400	7.2	12.5	2.9	<.050	--	--	--	--
08-06-98	89.00	794	7.7	11.5	1.5	3.10	<.0500	<.050	<.050	<.050
10-08-98	97.00	698	7.0	13.0	.2	2.96	--	--	--	--
10-08-98	65.00	900	7.1	12.0	1.3	12.5	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Papio-Missouri Study--Continued

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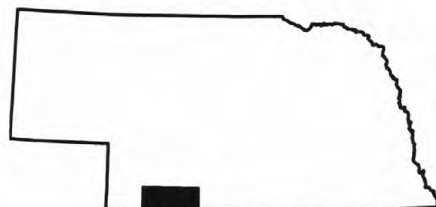
CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

SPECIAL PROTECTION AREA (SPA) MIDDLE REPUBLICAN RIVER

COUNTIES: Hitchcock, Red Willow



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	DATE	TIME	DEPTH BELOW AND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
HITCHCOCK COUNTY								
400818101124001	2N 35W13AAAD1	40 08 18 N	101 12 40 W	112SDGV	08-26-98	1400	20.34	46.00
400818101124002	2N 35W13AAAD2			112SDGV	08-26-98	1430	20.19	30.00
401655100583201	4N 32W30DCBB1	40 16 55 N	100 58 32 W	112SDGV	08-26-98	1500	17.08	61.00
401655100583202	4N 32W30DCBB2			112SDGV	08-26-98	1530	16.74	45.00
RED WILLOW COUNTY								
400357100135201	1N 26W11CBBB1	40 03 57 N	100 13 52 W	112SDGV	08-27-98	1330	19.50	64.00
400357100135202	1N 26W11CBBB2			112SDGV	08-27-98	1400	19.57	36.00
401016100391801	2N 30W1ACDD1	40 10 16 N	100 39 18 W	112SDGV	08-26-98	1000	26.98	72.00
401016100391802	2N 30W1ACDD2			112SDGV	08-26-98	1100	26.75	55.00
401016100391803	2N 30W1ACDD3			112SDGV	08-26-98	1130	26.75	36.00
401412100364201	3N 29W8DDBA1	40 14 12 N	100 36 42 W	121OGLL	08-27-98	0930	119.34	174.00
401412100364202	3N 29W8DDBA2			121OGLL	08-27-98	1030	119.15	159.00
401412100364203	3N 29W8DDBA3			121OGLL	08-26-98	1100	118.73	135.00
401454100215401	3N 27W9AAAA1	40 14 54 N	100 21 54 W	112SDGV	08-27-98	1200	26.15	40.00
401454100215402	3N 27W9AAAA2			112SDGV	08-27-98	1300	26.19	32.00

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Special Protection Area - Middle Republican River

DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (° C) (00020)	TEMPER- ATURE WATER (° C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)
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HITCHCOCK COUNTY

08-26-98	2788	20	1.5	703	1520	7.3	27.0	14.0	.4	4	13.8
08-26-98	2788	20	1.5	703	1770	7.2	27.0	13.5	1.5	16	22.5
08-26-98	2867	20	1.5	703	1380	7.2	27.0	14.5	4.6	49	12.2
08-26-98	2867	20	1.5	703	1540	7.2	27.0	14.5	4.8	52	12.9

RED WILLOW COUNTY

08-27-98	2366	25	1.5	703	1310	7.4	29.0	14.0	.2	2	4.86
08-27-98	2366	30	1.5	703	745	7.3	29.0	14.0	.6	6	<.050
08-26-98	2493	20	1.5	703	1180	7.2	22.0	14.5	--	--	27.7
08-26-98	2493	25	1.5	703	1170	7.1	22.0	15.0	.6	6	21.8
08-26-98	2493	30	1.5	703	1180	7.1	22.0	14.5	4.9	52	14.7
08-27-98	2605	30	1.5	702	527	7.5	23.0	16.0	7.1	78	4.59
08-27-98	2605	20	1.5	702	742	7.4	26.0	16.0	7.7	85	16.6
08-26-98	2605	15	1.5	702	1030	7.4	27.0	16.0	8.2	91	31.6
08-27-98	2368	20	1.5	702	620	7.4	28.0	14.0	6.5	69	1.36
08-27-98	2368	20	1.5	702	637	7.4	29.0	14.0	8.0	85	2.53

