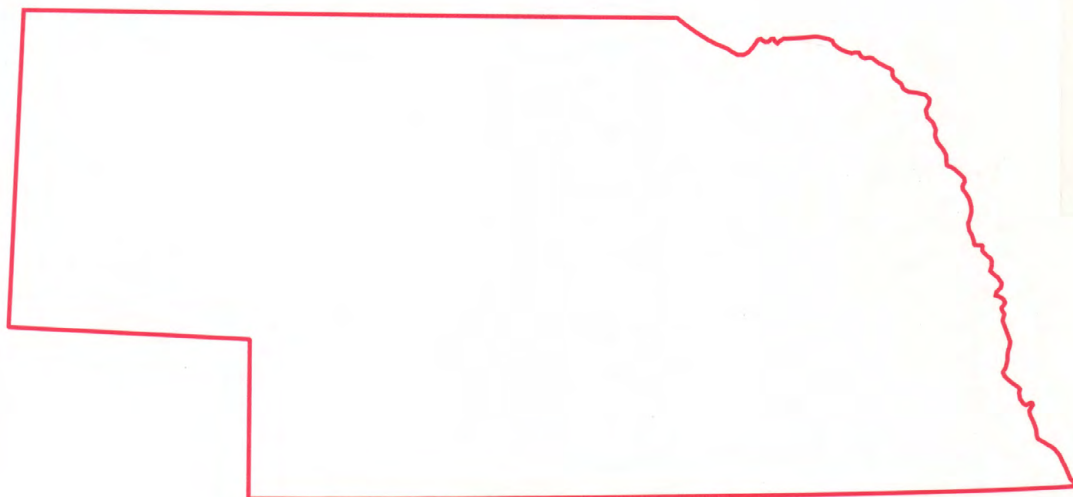
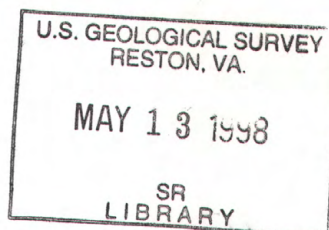


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1997



Water Resources Data Nebraska Water Year 1997



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-97-1
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



CALENDAR FOR WATER YEAR 1997

1996

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

1997

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	4							1							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

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

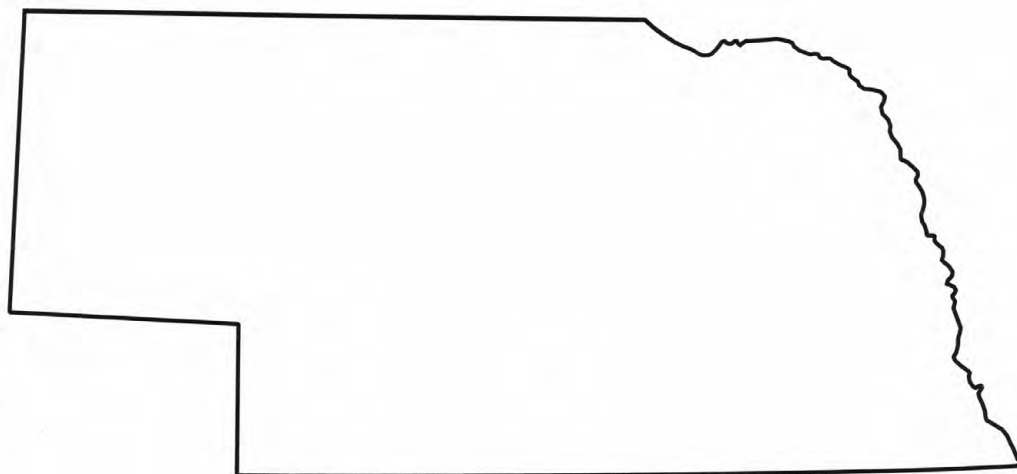
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2		1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30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



Water Resources Data Nebraska

Water Year 1997

by J.A. Booher and V.C. Walczyk



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-97-1
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,
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and other Federal, State, and local agencies

UNITED STATES DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary
GEOLOGICAL SURVEY
Thomas J. Casadevall, Acting 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 authors, 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, G.V. Steele, P.A. Bartz, J. B. Sharpe, and M.J. Griffin of the District office, including

student assistants: R.L. Atkeson, T.P. Boyle, K.L. Heckman, J.S. Huyck.,
P.A. Janike, N.A. Morris, J.L. Wagner, and K.J. Yoder.

M. Kubicek, S.H. Hull, and D.M. Schwartz of the Lincoln field office.

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

D. E. Hitch, R.B. Swanson, D.L. Curtis, J.D. Miller, K.A. Miller and J. Williams (student assistants), and E.T. Roundy (summer employee) of the North Platte field office.

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 1997 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, 6 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 11 ungaged streamsites, and for 323 wells; and water levels for 56 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.				
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---	---

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

vii

[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	43
<u>NIOBRARA RIVER BASIN</u>		
Box Butte Reservoir near Hemingford (e)-----	4550	45
Merritt Reservoir near Burge (e)-----	4593	46
Niobrara River near Sparks (dc)-----	4615	47
Long Pine Creek near Riverview (dc)-----	4635	51
Keya Paha River at Wewela, SD (d)-----	4645	55
Niobrara River near Spencer (d)-----	4650	57
Niobrara River near Verdel (d)-----	4655	59
MISSOURI RIVER:		
Lewis and Clark Lake Yankton, SD (e)-----	4670	61
Missouri River at Sioux City, IA (d)-----	4860	62
<u>OMAHA CREEK BASIN</u>		
Omaha Creek at Homer (d)-----	6010	64
Missouri River at Decatur (d)-----	6012	66
Missouri River at Omaha (d)-----	6100	68
<u>PLATTE RIVER BASIN</u>		
North Platte River (head of Platte River) at Wyoming-Nebraska State line (dc)-----	6745	70
Lake McConaughy near Keystone (e)-----	6900	74
South Platte River:		
South Platte River at Julesburg, CO (d)-----	7640	75
South Platte River at Roscoe (d)-----	764880	77
Platte River:		
Plum Creek near Smithfield (d)-----	7675	79
Platte River near Overton (cts)-----	7680	83
Spring Creek near Overton (d)-----	768020	85
Buffalo Creek near Overton (d)-----	7690	89
Elm Creek near Elm Creek (d)-----	769525	93
Whisky Slough 1 mi E of Phelps-Kearney County Line (d)-----	770175	97
North Dry Creek 2 mi SW of Platte River Bridge S of Kearney (d)-----	770195	101
Platte River near Kearney (d)-----	7702	105
Fort Kearney Slough near Newark (d)-----	770240	107
Downstream Drain near Newark (d)-----	770255	111
Platte River near Grand Island (d)-----	7705	115
Warm Slough near Central City (d)-----	772775	117
Silver Creek at Mile 4 near Silver Creek (d)-----	772898	121
Prairie Creek near Ovina (d)-----	773050	125
Prairie Creek near Silver Creek (d)-----	7735	127
Platte River near Duncan (d)-----	7740	131
Middle Loup River (head of Loup River) at Dunning (d)-----	7755	133
Dismal River near Thedford (dcms)-----	7759	135
South Loup River at St. Michael (dc)-----	7840	138
Sherman Reservoir near Loup City (e)-----	7842	142

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	<i>Station number</i>	<i>Page</i>
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<u>PLATTE RIVER BASIN--Continued</u>		
Middle Loup River at St. Paul (dc)-----	7850	143
North Loup River at Taylor (d)-----	7860	147
Calamus River near Harrop (d)-----	7870	149
Calamus Reservoir near Burwell (e)-----	7873	151
North Loup River near St. Paul (dc)-----	7905	152
Loup River:		
Loup River Power Canal near Genoa (d)-----	7925	156
Loup River near Genoa (d)-----	7930	158
Beaver Creek at Genoa (d)-----	7940	160
Clear Creek 1.75 mi W of Polk County Line (d)-----	794650	162
Shell Creek near Columbus (d)-----	7955	166
Platte River at North Bend (d)-----	7960	168
Platte River near Leshara (d)-----	7965	170
Elkhorn River at Ewing (d)-----	7975	172
Elkhorn River at Norfolk (d)-----	7990	174
North Fork Elkhorn River:		
North Fork Elkhorn River near Pierce (d)-----	7991	176
Elkhorn River at West Point (d)-----	799350	178
Logan Creek near Uehling (d)-----	7995	180
Maple Creek near Nickerson (dcts)-----	8000	182
Elkhorn River at Waterloo (d)-----	8005	186
Platte River near Ashland (d)-----	8010	188
Olive Branch (head of Salt Creek) near Hallam (d)-----	801180	190
Salt Creek at Roca (d)-----	8030	192
Salt Creek at Pioneers Boulevard at Lincoln (d)-----	803080	194
Haines Branch at SW 56th St. at Lincoln (d)-----	8030	196
Middle Creek at SW 40th St at Lincoln (d)-----	803170	198
Salt Creek at Lincoln (d)-----	8035	200
Little Salt Creek near Lincoln (d)-----	803510	202
Salt Creek at 70th St. at Lincoln (d)-----	803513	204
Stevens Creek near Lincoln (d)-----	803520	206
Salt Creek below Stevens Creek near Waverly (cm)-----	803525	208
Rock Creek near Ceresco (d)-----	803530	210
Salt Creek at Greenwood (d)-----	803555	212
Wahoo Creek at Ithaca (d)-----	8040	214
Wahoo Creek at Ashland (d)-----	8047	216
Johnson Creek near Memphis (d)-----	8049	218
Platte River at Louisville (dcms)-----	8055	220
<u>WEEPING WATER CREEK BASIN</u>		
Weeping Water Creek at Union (d)-----	8065	232
MISSOURI RIVER:		
Missouri River at Nebraska City (d)-----	8070	234
<u>LITTLE NEMAHA RIVER BASIN</u>		
Little Nemaha River at Auburn (d)-----	8115	236

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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	<i>Station number</i>	<i>Page</i>
MISSOURI RIVER BASIN--Continued		
MISSOURI RIVER:		
Missouri River at Rulo (d) -----	8135	238
 <u>BIG NEMAHA RIVER BASIN</u>		
Big Nemaha River:		
Turkey Creek near Seneca, KS (d)-----	8140	240
Big Nemaha River at Falls City (d)-----	8150	242
 <u>KANSAS RIVER BASIN</u>		
Arikaree River (head of Kansas River) at Haigler (d)-----	8215	244
North Fork Republican River at Colorado-Nebraska State line (d) -----	8230	246
Republican River (continuation of Arikaree River):		
Buffalo Creek near Haigler (d)-----	8235	248
Rock Creek at Parks (d) -----	8240	250
South Fork Republican River near Benkelman (d) -----	8275	252
Republican River at Stratton (d) -----	8285	254
Enders Reservoir near Enders (e)-----	8320	256
Frenchman Creek at Palisade (d) -----	8340	257
Frenchman Creek at Culbertson (d) -----	8355	259
Driftwood Creek near McCook (d) -----	8365	261
Republican River at McCook (d) -----	8370	263
Red Willow Creek near Red Willow (d)-----	8380	265
Republican River at Cambridge (d) -----	8435	267
Republican River near Orleans (dc) -----	8445	219
Sappa Creek:		
Beaver Creek at Cedar Bluffs, KS (d) -----	8465	272
Sappa Creek near Stamford (d)-----	8475	274
Prairie Dog Creek near Woodruff, KS (d) -----	8485	276
Republican River below Harlan County Dam (d) -----	8495	278
Courtland Canal at Nebraska-Kansas State line (d) -----	8525	280
Republican River at Guide Rock (d) -----	853020	282
Republican River near Hardy (d) -----	8535	284
Kansas River (continuation of Republican River):		
Big Blue River:		
West Fork Big Blue River near Dorchester (d) -----	8808	286
Big Blue River near Crete (d) -----	8810	288
Big Blue River at Barneston (d) -----	8820	290
Little Blue River near Deweese (d)-----	8830	292
Little Blue River near Fairbury (d) -----	8840	294
Little Blue River at Hollenberg, KS (d) -----	884025	296

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

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ADAMS COUNTY	
Well 403403098244001 Local number 7N 10W 23AB-----	396
BLAINE COUNTY	
Well 414958100061501 Local number 22N 24W 33CA -----	396
BOONE COUNTY	
Well 413323098074501 Local number 18N 7W 4CA -----	397
BOX BUTTE COUNTY	
Well 420945102551501 Local number 25N 48W 4DDD -----	397
BUFFALO COUNTY	
Well 404618098504401 Local number 9N 14W 1DC -----	398
Well 404345098560001 Local number 9N 14W 19DD -----	398
BUTLER COUNTY	
Well 411420097173002 Local number 15N 1E 27DD2-----	399
CHASE COUNTY	
Well 403220101384001 Local number 7N 38W 28CC -----	400
Well 403235101395501 Local number 7N 38W 29CBB -----	400
CHERRY COUNTY	
Well 423205100321501 Local number 30N 28W 36AAA-----	401
COLFAX COUNTY	
Well 412810097054501 Local number 17N 3E 4CC -----	401
DAWES COUNTY	
Well 424100103243501 Local number 31N 52W 3DC -----	402
DAWSON COUNTY	
Well 404949099445701 Local number 10N 21W 18DDD -----	402
DUNDY COUNTY	
Well 400155101521302 Local number 1N 40W 29BB2-----	403
FILLMORE COUNTY	
Well 402504097432201 Local number 5N 4W 12BDC -----	403
Well 403800097300701 Local number 8N 2W 26AD -----	404
GARFIELD COUNTY	
Well 414718099083201 Local number 21N 16W 14CB -----	404
GOSPER COUNTY	
Well 403626099451401 Local number 7N 21W 6BC -----	405