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

REPUBLICAN RIVER BASIN WATER QUALITY

COUNTIES: Chase, Harlan, Hayes

(These were sampled as part of the Republican River Basin
Ground-water/Surface-water Interaction Study)



STATION/ WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE
CHASE COUNTY						
06831100	FRENCHMAN CR, BELOW RESERV	40 27 37 N	101 41 36 W	--	10250005	04-28-98
				--	10250005	08-13-98
				--	10250005	09-09-98
402733101413501	6N 39W25ACCA1	40 27 33 N	101 41 35 W	121OGLL	10250005	04-29-98
				121OGLL	10250005	08-13-98
				121OGLL	10250005	09-09-98
402733101413502	6N 39W25ACCA2			121OGLL	10250005	04-29-98
				121OGLL	10250005	08-13-98
402733101413503	6N 39W25ACCA3			112SDGV	10250005	04-29-98
				112SDGV	10250005	08-13-98
				112SDGV	10250005	09-09-98
402736101413001	6N 39W25ACAC1	40 27 36 N	101 41 30 W	121OGLL	10250005	04-28-98
				121OGLL	10250005	08-13-98
402736101413002	6N 39W25ACAC2			121OGLL	10250005	04-28-98
				121OGLL	10250005	08-13-98
402736101413003	6N 39W25ACAC3			112SDGV	10250005	04-28-98
				112SDGV	10250005	08-13-98
402739101412501	6N 39W25ACAA1	40 27 39 N	101 41 25 W	121OGLL	10250005	04-28-98
				121OGLL	10250005	08-13-98
				121OGLL	10250005	09-09-98
402739101412502	6N 39W25ACAA2			121OGLL	10250005	04-28-98
				121OGLL	10250005	08-13-98
402739101412503	6N 39W25ACAA3			112SDGV	10250005	04-28-98
				112SDGV	10250005	08-13-98
				112SDGV	10250005	09-09-98
HARLAN COUNTY						
06847550	SAPPA CREEK, 1 MI BELOW GA	40 07 52 N	099 32 10 W	--	10250011	04-22-98
				--	10250011	08-11-98
				--	10250011	09-11-98
400714099320901	2N 20W24CCBC1	40 07 14 N	099 37 09 W	112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-11-98
400714099320902	2N 20W24CCBC2	40 07 14 N	099 32 09 W	112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-10-98

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
 Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (° C) (00020)	TEMPER- ATURE WATER (° C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
CHASE COUNTY										
04-28-98	1600	--	2.1	397	8.5	18.0	13.0	685	11.1	117
08-13-98	1700	--	6.5	463	8.5	32.5	32.5	680	9.3	146
09-09-98	1630	--	3.3	500	8.7	30.0	26.0	680	10.3	143
04-29-98	1100	55.00	--	485	7.5	11.0	14.0	685	7.4	80
08-13-98	1100	55.00	--	416	7.5	25.0	15.5	685	7.0	78
09-09-98	0930	55.00	--	422	7.6	--	14.0	680	6.8	74
04-29-98	1130	46.00	--	508	7.4	13.0	13.5	685	7.6	81
08-13-98	1130	46.00	--	427	7.6	26.0	14.5	685	7.5	82
04-29-98	1200	28.00	--	570	7.5	13.0	13.5	685	.1	1
08-13-98	1200	28.00	--	462	7.6	26.0	14.0	685	.9	10
09-09-98	1030	28.00	--	483	7.6	--	14.0	680	1.0	11
04-28-98	1300	45.00	--	450	7.5	16.0	13.5	685	6.3	67
08-13-98	1230	45.00	--	370	7.7	29.0	13.5	685	7.2	77
04-28-98	1330	35.00	--	484	7.4	16.0	13.0	685	5.2	55
08-13-98	1300	35.00	--	400	7.6	30.0	13.5	685	5.6	60
04-28-98	1400	22.00	--	523	7.3	18.0	11.0	685	.2	2
08-13-98	1330	22.00	--	430	7.5	30.0	13.5	685	.2	2
04-28-98	1430	39.00	--	547	7.1	19.0	12.5	685	.1	1
08-13-98	1530	39.00	--	432	7.4	30.0	13.0	685	.2	2
09-09-98	1230	39.00	--	450	7.4	--	13.0	680	4.4	47
04-28-98	1500	30.00	--	555	7.2	20.0	12.0	685	.1	1
08-13-98	1600	30.00	--	445	7.4	30.0	12.5	685	.1	1
04-28-98	1530	20.00	--	560	7.2	18.0	10.5	685	.2	2
08-13-98	1630	20.00	--	461	7.4	30.0	13.5	680	.1	1
09-09-98	1400	20.00	--	501	7.4	--	15.0	680	.3	3
HARLAN COUNTY										
04-22-98	1830	--	--	980	8.8	20.0	14.0	--	16.0	--
08-11-98	1830	--	--	338	7.9	30.0	22.5	710	6.8	85
09-11-98	1300	--	5.4	1010	8.4	28.5	19.5	710	9.9	116
04-22-98	1200	65.00	--	1080	7.2	19.0	14.0	720	.1	1
08-11-98	1130	65.00	--	1090	7.2	24.0	15.0	713	.0	0
09-11-98	0900	65.00	--	960	7.2	--	14.0	710	.4	4
04-22-98	1300	58.00	--	1120	7.2	20.0	14.5	720	.2	2
08-11-98	1200	58.00	--	1020	7.1	24.0	15.5	713	.1	1
09-10-98	1000	58.00	--	934	7.2	--	14.5	710	.8	8