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

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					<i>Page</i>
HALL COUNTY					
Well 405315098304302	Local number	11N	11W	25CC2-----	405
HAMILTON COUNTY					
Well 404836097584101	Local number	10N	6W	27ACAA -----	406
Well 405514097573901	Local number	11N	6W	13CB -----	406
HARLAN COUNTY					
Well 400920099215501	Local number	2N	18W	9BCC -----	407
HOLT COUNTY					
Well 421605098203001	Local number	27N	9W	34DA -----	407
Well 423148098300601	Local number	30N	10W	32DAA -----	408
Well 423730098560001	Local number	31N	14W	27DDD -----	408
KEARNEY COUNTY					
Well 402625098594501	Local number	6N	15W	34DC -----	409
Well 403354098553702	Local number	7N	14W	20BA2-----	409
KIMBALL COUNTY					
Well 411416103361101	Local number	15N	55W	26CCC -----	410
LANCASTER COUNTY					
Well 403929096401001	Local number	8N	7E	18DDB -----	410
Well 403833096385501	Local number	8N	7E	20DDA -----	411
Well 404706096413001	Local number	10N	6E	36CDD -----	411
MORRILL COUNTY					
Well 414058103054001	Local number	20N	50W	28BBC -----	412
NUCKOLLS COUNTY					
Well 400240098111301	Local number	1N	8W	23AB-----	412
PHELPS COUNTY					
Well 403123099261501	Local number	6N	19W	2AA -----	413
PLATTE COUNTY					
Well 412955097192001	Local number	18N	1E	28CD -----	413
SALINE COUNTY					
Well 403855097072501	Local number	8N	3E	19ADA -----	414
SARPY COUNTY					
Well 410308096190701	Local number	13N	10E	32DBBA -----	414

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

					<i>Page</i>
SAUNDERS COUNTY					
Well 410558096210601	Local number	13N	9E	13ADBA -----	415
Well 410428096211001	Local number	13N	9E	24DDCC -----	416
Well 410334096211601	Local number	13N	9E	36ABAA -----	417
Well 410527096203201	Local number	13N	10E	18CDBD -----	418
Well 410427096202501	Local number	13N	10E	19CDDD -----	419
Well 410340096202201	Local number	13N	10E	30CDDA -----	420
Well 410401096195201	Local number	13N	10E	30DAAB -----	421
Well 410314096201101	Local number	13N	10E	31ACDB -----	422
Well 410303096192901	Local number	13N	10E	32CABC -----	423
Well 410307096193801	Local number	13N	10E	32CBAB -----	424
Well 411005096281502	Local number	14N	8E	24ACD2 -----	425
SCOTTS BLUFF COUNTY					
Well 415325103392801	Local number	22N	55W	11DDC -----	426
SEWARD COUNTY					
Well 405406097115001	Local number	11N	2E	21DD -----	427
SHERIDAN COUNTY					
Well 423034102415001	Local number	29N	46W	10AA -----	427
THOMAS COUNTY					
Well 415845100334001	Local number	23N	28W	9DA -----	428
VALLEY COUNTY					
Well 412955099123201	Local number	18N	16W	30CC -----	428
WEBSTER COUNTY					
Well 400423098314001	Local number	1N	11W	11AB -----	429
YORK COUNTY					
Well 404618097482201	Local number	9N	4W	5CCC -----	429
Well 405305097351503	Local number	11N	2W	31BA3 -----	430

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 Colclesser (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

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			
Bazile 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

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
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

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			
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 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, 1997
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	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.

WATER RESOURCES DATA - NEBRASKA, 1997

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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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

WATER RESOURCES DATA - NEBRASKA, 1997

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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 Ohiowa	883955	11.6	1968-78
Dry Branch tributary near Fairbury	884005	4.51	1968-78

WATER RESOURCES DATA - NEBRASKA, 1997
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 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
Snake River near Burge	4595	1947-52	c
		1949-53	s
Gordon Creek near Simeon	4600	* 1948	c
Niobrara River at Valentine	4605	* 1948	c
Minnechadusa Creek at Valentine	4610	* 1948-49	c

WATER RESOURCES DATA - NEBRASKA, 1997
DISCONTINUED SURFACE-WATER QUALITY STATIONS--continued

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Station name		Station number	Period of record (water years)	Type of record	
NIOBRARA RIVER BASIN--CONTINUED					
**	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	c	*s
			1977-84	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	c	
			1976	c	t
	Eagle Creek near Midway	465050	* 1957-66,	c	
			1976-90	c	t
	East Branch Eagle Creek near Midway	4651	* 1957-66	c	
			1976-90	c	t
			1974-83	c	
	Honey Creek near Midway	465202	* 1957-66	c	
	Eagle Creek near Redbird	465310	1986-90	c	
	Redbird Creek near Meek	465398	* 1957-66	c	
			1976-90	c	t
	Blackbird Creek near Meek	465420	* 1957-66	c	
			1976-90	c	t
	South Branch Verdigre Creek near Royal	465650	* 1967	c	
	Verdigre River near Verdigre	4657	1948-49	c	
			1948-50		s

BAZILLE CREEK BASIN

Bazille Creek near Creighton	4662	* 1967	c
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MISSOURI RIVER

Missouri River at Yankton, SD	4675	1951, 1957-59	c	
		1957-59		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

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			
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
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

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			
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	c
		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
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

WATER RESOURCES DATA - NEBRASKA, 1997

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			
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	1970-81	c t
		1970-94	m s
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
Plum Creek near Smithfield	7675	* 1948	c
		* 1948-51	s
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
Buffalo Creek near Overton	7690	* 1947	c
Unnamed Drain 2.2 miles SW of Platte River bridge S of Elm Creek	769950	* 1968	c
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

WATER RESOURCES DATA - NEBRASKA, 1997
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			
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
North Dry Creek 2.0 miles SW of Platte River bridge S of Kearney	770195	* 1968	c
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
** Platte River near Grand Island	7705	1972-80 1972-89 1993-95	t c m c s
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
Prairie Creek near Silver Creek	7735	* 1965-66	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
Middle Loup River at Walworth	7775	* 1949	s
Lillian Creek near Walworth	7779	1951	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>
PLATTE RIVER BASIN--CONTINUED			
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	c
		1948-57	s
		1977-83	c
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	c
		1948-51	s
Mud Creek near Broken Bow	7830	1973-74	c m t
Mud Creek near Sweetwater	7835	* 1977	s
		1978-89	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	c
		1948-51	s
** North Loup River at Taylor	7860	* 1956	c
		* 1949, *1977	s
		1974-81	c t
North Loup River near Burwell	7865	* 1944, 1952	c
		1949-57	s
Calamus River near Burwell	7875	* 1944, *1952-56	c
		* 1949-55	s
		1972-81	c t
North Loup River at Ord	7885	* 1944	c
		1949-55	s
North Loup River at Scotia	7890	* 1944	c
		* 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
Unnamed Creek south of Elba	790255	1977-83	c t
Loup River near Palmer	791150	1993-95	c s t

WATER RESOURCES DATA - NEBRASKA, 1997
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			
Cedar River near Spalding	7915	* 1947-49, *1959-60 1946-47 1957-63	c s c s
Cedar River at Belgrade	7918	* 1959 1958-63	c 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 1974-83	c 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 1946-51	c s
Beaver Creek near Albion	7936	1973-78	c m t
** Beaver Creek at Genoa	7940	* 1977 1978-89	s 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 1948-49	c s
** Platte River at North Bend	7960	* 1966-69 1973-77 1973-89	s t 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 1965-70	c s
** Elkhorn River at Ewing	7975	* 1948-49, 1960-66, 1968-69, 1976 1948-52, 1961	c s
South Fork Elkhorn River at Ewing	7980	* 1948, 1960-66 1961, 1963-67	c s
Cache Creek near Ewing	798150	* 1967-68	c
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

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			
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 * 1976	t c 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
East inlet to Olive Creek Lakenear Kramer	801148	* 1967	c
Olive Creek near Kramer	801150	* 1967	c
West tributary to Bluestem Lake near Sprague	801264	* 1967	c

WATER RESOURCES DATA - NEBRASKA, 1997
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			
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	813114	* 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
Oak Creek at Agnew	803442	* 1968	c
Middle Oak Creek near Garland	803445	* 1968	c
Branched Oak Reservoir near Raymond	803448	* 1968	c

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			
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
Patte 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, 1997
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

WATER RESOURCES DATA - NEBRASKA, 1997
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 near Enders	8325	1947-49 1946-47, 1962, 1964	c	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
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 * 1956	c	s t
Fox Creek at Curtis	8400	1951-58		s t
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	
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
Beaver Creek at Cedar Bluffs, KS	8465	1962-63	c	s t

WATER RESOURCES DATA - NEBRASKA, 1997
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			
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

WATER RESOURCES DATA - NEBRASKA, 1997
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			
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 1962, 1968-84	s t
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

WATER RESOURCES DATA - NEBRASKA, 1997
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 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
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	* 1668-69	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.

WATER RESOURCES DATA - NEBRASKA, 1997

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 6 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 11 ungaged streamsites, and for 323 wells; and (4) water-level records for 56 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, J. Michael Jess, Director; Conservation and Survey Division; University of Nebraska-Lincoln, Perry B. Wigley, Director; Nebraska Natural Resources Commission, Dayle Williamson, Director; 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.

WATER RESOURCES DATA - NEBRASKA, 1997

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 1997 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 are shown for each quarter of the year to emphasize temporal as well as spatial variations of precipitation during water year 1997.

The precipitation totals for each division in Nebraska during water years 1995, 1996, 1997, and normal precipitation (1961-90) are shown in figure 2. Precipitation totals for each division for each month of water year 1997 and normal precipitation are shown in figure 3.

All divisions, except for the Panhandle division, received less-than-normal precipitation for water year 1997. Only the Northeast and Southeast divisions received greater-than-normal precipitation during the first quarter. All divisions of the State received less-than-normal precipitation during the second quarter. The Panhandle and Southeast divisions received greater-than-normal precipitation during the third quarter, and the Panhandle, North Central, Central, and Southwest divisions received greater-than-normal precipitation during the fourth quarter (table 1).

Table 1. -- Precipitation and departures from normal, water year 1997

[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 1997	Departure	Normal	Water year 1997	Departure	Normal	Water year 1997	Departure	Normal	Water year 1997	Departure
Panhandle	1.80	1.76	-0.04	1.77	1.03	-0.74	7.80	8.59	0.79	5.39	5.91	0.52
North Central	2.59	2.41	-.18	2.34	0.97	-1.37	9.03	8.26	-.77	7.68	8.89	1.21
Northeast	3.60	4.79	1.19	3.10	1.66	-1.44	10.48	9.80	-.68	8.66	7.50	-1.16
Central	3.05	2.78	-.27	2.77	1.44	-1.33	10.12	7.05	-3.07	8.48	10.76	2.28
East Central	4.40	4.08	-.32	3.46	1.68	-1.78	11.20	9.10	-2.10	10.11	9.92	-0.19
Southwest	2.17	0.92	-1.25	2.11	.96	-1.15	8.58	6.92	-1.66	6.72	7.16	.44
South Central	2.93	2.84	-.09	2.70	1.23	-1.47	9.86	7.26	-2.60	8.85	7.75	-1.10
Southeast	4.62	5.85	1.23	3.68	2.38	-1.30	11.02	11.36	.34	11.02	9.46	-1.56

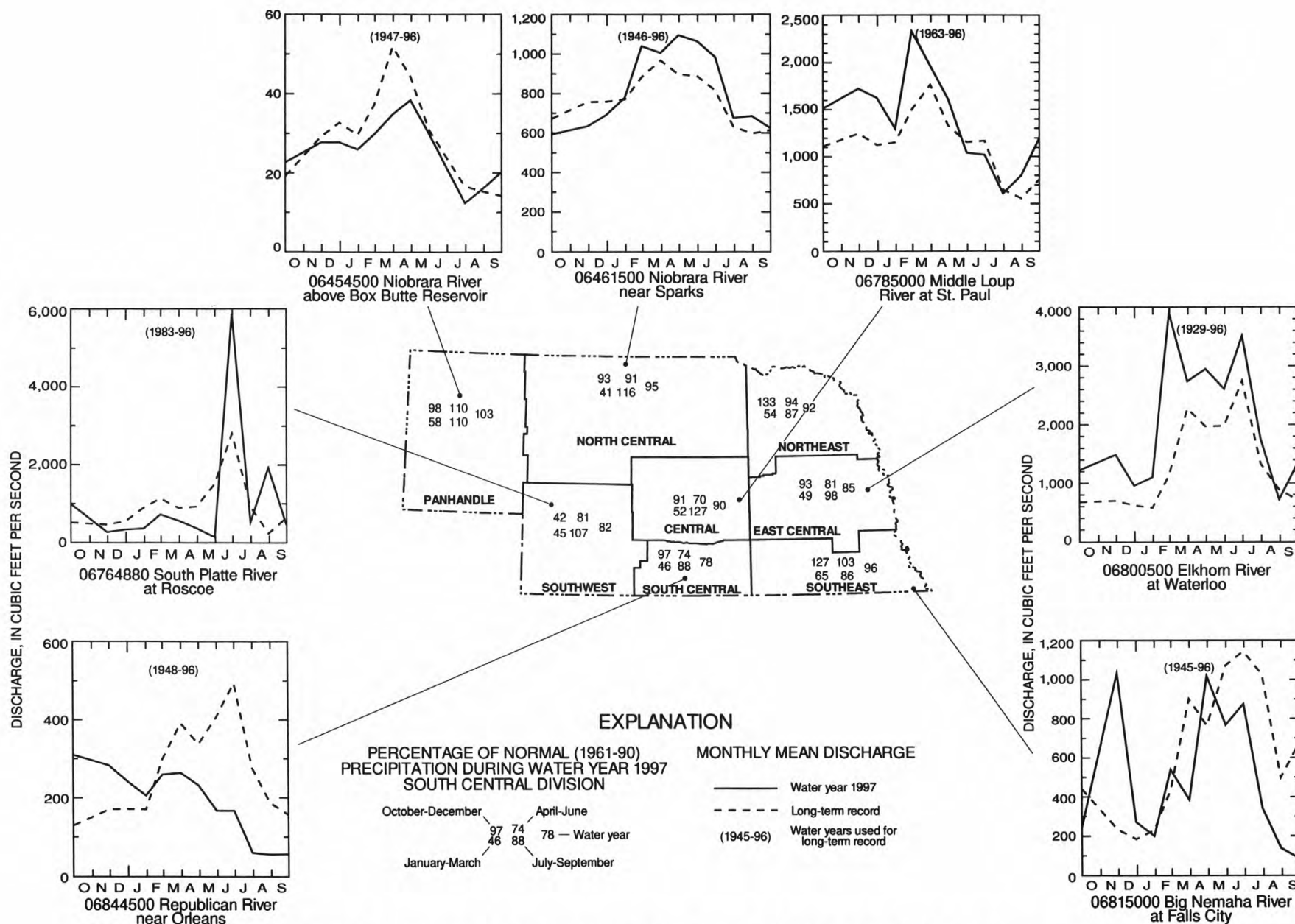


Figure 1. -- Streamflow and precipitation data for water year 1997 and the long-term record

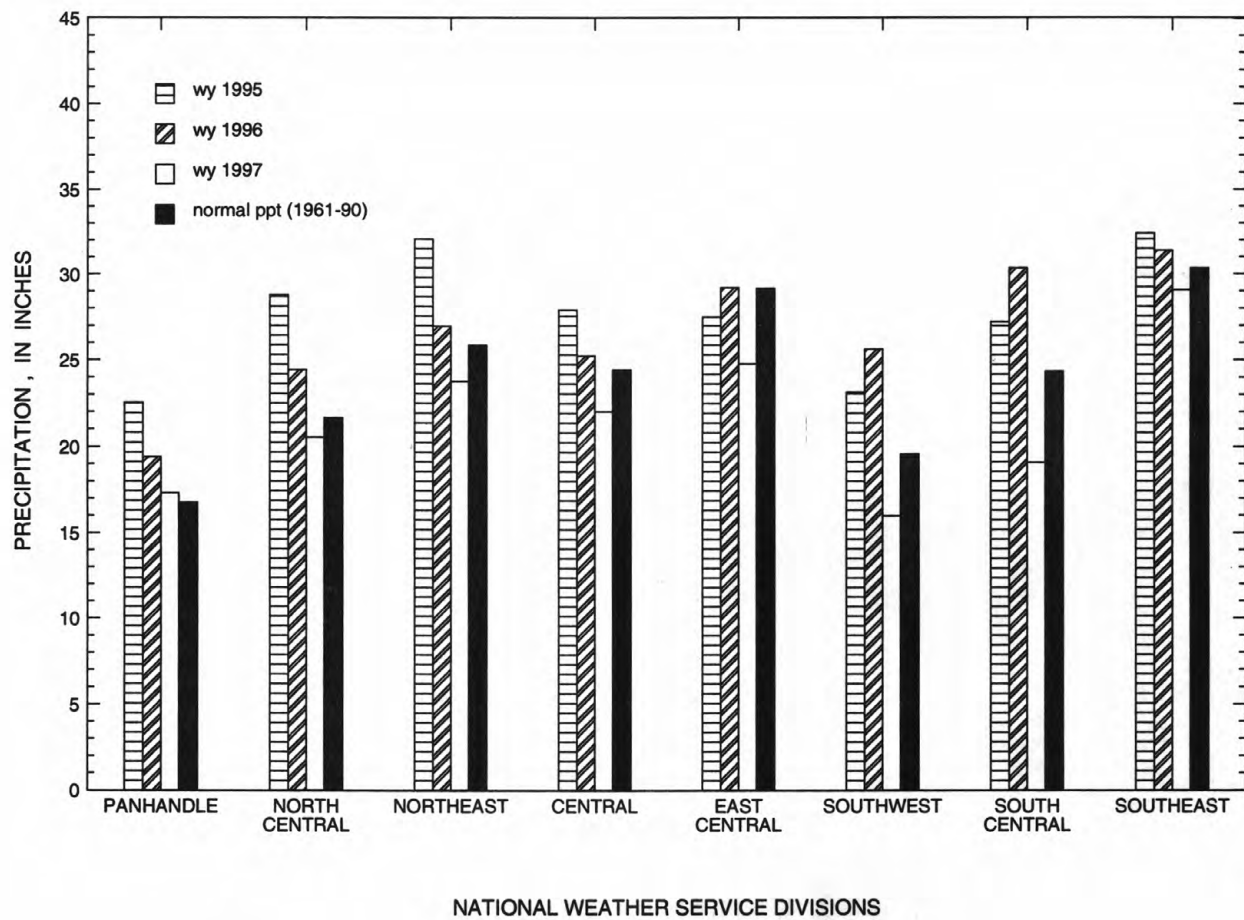


Figure 2.--Precipitation for water years 1995, 1996, 1997, and normal precipitation (1961-90) for the eight National Weather Service divisions in Nebraska.

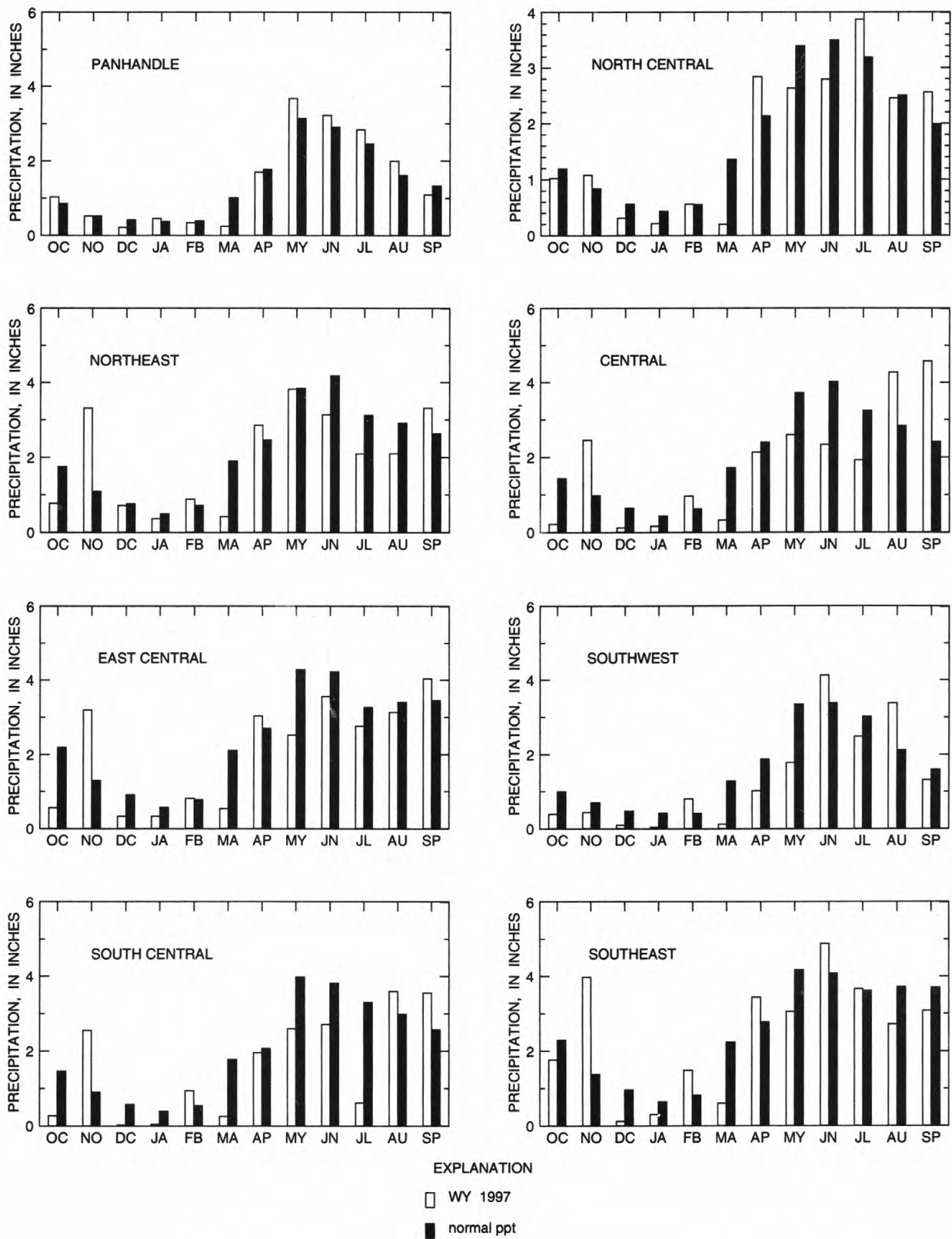


Figure 3.--Monthly precipitation for water year 1997 and normal precipitation (1961-90) for each National Weather Service division in Nebraska.

Streamflow

Streamflow during water year 1997 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 1997.

The South Central division generally received less-than-normal amounts of precipitation during the water year. However, flow at station 06844500, Republican River near Orleans, in the South Central division, was greater than the long-term mean during most of the first half of the water year because of greater-than-normal precipitation during the last five months of the previous water year which was temporarily stored in upstream reservoirs and greater-than-normal precipitation in November (more than twice the normal amount). Less-than-normal precipitation during the third quarter and continuing into the fourth quarter, except for August and September, resulted in flow that was less than the long-term mean during the second half of the water year.

Except for October, June, and August, streamflow at station 06764880, South Platte River at Roscoe, in the Southwest division, was less than the long-term mean during the water year. Greater-than-normal flow in October was a result of greater-than-normal precipitation during the last five months of the previous water year. Greater-than-normal flow in June and August was a result of increased precipitation in June and August.

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 first and last two months of the water year. The small increases in flow, though less than the long-term mean, during March, April, and May were caused by a combination of snowmelt and runoff (March and April) and increased precipitation (May). Although precipitation was greater than normal during May, June, and July, flow remained less than the long-term mean during those months. Flow became greater than the long-term mean during August and September because of continued precipitation during August.

Flow for station 06461500, Niobrara River near Sparks, in the North Central division, generally remains steady during the water year, mainly because ground water is the major contribution to streamflow at this station. However, flow was greater than the long-term mean from February to the end of the water year because of snowmelt in February and increased precipitation in April, July, and September.

Station 06785000, Middle Loup River at St. Paul, is near the eastern edge of the Sandhills region in the Central division of the State, where flow generally is more uniform and extremes in runoff are not as great as for other regions of the State. Flow was greater than normal during the first part of the water year, mainly because of greater-than-normal precipitation during the last few months of the previous water year, but started decreasing--though still greater than the long-term mean--in December and January when precipitation was less than normal. Flow during May, June, and July was less than the long-term mean because precipitation was only 58 to 70 percent of normal during those months. However, since most of the flow is derived from ground-water discharge, flow was not greatly lower than the long-term mean.

Except for August, 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 all quarters of water year 1997, the monthly precipitation totals indicate that there was a month within each quarter that had greater-than-normal precipitation. 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 greater than mean flow. Less-than-normal precipitation in June, July, and August accounted for the decrease in flow during August.

Almost three times the normal precipitation during November in the Southeast division of the State, produced greater-than-normal runoff at station 06815000, Big Nemaha River at Falls City, so that the monthly mean flow was more than four times the long-term mean for that month. Increased precipitation during April also resulted in greater-than-normal flow in April, though not to the extent that it did during November.

Water Quality

Water samples were collected to determine the water quality at various 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, depending on which analyses are needed.

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 is recognized as a major factor in growth of aquatic plants. The presence of excessive nitrogen concentrations, commonly resulting from application of agricultural fertilizers, 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 1997 were determined from a statewide network of observation wells measured by 34 Federal, State, and local agencies. The network consists of 4,040 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 pumped. Water-level fluctuations in representative observation wells located in various parts of the State are shown in figure 4.

Except for the Panhandle division, precipitation during water year 1997 was slightly less than the 30-year normal. Precipitation was slightly more than normal during April in four divisions (North Central, Northeast, East Central and Southeast) providing recharge to the aquifers. Except for wells in the western part of the State, ground-water levels reached a peak from March to June, then started declining when precipitation was less than normal in June and July, and irrigation withdrawals had begun. Data from 56 observation wells are published in this report; twenty-three of these wells are equipped with continuous recorders. The water-level readings decreased an average of 0.25 ft from September 30, 1996, to September 30, 1997.

The hydrograph for the observation well in Seward County (fig. 4) is representative of water-level fluctuations that occurred in the East Central division of the State during water years 1996 and 1997. The water level in this well was 0.36 feet higher at the end of water year 1997 than at the end of water year 1996 in spite of less-than-normal precipitation and ground-water irrigation during the growing season.

Throughout much of the Central division of Nebraska, precipitation during the growing season was less than normal but greater than normal in 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 until June when initiation of ground-water irrigation affected water levels. The water level in the Buffalo County well was 1.30 feet lower at the end of water year 1997 than at the end of water year 1996.

In the Southwest division of the State, precipitation during the water year was generally less than normal. 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 1996 and 1997. The water level in the Chase County well on September 22 was 0.76 foot lower than the reading on September 25, 1996.