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[illegible][illegible]

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
 Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE(FLUO- RIDE, DIS- SOLVED MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)
CHASE COUNTY									
04-28-98	--	--	--	--	--	1.71	--	--	--
08-13-98	.85	44	256	.35	4.50	1.36	13	<4.0	1.0
09-09-98	--	--	--	--	--	1.85	--	--	--
04-29-98	--	--	--	--	--	3.63	--	--	--
08-13-98	.74	<.10	264	.36	--	3.65	<10	<4.0	11
09-09-98	--	--	--	--	--	3.65	--	--	--
04-29-98	--	--	--	--	--	3.51	--	--	--
08-13-98	.74	<.10	278	.38	--	3.46	<10	<4.0	9.5
04-29-98	--	--	--	--	--	1.60	--	--	--
08-13-98	.80	57	381	.52	--	1.39	<10	<4.0	11
09-09-98	--	--	--	--	--	1.49	--	--	--
04-28-98	--	--	--	--	--	2.75	--	--	--
08-13-98	.81	<.10	243	.33	--	2.60	<10	<4.0	7.2
04-28-98	--	--	--	--	--	2.75	--	--	--
08-13-98	.81	<.10	267	.36	--	2.35	<10	<4.0	10
04-28-98	--	--	--	--	--	.170	--	--	--
08-13-98	.88	<.10	291	.40	--	.220	<10	<4.0	16
04-28-98	--	--	--	--	--	<.050	--	--	--
08-13-98	.83	56	350	.48	--	.060	<10	73	22
09-09-98	--	--	--	--	--	.070	--	--	--
04-28-98	--	--	--	--	--	<.050	--	--	--
08-13-98	.86	61	372	.51	--	<.050	<10	7.0	23
04-28-98	--	--	--	--	--	<.050	--	--	--
08-13-98	.90	.17	313	.43	--	<.050	<10	22	23
09-09-98	--	--	--	--	--	<.050	--	--	--
HARLAN COUNTY									
04-22-98	--	--	--	--	--	.420	--	--	--
08-11-98	.31	28	237	.32	--	1.07	22	<4.0	3.8
09-11-98	--	--	--	--	--	.780	--	--	--
04-22-98	--	--	--	--	--	<.050	--	--	--
08-11-98	.26	39	709	.96	--	<.050	740	70	41
09-11-98	--	--	--	--	--	.050	--	--	--
04-22-98	--	--	--	--	--	<.050	--	--	--
08-11-98	.24	45	684	.93	--	<.050	930	69	48
09-10-98	--	--	--	--	--	<.050	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
Republican River Basin Ground-water/Surface-water Interaction Study--Continued

STATION/ WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE
HARLAN COUNTY						
400714099320903	2N 20W24CCBC3	40 07 14 N	099 32 09 W	112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-10-98
400732099321001	2N 20W24CBBB1	40 07 32 N	099 32 10 W	112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-11-98
400732099321002	2N 20W24CBBB2			112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-11-98
400732099321003	2N 20W24CBBB3			112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-11-98
400750099320901	2N 20W24BCBB1	40 07 50 N	099 32 09 W	112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-12-98
400750099320902	2N 20W24BCBB2			112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-12-98
400750099320903	2N 20W24BCBB3			112SDGV	10250011	04-22-98
				112SDGV	10250011	08-11-98
				112SDGV	10250011	09-12-98
HAYES COUNTY						
06833900 FRENCHMANCREEKNR	PALISAD	40 21 35 N	101 09 01 W	--	10250005	04-24-98
				--	10250005	08-12-98
				--	10250005	09-10-98
402124101090501	5N 34W35CBAD1	40 21 24 N	101 09 05 W	112SDGV	10250005	04-23-98
				112SDGV	10250005	08-12-98
				112SDGV	10250005	08-19-98
402124101090502	5N 34W35CBAD2			112SDGV	10250005	04-23-98
				112SDGV	10250005	08-12-98
402124101090503	5N34W35CBAD3			112SDGV	10250005	04-23-98
				112SDGV	10250005	08-12-98
				112SDGV	10250005	09-10-98
402128101090101	5N 34W35CABB1	40 21 28 N	101 09 01 W	112SDGV	10250005	04-24-98
				112SDGV	10250005	08-12-98

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
 Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (° C) (00020)	TEMPER- ATURE WATER (° C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
HARLAN COUNTY										
04-22-98	1330	49.00	--	1350	7.2	21.0	14.0	720	3.9	40
08-11-98	1300	49.00	--	1260	7.2	24.0	16.0	713	5.6	61
09-10-98	0930	49.00	--	1180	7.3	--	14.5	710	5.9	62
04-22-98	1530	50.00	--	1400	7.2	22.0	14.5	720	.1	1
08-11-98	1430	50.00	--	1170	7.1	--	16.5	711	.5	6
08-11-98	1440	50.00	--	1170	7.1	--	16.5	711	--	--
09-11-98	1430	50.00	--	1170	7.2	--	14.5	710	1.0	11
04-22-98	1600	40.00	--	1320	7.0	22.0	14.5	720	.1	1
08-11-98	1530	40.00	--	1030	7.1	--	15.0	710	.4	4
09-11-98	1500	40.00	--	1330	7.1	--	15.0	710	1.0	11
04-22-98	1630	30.00	--	1260	7.0	22.0	14.5	720	.1	1
08-11-98	1600	30.00	--	708	7.0	--	15.5	710	2.9	31
09-11-98	1530	30.00	--	1000	7.0	--	14.5	710	.8	8
04-22-98	1700	33.00	--	1300	7.1	22.0	14.0	720	.2	2
08-11-98	1700	33.00	--	702	7.2	--	14.0	710	--	--
09-12-98	0900	33.00	--	1210	7.0	--	13.5	--	.3	--
04-22-98	1730	27.00	--	1270	7.1	22.0	13.5	720	.1	1
08-11-98	1730	27.00	--	680	7.1	--	14.0	710	--	--
09-12-98	1000	27.00	--	1190	6.9	--	14.0	--	.2	--
04-22-98	1730	20.00	--	1220	7.0	21.0	13.0	720	.1	1
08-11-98	1800	20.00	--	686	7.0	--	14.5	710	--	--
09-12-98	1130	20.00	--	1160	6.9	--	14.5	--	.2	--
HAYES COUNTY										
04-24-98	1430	--	--	402	8.7	24.0	19.5	685	11.6	141
08-12-98	1800	--	--	181	8.2	29.0	21.0	690	6.1	76
09-10-98	1330	--	15	453	8.5	29.0	25.0	--	11.2	--
04-23-98	1400	74.00	--	446	7.6	23.5	14.5	690	2.7	29
08-12-98	1430	74.00	--	349	7.5	29.0	14.0	690	3.0	32
08-19-98	0930	74.00	--	369	7.6	--	14.0	685	3.2	35
04-23-98	1430	50.00	--	422	7.7	24.0	14.5	690	1.1	12
08-12-98	1500	50.00	--	334	7.7	29.0	14.0	690	1.4	15
04-23-98	1500	35.00	--	437	7.6	24.0	14.0	690	.1	1
08-12-98	1530	35.00	--	345	7.7	29.0	14.5	690	.5	5
09-10-98	1030	35.00	--	367	7.6	--	14.5	685	3.3	36
04-24-98	0930	70.00	--	471	7.6	14.0	13.0	685	2.6	28
08-12-98	1600	70.00	--	363	7.7	--	13.5	690	2.5	27