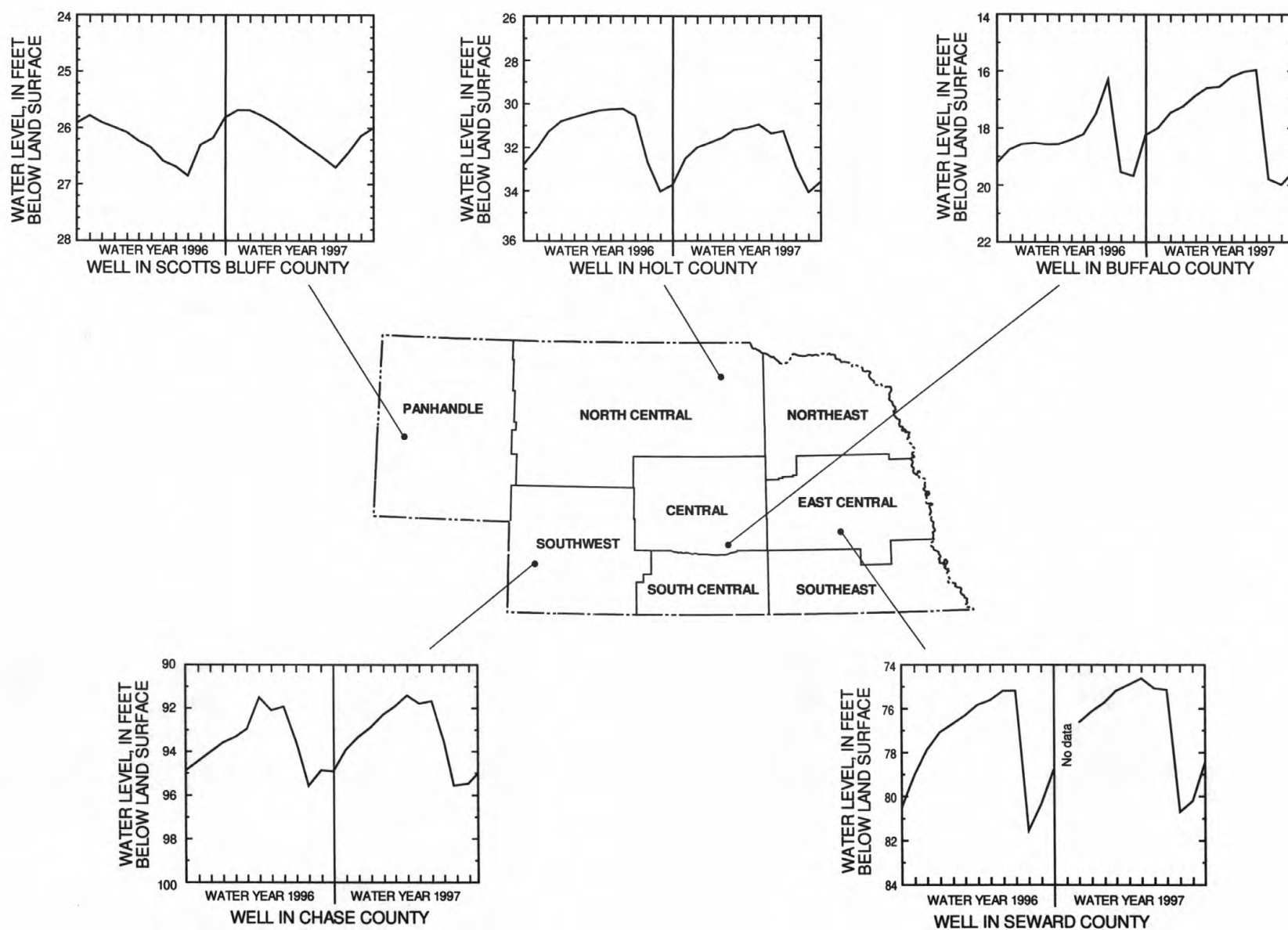


Figure 4.--Water levels in representative observation wells, water years 1996 and 1997.

Precipitation during water year 1997 was less than normal in the both the North Central and Northeast divisions. Water-level fluctuations for an observation well in Holt County (fig. 4) are representative of water-level fluctuations in wells in North Central Nebraska during water years 1996 and 1997. This hydrograph shows that water levels did not recover during water year 1997 even though April, June, and September received greater-than-normal precipitation. However, the water level in this well at the end of water year 1997 was 0.14 foot higher than at the end of water year 1996.

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. Commonly, water levels 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. The hydrograph for an observation well in Scotts Bluff County (fig. 4) shows these annual fluctuations during water years 1996 and 1997. The Panhandle division received greater-than-normal precipitation during water year 1997. However, more than twice the normal amount of precipitation during September 1996, and less-than-normal precipitation during September 1997 resulted in a 0.19 ft decrease in the water-level reading for this well at the end of water year 1997.

WATER RESOURCES DATA - NEBRASKA, 1997

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.]

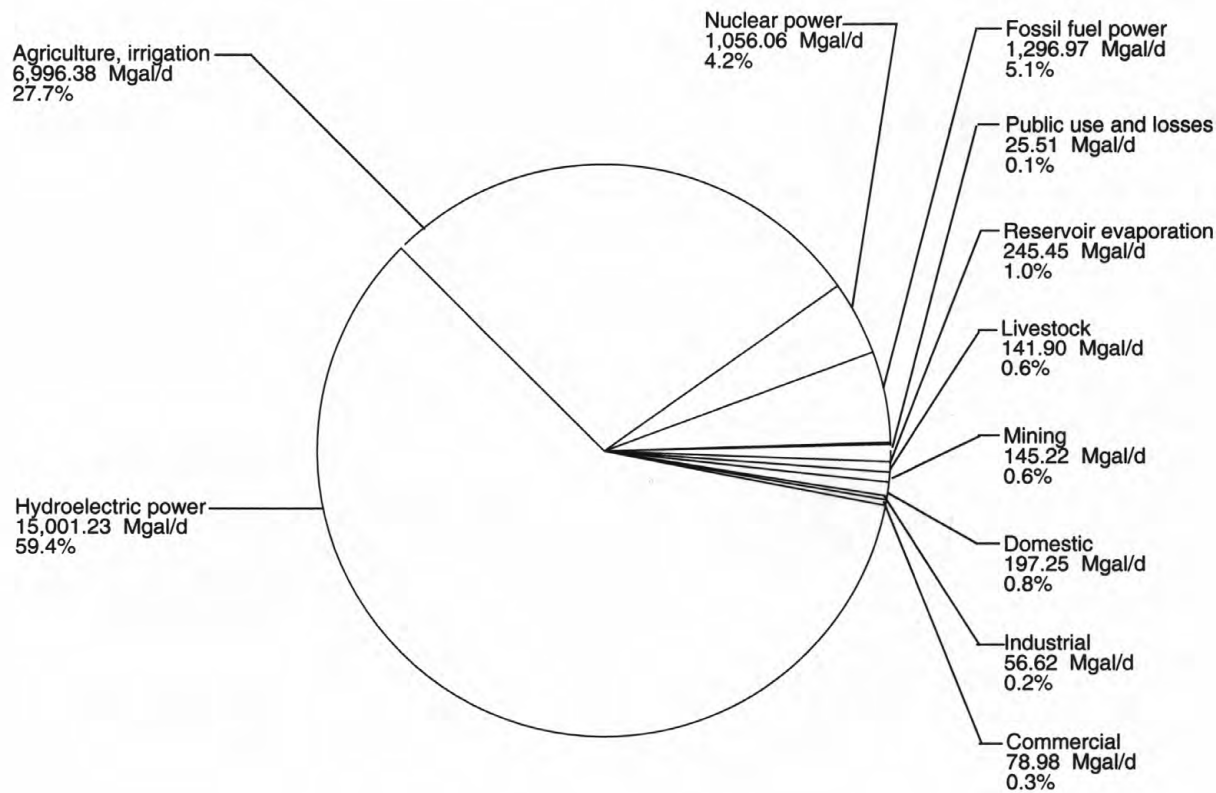


Figure 5.--(a) Estimated total water use in Nebraska, 1995.

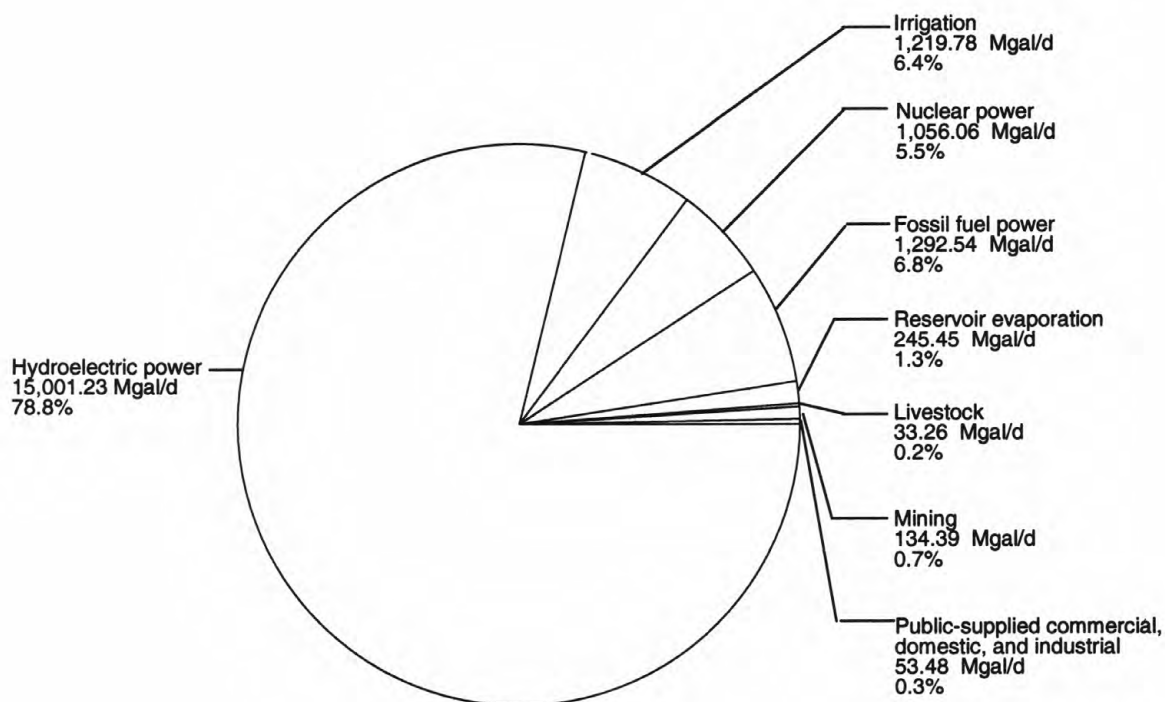


Figure 5.--(b) Estimated total surface-water use in Nebraska, 1995.

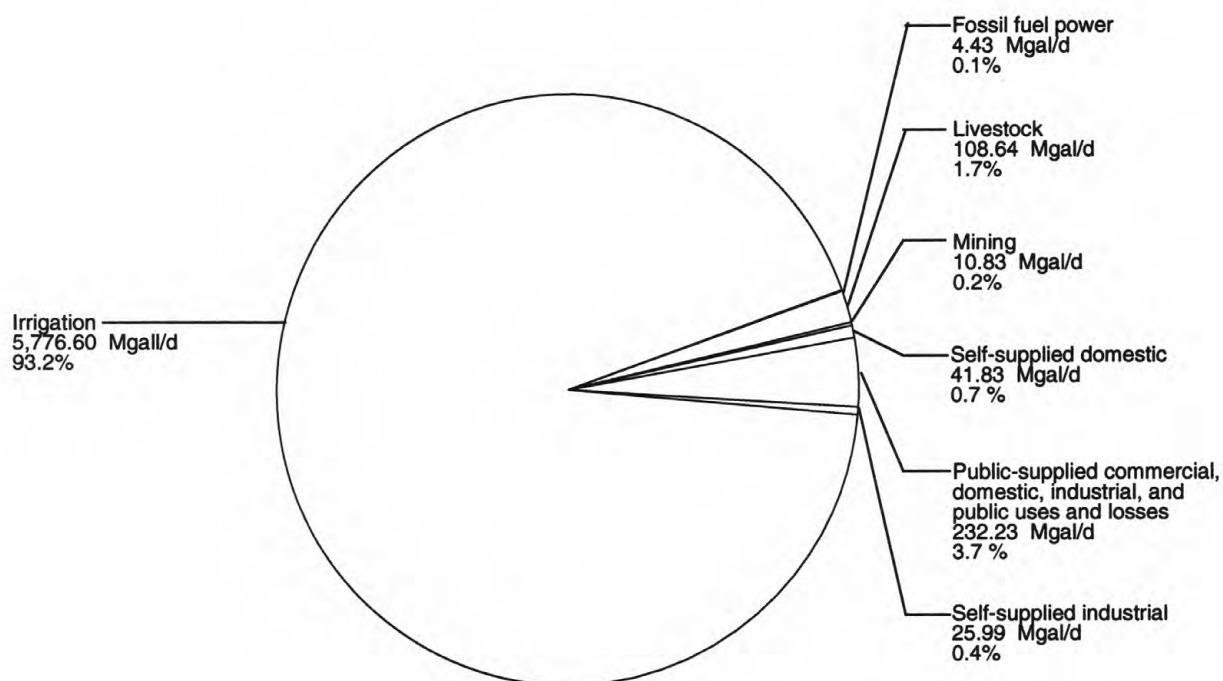


Figure 5.--(c) Estimated total ground-water use in Nebraska, 1995.

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 1997 water year that began October 1, 1996, and ended September 30, 1997. 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.

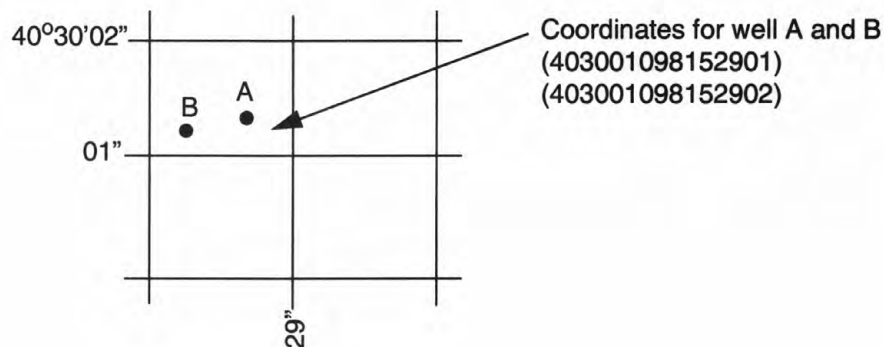
Downstream Order System

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 below.)



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.