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl) (00940)
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HARLAN COUNTY

04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	650	210	27	31	9	.5	13	385	140	110
09-10-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	640	190	39	65	18	1	23	411	330	58
08-11-98	--	--	--	--	--	--	--	--	--	--
09-11-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	630	190	39	81	21	1	35	446	310	75
09-11-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	490	160	21	71	23	1	19	412	210	39
09-11-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	630	190	35	37	11	.6	21	398	260	42
09-12-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	610	190	33	38	11	.7	27	408	250	47
09-12-98	--	--	--	--	--	--	--	--	--	--
04-22-98	--	--	--	--	--	--	--	--	--	--
08-11-98	650	200	33	42	12	.7	28	434	230	52
09-12-98	--	--	--	--	--	--	--	--	--	--

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

HAYES COUNTY

04-24-98	--	--	--	--	--	--	--	--	--	--
08-12-98	67	19	4.8	6.0	14	.3	11	113	7.0	2.2
09-10-98	--	--	--	--	--	--	--	--	--	--
04-23-98	--	--	--	--	--	--	--	--	--	--
08-12-98	180	53	13	23	21	.7	3.8	202	26	4.8
08-19-98	--	--	--	--	--	--	--	--	--	--
04-23-98	--	--	--	--	--	--	--	--	--	--
08-12-98	170	47	13	19	18	.6	11	193	26	6.1
04-23-98	--	--	--	--	--	--	--	--	--	--
08-12-98	200	56	13	17	15	.5	11	199	25	5.6
09-10-98	--	--	--	--	--	--	--	--	--	--
04-24-98	--	--	--	--	--	--	--	--	--	--
08-12-98	180	51	13	27	23	.9	11	213	27	4.4

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
 Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE	FLUORIDE, DIS- SOLVED MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)
HARLAN COUNTY									
04-22-98	--	--	--	--	7.25	--	--	--	--
08-11-98	.21	50	819	1.11	7.61	--	<10	<4.0	47
09-10-98	--	--	--	--	8.54	--	--	--	--
04-22-98	--	--	--	--	.450	--	--	--	--
08-11-98	.34	50	1020	1.38	<.050	--	12000	1520	63
08-11-98	--	--	--	--	--	.058	--	--	--
09-11-98	--	--	--	--	<.050	--	--	--	--
04-22-98	--	--	--	--	.090	--	--	--	--
08-11-98	.35	28	1020	1.39	3.18	--	410	1020	69
09-11-98	--	--	--	--	3.43	--	--	--	--
04-22-98	--	--	--	--	.110	--	--	--	--
08-11-98	.28	28	800	1.09	.310	--	<10	555	80
09-11-98	--	--	--	--	.560	--	--	--	--
04-22-98	--	--	--	--	.670	--	--	--	--
08-11-98	.39	45	871	1.18	<.050	--	3400	1580	49
09-12-98	--	--	--	--	<.050	--	--	--	--
04-22-98	--	--	--	--	.370	--	--	--	--
08-11-98	.38	37	873	1.19	.050	--	2300	1030	63
09-12-98	--	--	--	--	<.050	--	--	--	--
04-22-98	--	--	--	--	.150	--	--	--	--
08-11-98	.45	34	888	1.21	1.32	--	<10	485	84
09-12-98	--	--	--	--	.370	--	--	--	--
HAYES COUNTY									
04-24-98	--	--	--	--	.610	--	--	--	--
08-12-98	.43	17	135	.18	.760	--	11	<4.0	1.4
09-10-98	--	--	--	--	1.09	--	--	--	--
04-23-98	--	--	--	--	1.86	--	--	--	--
08-12-98	.81	60	306	.42	1.68	--	<10	<4.0	12
08-19-98	--	--	--	--	1.73	--	--	--	--
04-23-98	--	--	--	--	1.17	--	--	--	--
08-12-98	.91	54	293	.40	.940	--	<10	<4.0	7.4
04-23-98	--	--	--	--	.340	--	--	--	--
08-12-98	.95	56	304	.41	.610	--	<10	<4.0	7.7
09-10-98	--	--	--	--	.460	--	--	--	--
04-24-98	--	--	--	--	1.90	--	--	--	--
08-12-98	.96	<.10	262	.36	1.87	--	<10	<4.0	8.2