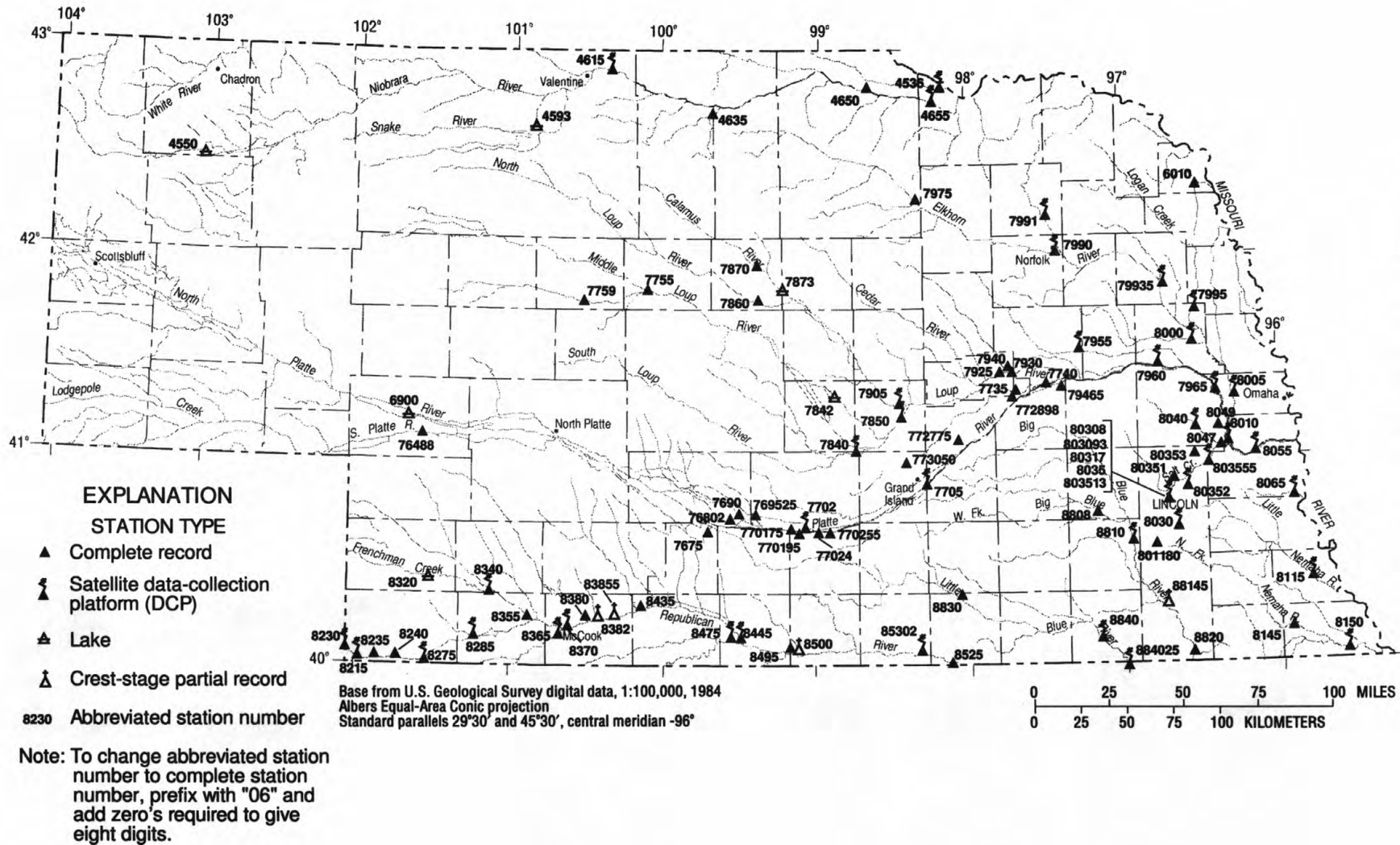


Figure 6. Location of active surface-water gaging stations.

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 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.

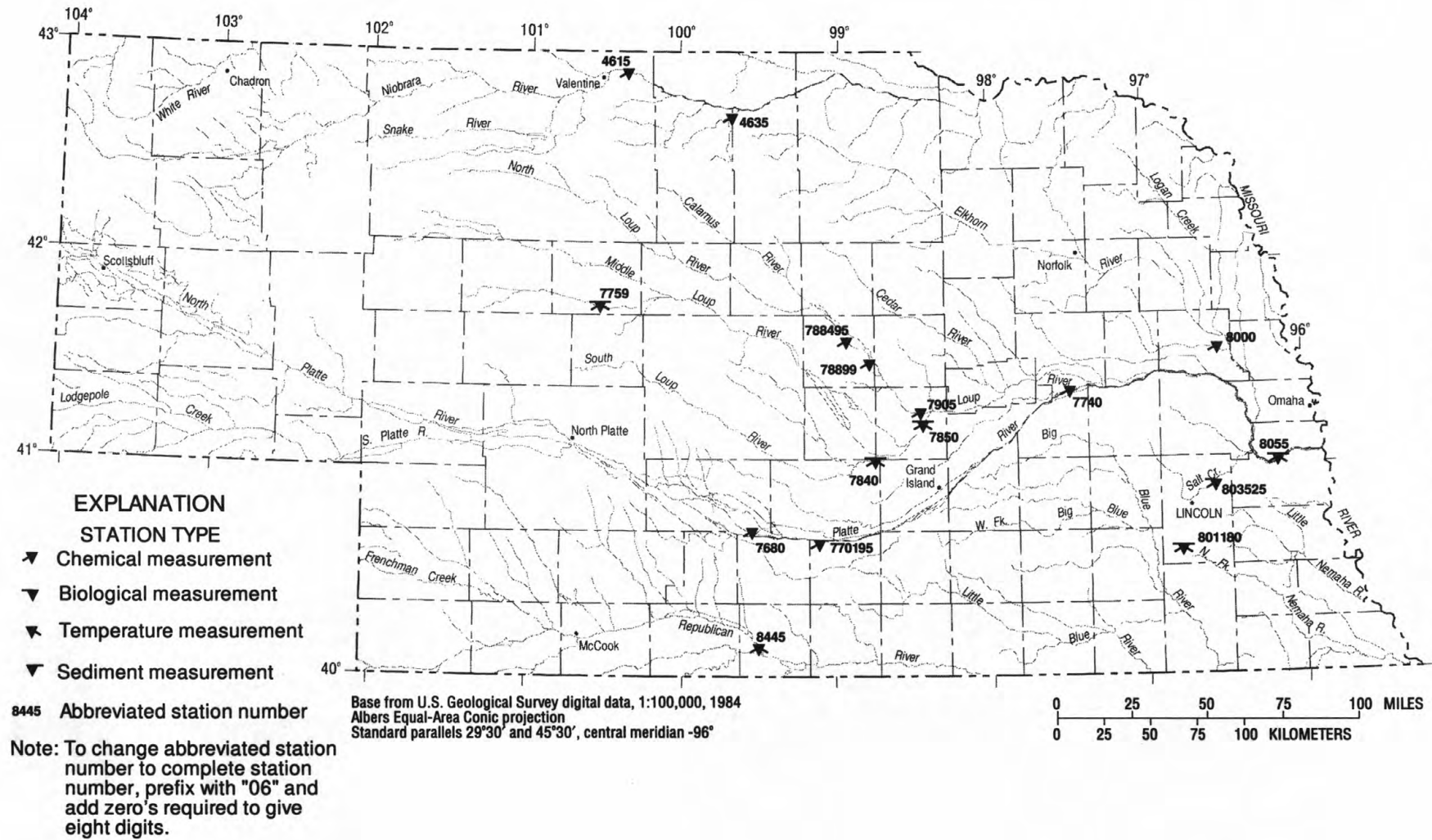


Figure 7.--Location of active surface-water quality stations.

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 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 (1997) 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).

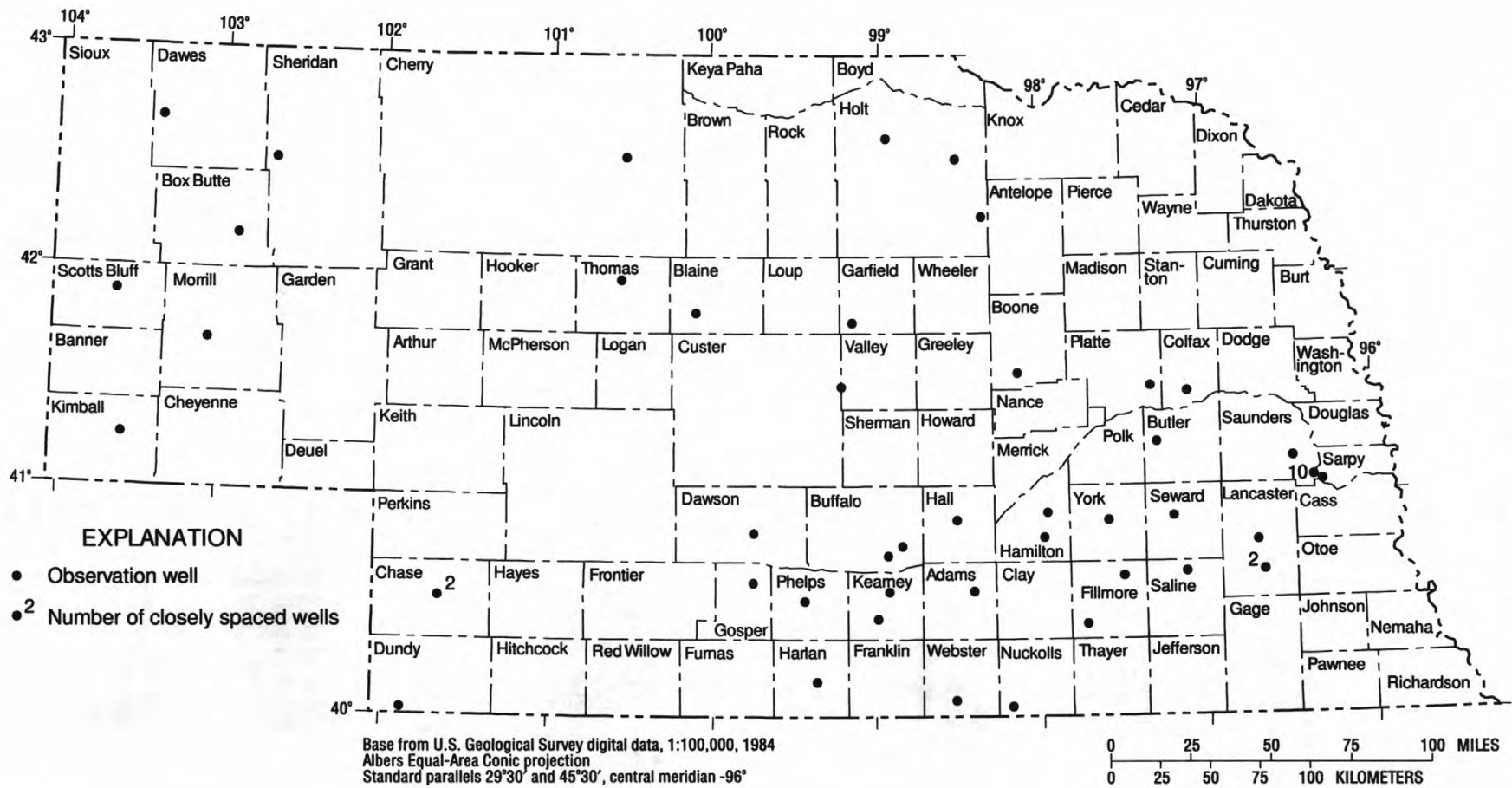


Figure 8.--Location of selected observation wells.

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.

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.

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

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. 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 warmblooded 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.

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

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.

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.

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.

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 (ft³/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 μ m 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.

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).

Hydrologic Bench-Mark Network is a network of 57 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 eight-digit number.

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

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.

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.

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.

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) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 39 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

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, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE 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:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
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.

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.

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 (ft^3/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 ($7 Q_{10}$) 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 about 65 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 planimetered. All areas shown are those for the stage when the planimetered 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 μ m 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 μ m 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 μ m 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 recoverable concentrations of the constituent.

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
<u>Genus</u>	<u>Hexagenia</u>
<u>Species</u>	<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.

Water year in 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, 1997, is called the "1997 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."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 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.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 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.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 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.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 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. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Meyers and F.D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.

WATER RESOURCES DATA - NEBRASKA, 1997
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

43

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	181	e140	e110	e135	e130	236	401	316	72	44	77
2	183	145	e141	e140	e130	e150	247	603	276	65	46	66
3	157	134	e145	e130	e120	e145	266	962	253	58	45	49
4	144	138	e125	e110	e110	e130	266	818	273	54	82	41
5	136	136	e125	e96	e105	e160	321	690	265	52	80	41
6	129	129	e135	e98	e105	e200	543	558	252	49	64	44
7	122	122	e130	e105	e94	e300	449	512	229	47	52	169
8	116	116	e125	e110	e96	e500	388	450	208	47	43	645
9	111	110	e150	e88	e100	825	364	399	187	44	37	324
10	105	106	e130	e62	e100	723	366	355	172	43	35	260
11	102	102	e145	e64	e105	714	338	330	170	43	39	186
12	101	99	e140	e66	e100	689	331	303	192	43	38	120
13	96	99	e135	e70	e115	560	361	283	202	54	37	99
14	93	100	e125	e72	e110	e350	420	268	187	59	41	81
15	91	102	e125	e72	e110	e370	528	251	170	58	57	72
16	90	e98	e120	e64	e120	e420	565	243	154	53	53	65
17	106	e94	e96	e67	e145	e400	554	234	140	45	40	58
18	138	e98	e86	e94	e140	378	592	230	131	40	35	52
19	142	e102	e84	e120	e145	345	626	215	124	38	34	47
20	133	e102	e94	e140	e145	386	550	206	119	35	33	44
21	117	e100	e86	e125	e125	449	506	200	119	33	31	40
22	103	e100	e70	e100	e120	443	515	195	116	34	30	48
23	96	e92	e60	e100	e105	411	517	197	127	40	29	55
24	91	e88	e60	e86	e115	374	468	208	149	39	28	53
25	91	e90	e60	e74	e140	356	421	204	131	36	28	53
26	93	e96	e62	e76	e120	330	398	262	107	35	27	52
27	94	e106	e72	e66	e125	314	397	415	95	34	27	48
28	95	e130	e74	e78	e135	298	378	551	86	34	28	43
29	99	e150	e66	e86	---	274	357	552	79	30	28	39
30	124	e145	e70	e105	---	258	395	453	74	30	35	37
31	177	---	e80	e140	---	244	---	371	---	33	113	---
TOTAL	3702	3410	3256	2914	3315	11626	12663	11919	5103	1377	1339	3008
MEAN	119	114	105	94.0	118	375	422	384	170	44.4	43.2	100
MAX	227	181	150	140	145	825	626	962	316	72	113	645
MIN	90	88	60	62	94	130	236	195	74	30	27	37
AC-FT	7340	6760	6460	5780	6580	23060	25120	23640	10120	2730	2660	5970

e Estimated

PONCA CREEK BASIN

06453600 PONCA CREEK AT VERDEL, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.1	26.2	18.1	16.1	52.6	234	191	183	150	85.6	40.4	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

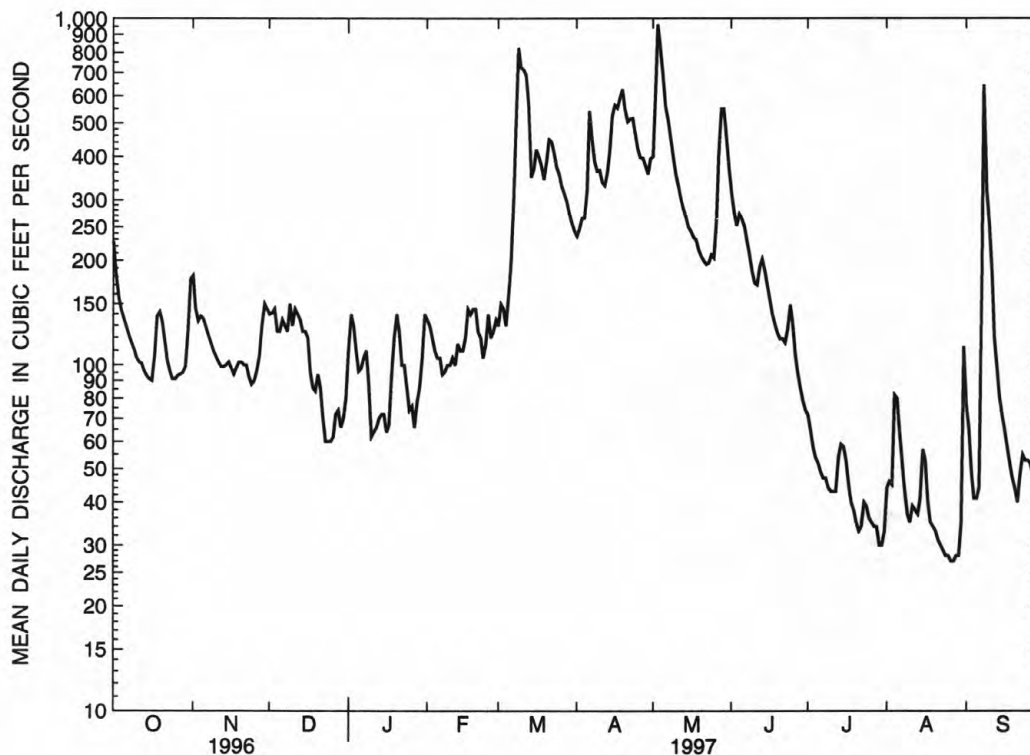
SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1958 - 1997	
ANNUAL TOTAL	73347		63632			
ANNUAL MEAN	200		174		87.9	
MEDIAN OF ANNUAL MEANS					65	
HIGHEST ANNUAL MEAN					343	
LOWEST ANNUAL MEAN					3.75	
HIGHEST DAILY MEAN	3660	May 28	962	May 3	14800	Mar 28 1960
LOWEST DAILY MEAN	24	Sep 6	27	Aug 26	.00	Oct 1 1957
ANNUAL SEVEN-DAY MINIMUM	27	Sep 12	28	Aug 23	.00	Oct 1 1957
INSTANTANEOUS PEAK FLOW (STAGE)			1060 (7.37) May 3		15700 (**15.10) Mar 27 1960	
INSTANTANEOUS PEAK STAGE			***16.27 Feb 20		****17.30 Mar 6 1993	
ANNUAL RUNOFF (AC-FT)	145500		126200		63680	
10 PERCENT EXCEEDS	299		405		193	
50 PERCENT EXCEEDS	125		116		20	
90 PERCENT EXCEEDS	46		41		.10	

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

** Site and datum then in use.

*** Ice jam.

**** From floodmark, ice jam.



PONCA CREEK AT VERDEL

NIOBRARA RIVER BASIN

45

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, 21,050 acre-ft June 24, elevation, 4,000.03 ft; minimum observed, 9,300 acre-ft Oct. 1, elevation, 3,988.86 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sep 30	3,988.86	9,300	--
Oct. 31	3,990.37	10,600	+1,300
Nov. 30	3,991.97	12,070	+1,470
Dec. 31	3,993.28	13,340	+1,270
CAL YR 1996.....	--	--	+730
Jan. 31	3,994.68	14,780	+1,440
Feb. 28	3,995.77	15,950	+1,170
Mar. 31	3,997.31	17,700	+1,750
Apr. 30.....	3,998.85	19,550	+1,850
May 31.....	3,999.77	20,720	+1,170
June 30.....	3,999.99	21,000	+280
July 31.....	3,994.79	14,890	-6,110
Aug. 31.....	3,989.27	9,640	-5,250
Sept. 30.....	3,989.68	9,990	+350
WTR YR 1997.....	--	--	+690

* 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 76,250 acre-ft June 3, elevation, 2,946.6 ft; minimum observed 47,420 acre-ft Oct. 1, elevation, 2,935.1 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,934.9	47,010	--
Oct. 31.....	2,940.2	58,920	+11,910
Nov. 30.....	2,944.2	69,390	+10,470
Dec. 31.....	2,944.2	69,390	0
CAL YR 1996	--	--	+560
Jan. 31.....	2,944.0	68,830	-560
Feb. 28.....	2,944.0	68,830	0
Mar. 31.....	2,944.1	69,110	+280
Apr. 30.....	2,946.2	75,080	+5,970
May 31.....	2,946.3	75,370	+290
June 30.....	2,946.0	74,490	-880
July 31.....	2,941.4	61,940	-12,550
Aug. 31.....	2,938.3	54,380	-7,560
Sept. 30.....	2,940.2	58,920	+4,540
WTR YR 1997	--	--	+11,910

* Elevations read on or near last day of month.

NIOBRARA RIVER BASIN

47

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 Minnechadua Creek, 6.5 mi southwest of Sparks, and at mile 342.

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637	645	792	e760	e940	1010	990	1230	1030	795	847	597
2	602	624	758	e940	e920	968	1000	1260	994	736	768	811
3	602	607	823	e980	e900	984	1020	1270	1270	708	755	631
4	598	611	791	e920	e880	987	1000	1220	1340	699	767	626
5	603	617	815	e840	e880	940	1040	1230	1220	710	712	648
6	598	617	786	e820	e880	952	1090	1120	1330	721	714	623
7	590	604	787	e824	e880	969	977	1130	1300	716	724	644
8	593	617	784	e820	e880	979	952	1100	1220	686	706	699
9	584	598	777	e760	e880	1030	967	1070	1130	648	690	626
10	578	580	833	e640	e880	1030	1060	1060	1070	606	679	607
11	572	580	832	e580	e874	1030	1030	1060	1020	628	699	607
12	577	580	853	e600	e880	1050	1030	1030	981	729	704	599
13	572	552	857	e620	e940	1060	969	1000	967	877	718	606
14	575	561	871	e660	e1060	1020	1010	1000	946	752	734	615
15	569	561	903	e700	1250	987	1010	1010	939	690	718	620
16	561	570	841	e660	1030	1010	1010	1020	925	670	688	612
17	580	508	817	e660	1150	1030	1070	1030	917	652	663	590
18	563	676	582	e740	1270	1050	1070	999	904	627	660	573
19	562	666	519	e860	1390	1020	1120	970	896	600	673	570
20	570	712	e640	e900	1400	1010	1120	925	935	585	669	575
21	567	e680	e620	e960	1350	1030	1320	903	962	627	667	580
22	551	e700	e560	e900	1210	1040	1190	893	1030	650	693	612
23	556	e680	e500	e840	1160	1010	1230	897	961	694	684	653
24	556	e620	e480	e820	1090	1010	1250	885	892	689	655	669
25	568	e600	e480	e740	1080	1010	1250	908	725	693	629	663
26	595	e620	e470	e700	1060	974	1270	1210	736	648	612	647
27	635	e700	e500	e700	1010	997	1240	1190	744	590	604	642
28	631	e780	e540	e720	990	990	1210	1180	733	579	602	629
29	646	e800	e500	e760	---	1010	1200	1110	716	569	601	624
30	731	785	e540	e820	---	998	1180	1030	729	627	600	623
31	686	---	e600	e900	---	994	---	1070	---	786	592	---
TOTAL	18408	19051	21451	24144	29114	31179	32875	33010	29562	20987	21227	18821
MEAN	594	635	692	779	1040	1006	1096	1065	985	677	685	627
MAX	731	800	903	980	1400	1060	1320	1270	1340	877	847	811
MIN	551	508	470	580	874	940	952	885	716	569	592	570
AC-FT	36510	37790	42550	47890	57750	61840	65210	65480	58640	41630	42100	37330

e Estimated

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

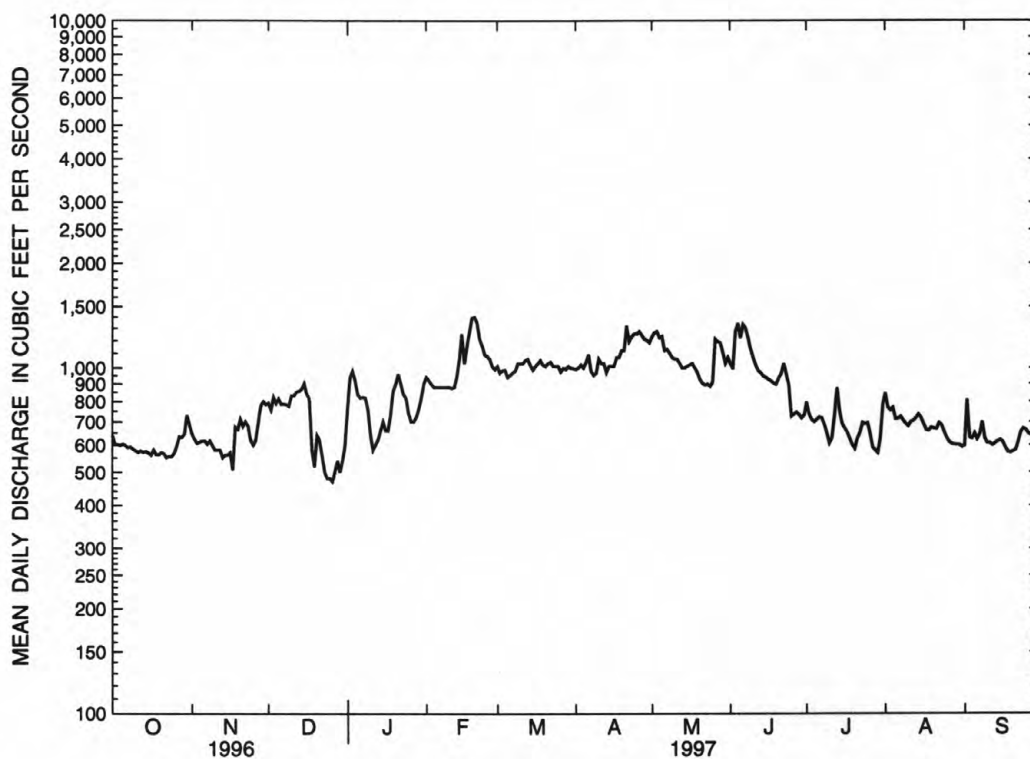
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	670	752	758	769	882	967	901	889	817	631	595	613
MAX	879	877	950	1208	1403	1464	1214	1385	1470	1122	858	993
(WY)	1966	1963	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL TOTAL	280285		299829			
ANNUAL MEAN	766		821		769	
HIGHEST ANNUAL MEAN					911	1962
LOWEST ANNUAL MEAN					598	1976
HIGHEST DAILY MEAN	1730	May 28	1400	Feb 20	5000	Feb 5 1984
LOWEST DAILY MEAN	470	Dec 26	470	Dec 26	100	Jan 10 1957
ANNUAL SEVEN-DAY MINIMUM	496	Dec 23	496	Dec 23	327	Dec 8 1949
INSTANTANEOUS PEAK FLOW (STAGE)			1460 (3.42)	Feb 20	10200 (6.73)	Mar 5 1949
INSTANTANEOUS PEAKSTAGE			*8.70	Dec 24	**10.06	Feb 7 1973
ANNUAL RUNOFF (AC-FT)	555900		594700		557300	
10 PERCENT EXCEEDS	995		1120		1030	
50 PERCENT EXCEEDS	740		777		760	
90 PERCENT EXCEEDS	537		580		501	

* Backwater from ice.