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
Republican River Basin Ground-water/Surface-water Interaction Study--Continued

STATION/ WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE
HAYES COUNTY						
402128101090102	5N 34W35CABB2	40 21 28 N	101 09 01 W	112SDGV 112SDGV	10250005 10250005	04-24-98 08-12-98
402128101090103	5N 34W35CABB3			112SDGV 112SDGV	10250005 10250005	04-24-98 08-12-98
402132101085701	5N 34W35BDC1	40 21 32 N	101 08 57 W	112SDGV 112SDGV 112SDGV	10250005 10250005 10250005	04-24-98 08-12-98 09-10-98
402132101085702	5N 34W35BDC2			112SDGV 112SDGV	10250005 10250005	04-24-98 08-12-98
402132101085703	5N 34W35BDC3			112SDGV 112SDGV 112SDGV	10250005 10250005 10250005	04-24-98 08-12-98 09-10-98

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (° C) (00020)	TEMPERATURE WATER (° C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)
HAYES COUNTY									
04-24-98	1000	53.00	554	7.5	15.0	13.0	685	2.5	26
08-12-98	1630	53.00	432	7.6	--	14.0	690	2.4	26
04-24-98	1030	35.00	589	7.5	15.0	12.5	685	1.3	14
08-12-98	1700	35.00	456	7.5	--	13.0	690	1.7	18
04-24-98	1130	87.00	741	7.4	16.0	13.0	685	.1	1
08-12-98	1730	87.00	604	7.4	29.0	13.5	690	.2	2
09-10-98	1200	87.00	634	7.4	--	14.0	--	.8	--
04-24-98	1330	55.00	433	7.6	17.0	15.0	685	.1	1
08-12-98	1800	55.00	331	7.7	29.0	14.0	690	.1	1
04-24-98	1400	22.00	438	7.9	15.0	8.5	685	.1	1
08-12-98	1830	22.00	375	7.6	29.0	24.0	690	.2	3
09-10-98	1300	22.00	445	7.6	--	24.5	--	2.1	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
Republican River Basin Ground-water/Surface-water Interaction Study--Continued

DATE	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	*ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO ₃) (90410)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)
HAYES COUNTY									
04-24-98	--	--	--	--	--	--	--	--	--
08-12-98	220	61	18	27	20	.8	14	232	40
04-24-98	--	--	--	--	--	--	--	--	--
08-12-98	250	70	18	33	21	.9	13	241	51
04-24-98	--	--	--	--	--	--	--	--	--
08-12-98	290	81	21	51	26	1	17	261	110
09-10-98	--	--	--	--	--	--	--	--	--
04-24-98	--	--	--	--	--	--	--	--	--
08-12-98	170	47	14	17	16	.6	11	194	26
04-24-98	--	--	--	--	--	--	--	--	--
08-12-98	150	42	12	16	17	.6	15	182	15
09-10-98	--	--	--	--	--	--	--	--	--

*ACID NEUTRALIZING CAPACITY, formerly ALKALINITY

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	IRON, DIS- SOLVED (μ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (μ G/L AS MN) (01056)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂) (00405)
HAYES COUNTY									
04-24-98	--	--	--	--	--	3.97	--	--	--
08-12-98	7.5	.89	<.10	306	.42	4.43	<10	<4.0	11
04-24-98	--	--	--	--	--	4.73	--	--	--
08-12-98	7.9	.94	<.10	338	.46	5.38	<10	<4.0	15
04-24-98	--	--	--	--	--	4.06	--	--	--
08-12-98	11	.83	<.10	450	.61	4.47	<10	<4.0	20
09-10-98	--	--	--	--	--	4.54	--	--	--
04-24-98	--	--	--	--	--	.130	--	--	--
08-12-98	5.7	.92	47	284	.39	.530	<10	41	7.5
04-24-98	--	--	--	--	--	.490	--	--	--
08-12-98	4.6	.94	42	257	.35	<.050	<10	5.2	8.9
09-10-98	--	--	--	--	--	<.050	--	--	--

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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