** Ice.iam.



NIOBRARA RIVER NEAR SPARKS

NIOBRARA RIVER BASIN

49

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 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE INST. (FT ³ /S) (00061)	SPECIFIC CONDUCTANCE (μS/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (°C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	ALKALINITY LAB (MG/L AS CaCO ₃) (90410)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)
OCT 16	1420	558	238	8.8	12.5	12	97	118	31	4.4	9.5
NOV 19	1430	572	261	8.5	0.5	9	99	119	32	4.6	9.4
FEB 11	1340	883	316	8.3	0.5	22	120	144	39	5.2	10
MAR 18	1500	1040	231	8.5	6.0	23	89	111	28	4.5	8.8
MAY 06	1420	1080	267	8.6	18.0	30	110	137	34	5.5	13
SEP 16	0905	615	232	8.5	20.0	12	97	113	31	4.5	9.1

DATE	SODIUM ADSORPTION RATIO (00931)	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)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 16	0.4	6.5	5.8	1.4	0.41	54	186	0.25	280	0.29	0.02
NOV 19	0.4	5.8	6.2	1.5	0.39	60	196	0.27	302	0.80	0.02
FEB 11	0.4	8.4	7.3	2.4	0.40	51	214	0.29	510	0.69	0.09
MAR 18	0.4	7.3	6.0	1.5	0.43	50	176	0.24	493	0.45	0.01
MAY 06	0.6	8.1	6.7	2.2	0.50	48	202	0.27	588	--	<0.01
SEP 16	0.4	7.0	5.2	1.3	0.40	52	181	0.25	300	--	<0.01

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
OCT 16	0.31	0.02	--	<0.20	--	0.09	0.04	0.05	41	8.2	1.8
NOV 19	0.82	0.03	--	<0.20	--	0.13	0.08	0.08	34	20	4.0
FEB 11	0.78	0.10	0.30	0.40	1.2	0.11	0.11	0.10	33	34	9.0
MAR 18	0.46	<0.02	--	0.25	0.71	0.08	0.06	0.07	30	43	4.3
MAY 06	0.22	<0.02	--	0.41	0.62	0.06	0.05	0.07	32	24	4.1
SEP 16	0.38	<0.02	--	<0.20	--	0.153	0.07	0.06	32	13	1.7

NIOBRARA RIVER BASIN

51

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	186	178	181	210	212	183	291	246	931	570	225
2	193	190	176	224	217	208	187	284	247	923	415	240
3	193	193	176	309	234	216	206	324	266	460	268	238
4	197	193	174	269	197	208	219	300	348	315	242	240
5	199	189	173	184	175	206	227	245	369	269	236	243
6	192	189	176	165	176	204	220	213	317	230	216	221
7	190	185	171	171	172	204	194	202	269	219	223	233
8	191	182	171	167	174	210	209	189	245	198	193	256
9	190	182	174	158	173	219	243	183	225	182	193	418
10	186	182	182	136	180	221	218	185	208	168	207	301
11	191	182	190	e140	183	216	192	180	209	188	241	260
12	193	182	209	e150	185	210	190	173	212	323	245	243
13	190	182	224	157	188	208	195	175	205	430	241	234
14	195	180	227	155	190	187	233	175	207	407	261	222
15	190	176	204	159	195	193	455	173	212	305	250	215
16	190	182	194	146	223	199	436	177	205	238	236	206
17	199	176	e160	151	260	204	308	177	197	220	232	194
18	195	176	e140	166	322	203	259	175	194	185	227	185
19	197	180	e155	181	311	207	227	193	192	175	234	188
20	192	190	173	182	319	210	220	190	206	188	232	192
21	189	192	167	198	266	207	233	202	230	200	280	193
22	186	193	156	195	234	202	337	220	211	198	288	212
23	186	191	e155	169	221	198	332	214	191	203	308	226
24	187	177	e135	166	217	196	293	222	184	194	264	232
25	191	181	157	157	213	194	252	223	177	184	249	189
26	192	175	155	151	215	192	224	276	189	187	242	182
27	182	175	169	146	212	194	210	334	184	187	237	176
28	185	177	167	e155	215	188	205	367	184	193	250	164
29	197	181	160	160	---	183	210	361	186	194	235	163
30	199	180	166	165	---	184	269	314	189	193	215	163
31	196	---	176	187	---	187	---	270	---	299	213	---
TOTAL	5954	5499	5390	5400	6077	6270	7386	7207	6704	8786	7943	6654
MEAN	192	183	174	174	217	202	246	232	223	283	256	222
MAX	201	193	227	309	322	221	455	367	369	931	570	418
MIN	182	175	135	136	172	183	183	173	177	168	193	163
AC-FT	11810	10910	10690	10710	12050	12440	14650	14300	13300	17430	15750	13200

e Estimated

NIOBRARA RIVER BASIN

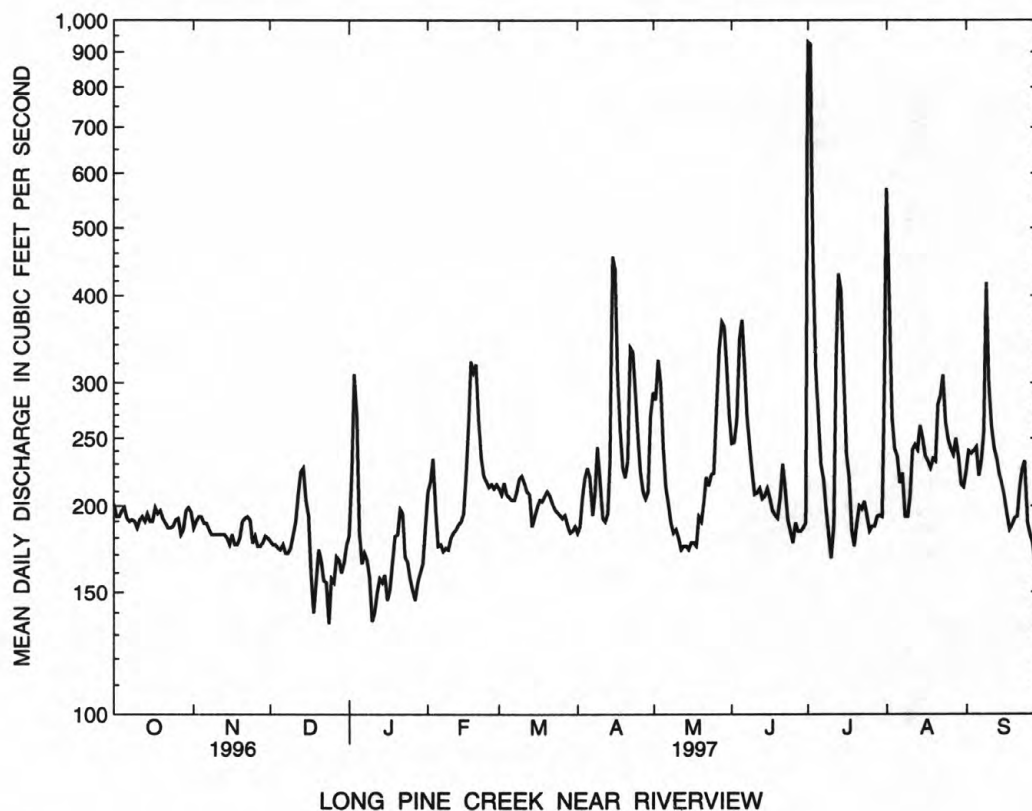
06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	138	139	138	135	144	166	168	181	169	162	158	155
MAX	254	198	191	180	256	257	369	495	396	368	256	263
(WY)	1996	1996	1996	1995	1996	1987	1995	1995	1951	1962	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1948 - 1997	
ANNUAL TOTAL	78496		79270		155	
ANNUAL MEAN	214		217		231	
HIGHEST ANNUAL MEAN					111	
LOWEST ANNUAL MEAN					1995	
HIGHEST DAILY MEAN	1750	May 28	931	Jul 1	3050	Jul 1 1962
LOWEST DAILY MEAN	120	Jan 18	135	Dec 24	44	Jan 10 1963
ANNUAL SEVEN-DAY MINIMUM	152	Jan 18	149	Jan 10	76	Jan 10 1963
INSTANTANEOUS PEAK FLOW			1520	Jul 1	9650	Jul 1 1962
INSTANTANEOUS PEAK STAGE			5.06	Jul 1	*15.68	Jul 1 1962
ANNUAL RUNOFF (AC-FT)	155700		157200		112200	
10 PERCENT EXCEEDS	258		282		197	
50 PERCENT EXCEEDS	190		196		143	
90 PERCENT EXCEEDS	164		169		110	

* Backwater from fallen bridge



NIOBRARA RIVER BASIN

53

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 1996 TO SEPTEMBER 1997

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)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	ALKA- LINITY 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)
OCT 17	1005	191	212	8.1	9.0	15	78	87	25	3.7	7.8
NOV 20	1100	189	217	7.7	7.0	9	78	88	25	3.8	8.1
FEB 12	0910	182	217	8.3	4.0	7	77	87	25	3.6	7.6
MAR 19	0900	199	203	8.3	6.0	12	75	87	24	3.6	7.5
MAY 07	0835	199	213	8.3	13.5	20	82	95	27	3.9	8.6
MAY 07	0845	199	213	8.3	13.5	15	84	96	27	3.9	8.6
SEP 15	1540	219	198	8.4	22.5	16	79	87	26	3.8	7.6

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 CONSTITUENTS, 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)
OCT 17	0.4	6.3	4.9	2.7	0.30	54	168	0.23	86.5	2.3	0.03
NOV 20	0.4	6.0	5.3	2.7	0.30	58	174	0.24	88.7	2.5	0.02
FEB 12	0.4	5.8	5.0	2.4	0.30	58	172	0.23	84.7	2.7	0.03
MAR 19	0.4	6.0	4.8	2.4	0.30	53	165	0.22	88.6	2.4	0.01
MAY 07	0.4	5.9	4.5	2.5	0.30	54	173	0.23	92.8	--	<0.01
MAY 07	0.4	6.0	4.6	2.4	0.29	54	173	0.24	93.2	--	<0.01
SEP 15	0.4	6.5	4.8	2.1	0.30	54	165	0.22	97.6	1.7	0.01

NIOBRARA RIVER BASIN

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
OCT 17	2.3	0.02	--	<0.20	--	0.26	0.12	0.19	33	19	3.0
NOV 20	2.5	<0.02	--	<0.20	--	0.24	0.17	0.17	31	21	3.0
FEB 12	2.7	0.02	0.18	0.20	2.9	0.16	0.14	0.16	32	24	2.0
MAR 19	2.4	0.02	0.48	0.50	2.9	0.15	0.10	0.15	25	35	1.0
MAY 07	2.0	<0.02	--	<0.20	--	0.19	0.14	0.17	21	32	3.3
MAY 07	1.9	<0.02	--	<0.20	--	0.20	0.14	0.17	22	30	4.1
SEP 15	1.8	<0.02	--	<0.20	--	0.20	0.16	0.17	34	24	2.3

NIOBRARA RIVER BASIN

55

06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'44", long 99°46'49", in NW1/4SW1/4SE1/4 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.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	151	e108	e85	e256	277	166	463	264	88	107	61
2	109	142	e106	e101	e400	253	167	509	227	103	162	65
3	101	135	e104	e162	e476	255	171	527	256	110	144	59
4	96	128	e104	e215	e396	237	171	554	506	e110	117	55
5	94	122	e104	e177	e290	e218	190	528	700	e100	95	54
6	89	118	e104	e139	e236	e216	e192	448	641	e94	86	53
7	87	112	e99	e137	e276	e212	e200	377	513	e90	78	54
8	83	109	e102	e125	e256	205	e210	335	408	e85	71	54
9	81	106	e100	e122	e212	251	e220	286	316	e80	67	52
10	79	103	e104	e112	e198	283	e230	254	250	77	66	51
11	77	97	e110	e102	e188	312	e270	233	221	72	66	49
12	77	93	e116	e95	e180	317	e290	206	259	83	69	49
13	77	93	e121	e97	e176	295	e300	189	247	111	71	52
14	77	e92	e125	e97	e187	221	320	173	213	150	72	52
15	75	e90	e120	e95	e191	196	437	159	191	148	75	54
16	75	e80	e107	e97	e268	196	543	148	173	133	68	57
17	86	e54	e94	e95	e800	e196	604	144	161	106	65	55
18	94	e80	e83	e96	e1690	217	579	141	158	89	67	52
19	97	e92	e85	e102	e2020	215	528	133	159	79	64	52
20	94	e98	e88	e116	e1800	226	499	126	152	76	61	52
21	91	e103	e89	e164	e1340	240	513	119	134	73	58	55
22	88	e103	e90	e244	e852	233	589	111	127	79	56	58
23	87	e107	e88	e201	e626	220	588	110	122	91	57	60
24	86	e103	e86	e180	e514	210	538	110	120	80	56	61
25	85	e100	e87	e162	e425	194	482	114	110	76	55	61
26	88	e97	e91	e153	e377	191	422	172	106	71	51	59
27	92	e97	e94	e145	e326	187	374	278	100	64	51	58
28	95	e97	e92	e142	e319	180	341	370	94	64	54	56
29	106	e101	e88	e136	---	167	328	367	89	62	65	54
30	137	e104	e84	e128	---	164	409	350	85	63	60	51
31	146	---	e85	e158	---	161	---	310	---	86	55	---
TOTAL	2868	3107	3058	4180	15275	6945	10871	8344	7102	2793	2289	1655
MEAN	92.5	104	98.6	135	546	224	362	269	237	90.1	73.8	55.2
MAX	146	151	125	244	2020	317	604	554	700	150	162	65
MIN	75	54	83	85	176	161	166	110	85	62	51	49
AC-FT	5690	6160	6070	8290	30300	13780	21560	16550	14090	5540	4540	3280

e Estimated

NIOBRARA RIVER BASIN

06464500 KEYA PAHA RIVER AT WEWELA, SD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.1	42.9	34.5	29.5	73.3	178	161	141	103	61.3	34.4	29.9
MAX	141	147	107	135	546	598	605	754	512	607	143	85.8
(WY)	1996	1996	1996	1997	1997	1960	1952	1995	1962	1962	1962	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1939 - 1997	
ANNUAL TOTAL	54726		68487			
ANNUAL MEAN	150		188		^a 77.2	
HIGHEST ANNUAL MEAN					188	
LOWEST ANNUAL MEAN					19.5	
HIGHEST DAILY MEAN	1300	May 29	2020	Feb 19	4930	Mar 30 1952
LOWEST DAILY MEAN	28	Aug 26	49	Sep 11	.00	^b Jan 10 1949
ANNUAL SEVEN-DAY MINIMUM	28	Aug 26	51	Sep 8	.00	Jan 10 1949
INSTANTANEOUS PEAK FLOW			^c 2530	Feb 20	^d 5430	Mar 31 1952
INSTANTANEOUS PEAK STAGE			^f 9.97	Feb 20	^f 13.50	Mar 25 1950
ANNUAL RUNOFF (AC-FT)	108500		135800		55960	
10 PERCENT EXCEEDS	276		385		156	
50 PERCENT EXCEEDS	101		111		40	
90 PERCENT EXCEEDS	35		60		15	

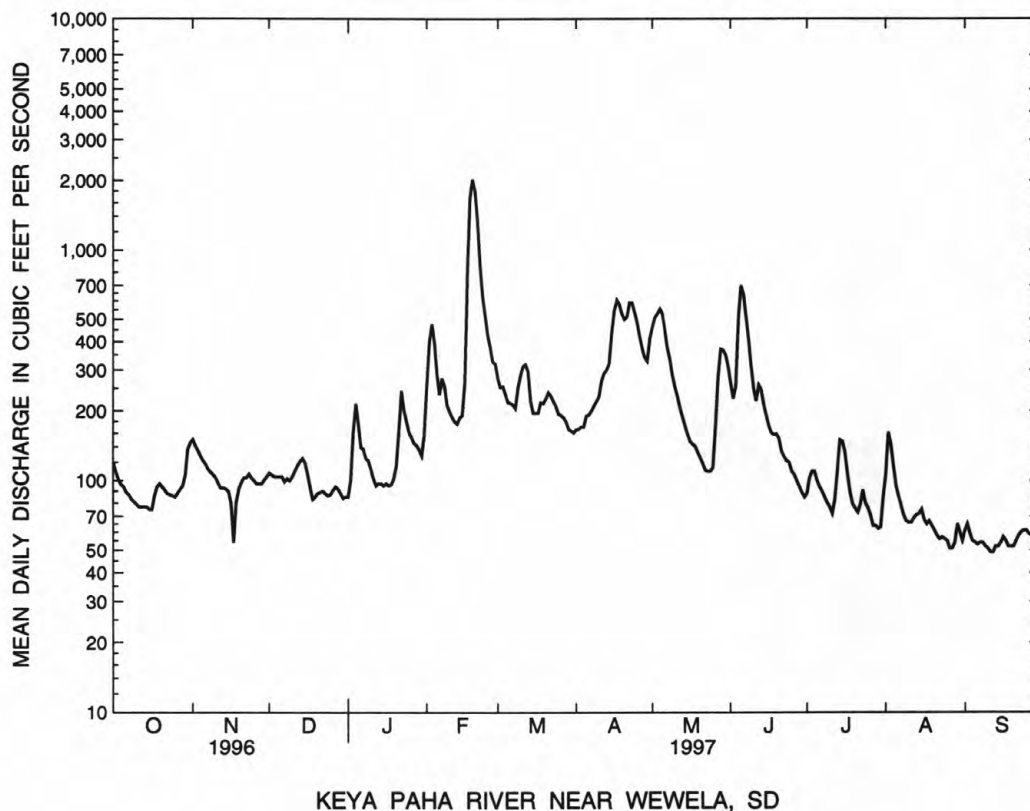
a Median of annual mean discharges, 62 ft³/s.

b Also Jan. 11 to Feb. 15, 1949, and Aug. 19 to Sept. 14, 1976.

c Gage height, 7.87 ft.

d Gage height, 13.08 ft.

f Backwater from ice.



NIOBRARA RIVER BASIN

57

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. 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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	2040	2090	1860	2350	2840	2010	3080	2490	1330	2440	1180
2	1640	1880	2000	1920	2500	2640	2260	3670	2250	2570	2430	1900
3	1650	1800	1970	2090	2510	2780	2370	3580	2530	2150	2190	1640
4	1600	1770	1990	2390	2320	2660	2210	3360	2870	1770	1830	1590
5	1440	1770	1960	2230	2320	2440	2680	3170	3200	1410	1860	1270
6	1460	1770	1980	2250	2330	2300	2720	2950	3250	1460	1770	1220
7	1560	1750	1960	2630	2350	2410	2120	2760	3090	1460	1610	2410
8	1530	1710	2010	2490	2520	2720	1980	2850	2910	1330	1550	1750
9	1400	1680	2060	2180	2230	3190	2250	2400	2680	1280	1330	1760
10	1500	1690	2170	1990	2120	3400	2120	2160	2510	1200	1470	1770
11	1490	1590	2320	1770	2070	3660	1980	2110	2410	1140	1740	1400
12	1440	1450	2420	1330	2030	3130	2050	2130	2570	1320	1640	1410
13	1430	1470	2550	1080	2040	2680	2180	2050	2250	1960	1680	1360
14	1430	1330	2480	1430	2050	1160	2570	1940	2180	2220	1740	1230
15	1490	1640	2070	1120	2070	1510	210	1880	2080	1960	1560	1240
16	1430	1410	1860	1400	2050	2940	1570	1870	1960	1620	1530	1540
17	1880	659	1540	1660	2170	3130	3310	1820	1890	1510	1480	1440
18	1890	670	843	1580	2670	2530	3010	1860	1830	1370	1440	1570
19	1620	896	417	1460	4640	2440	3020	1910	2090	1180	1380	1470
20	1630	1380	593	1650	6110	2080	2870	1780	1990	1140	1340	1410
21	1670	1760	630	1850	6970	2320	3310	1710	2040	1250	1340	1580
22	1610	1950	680	2010	5850	2390	3650	1720	1930	1230	1300	1920
23	1510	1850	928	2090	4200	2370	3780	1810	1980	1580	1290	1810
24	1820	1620	1230	1980	3610	2380	2540	1850	1820	1210	1270	1870
25	1490	1520	1430	1950	3320	2310	3190	1820	1770	1420	1380	2010
26	1530	1420	1320	1890	3180	2210	2960	2320	1740	1170	1200	1880
27	1590	1300	1400	1790	2980	2140	2780	3210	1270	1170	1210	1390
28	1480	1450	1440	2320	2830	2180	2630	3770	1270	1230	1280	1490
29	1570	1720	1510	1640	---	2180	2650	3370	1320	1150	1160	1490
30	2100	2070	1620	1700	---	2170	2880	3030	1320	1290	1230	1300
31	2100	---	1730	1930	---	2070	---	2810	---	1670	1190	---
TOTAL	49650	47015	51201	57660	84390	77360	75860	76750	65490	45750	47860	47300
MEAN	1602	1567	1652	1860	3014	2495	2529	2476	2183	1476	1544	1577
MAX	2100	2070	2550	2630	6970	3660	3780	3770	3250	2570	2440	2410
MIN	1400	659	417	1080	2030	1160	210	1710	1270	1140	1160	1180
AC-FT	98480	93250	101600	114400	167400	153400	150500	152200	129900	90750	94930	93820

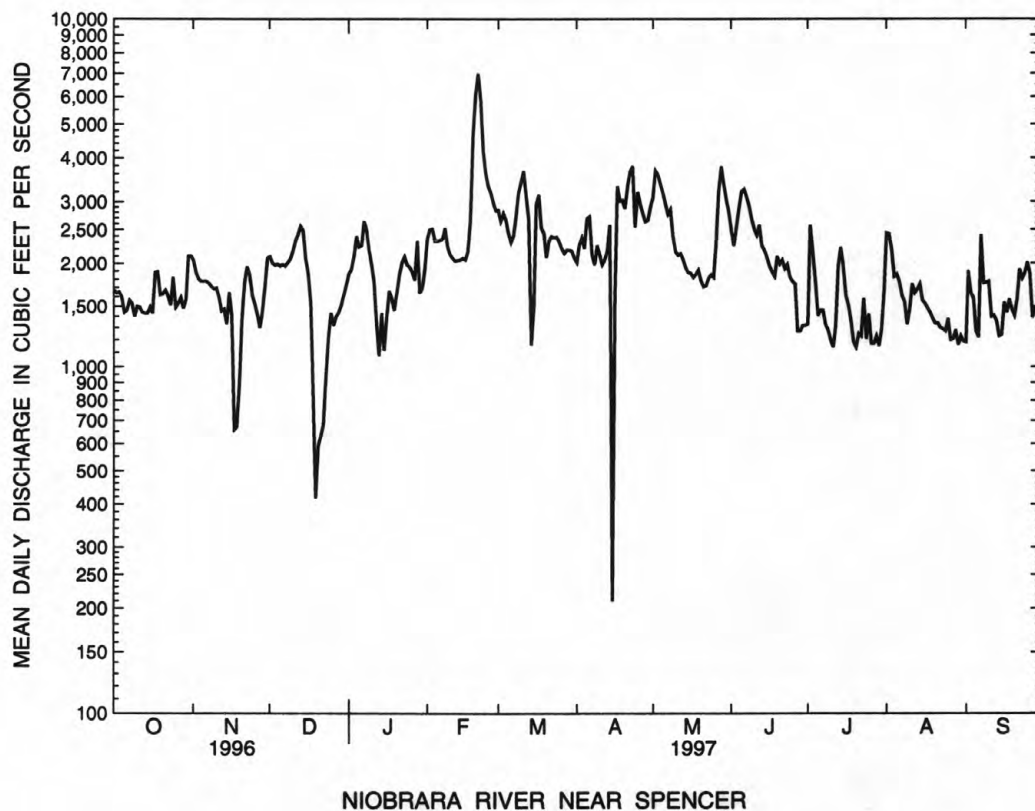
NIOBRARA RIVER BASIN

06465000 NIOBRARA RIVER NEAR SPENCER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1265	1324	1164	1220	1619	2246	1939	1865	1636	1144	1036	1117
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1927 - 1997	
ANNUAL TOTAL	699910		726286		1465	
ANNUAL MEAN	1912		1990		2066	
HIGHEST ANNUAL MEAN					1962	
LOWEST ANNUAL MEAN					1096	
HIGHEST DAILY MEAN	9400	May 28	6970	Feb 21	19000	Mar 27 1960
LOWEST DAILY MEAN	281	Mar 25	210	Apr 15	5.0	Nov 14 1940
ANNUAL SEVEN-DAY MINIMUM	760	Dec 18	760	Dec 18	168	Dec 8 1932
INSTANTANEOUS PEAK FLOW					27400	Mar 12 1955
INSTANTANEOUS PEAK STAGE					12.16	Mar 12 1955
ANNUAL RUNOFF (AC-FT)	1388000		1441000		1061000	
10 PERCENT EXCEEDS	2930		2920		2260	
50 PERCENT EXCEEDS	1720		1870		1300	
90 PERCENT EXCEEDS	1020		1270		771	



NIOBRARA RIVER BASIN

59

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	1950	e2600	e2300	e2600	e3200	3160	3720	3450	1480	1890	1620
2	1920	1720	e2500	e2500	e2800	e3100	3200	3720	3350	2220	2270	2010
3	1950	1720	e2500	e2700	e2700	e3100	3160	4830	3360	1960	2730	1980
4	2010	1950	e2500	e3000	e2700	e3000	3160	4650	3230	1370	2450	1890
5	2130	1890	e2400	e2800	e2600	e3000	3940	3860	3190	1170	2070	1670
6	2130	1700	e2400	e2900	e2700	e2700	4310	3250	3460	1320	1890	1550
7	2100	1720	e2300	e3100	e2800	e2800	3240	3300	2890	1320	1780	2510
8	2010	1670	e2400	e2800	e2900	e3200	3120	3360	2610	1370	1720	1860
9	2010	1650	e2500	e2500	e2700	e3700	3200	3600	2850	1350	1610	1750
10	1800	1530	e2600	e2300	e2600	e3900	3120	3770	2790	1390	1680	1650
11	1750	1550	e2700	e2100	e2600	e4100	3160	3690	2610	1690	1610	1490
12	1800	1550	e2900	e1900	e2500	e3800	3240	3360	2920	1920	1550	1430
13	1890	1570	e3200	e1500	e2400	e3300	3160	2740	2640	2320	1540	1490
14	1890	1550	e3100	e1800	e2300	e2500	4090	2560	2400	2440	1980	1470
15	1860	e2000	e2900	e1600	e2400	e3000	3780	2200	2410	2080	2070	1530
16	1540	e1900	e2600	e1700	e2500	e3500	4390	2170	2360	1670	1950	1530
17	1920	e1100	e2300	e1900	e2700	4100	4200	2450	2090	1550	1800	1650
18	2020	e1200	e1900	e1800	e3200	3320	4390	2740	1940	1530	1610	1670
19	1920	1860	e850	e1600	e5200	3200	4240	2940	1900	1430	1590	1530
20	1890	e2000	e900	e1500	e6200	3160	4290	2300	2210	1390	1620	1670
21	2040	e2100	e920	e1300	e7000	3160	4010	2130	2340	1370	1530	1700
22	2040	e2300	e1000	e1400	e7600	3160	4520	2300	2240	1800	1530	1800
23	2010	e2500	e1300	e1500	e6200	2630	5410	2480	2130	2100	1550	1950
24	1720	e2300	e1500	e1800	e4800	3560	4570	2410	2190	1860	1670	1850
25	1550	e2100	e1800	e2000	e4200	3200	3910	2520	2170	2130	1750	1840
26	1490	e1900	e1700	e2200	e3800	4390	3280	2820	2110	1950	1700	1910
27	1650	e1700	e1600	e2300	e3500	3690	3040	3830	1800	1890	1720	1950
28	1620	e2000	e1800	e2500	e3400	2630	2700	4750	1800	1860	1830	1720
29	2070	e2200	e1900	e2400	---	3160	3120	4220	1800	1700	1620	1570
30	2270	e2600	e2000	e2100	---	3200	3400	4000	1620	1550	1700	1530
31	2010	---	e2100	e2300	---	3120	---	3510	---	1510	1620	---
TOTAL	58900	55480	65670	66100	99600	101580	110510	100180	74860	52690	55630	51770
MEAN	1900	1849	2118	2132	3557	3277	3684	3232	2495	1700	1795	1726
MAX	2270	2600	3200	3100	7600	4390	5410	4830	3460	2440	2730	2510
MIN	1490	1100	850	1300	2300	2500	2700	2130	1620	1170	1530	1430
AC-FT	116800	110000	130300	131100	197600	201500	219200	198700	148500	104500	110300	102700

e Estimated

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1403	1486	1353	1406	1864	2582	2285	2146	1821	1356	1115	1247
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

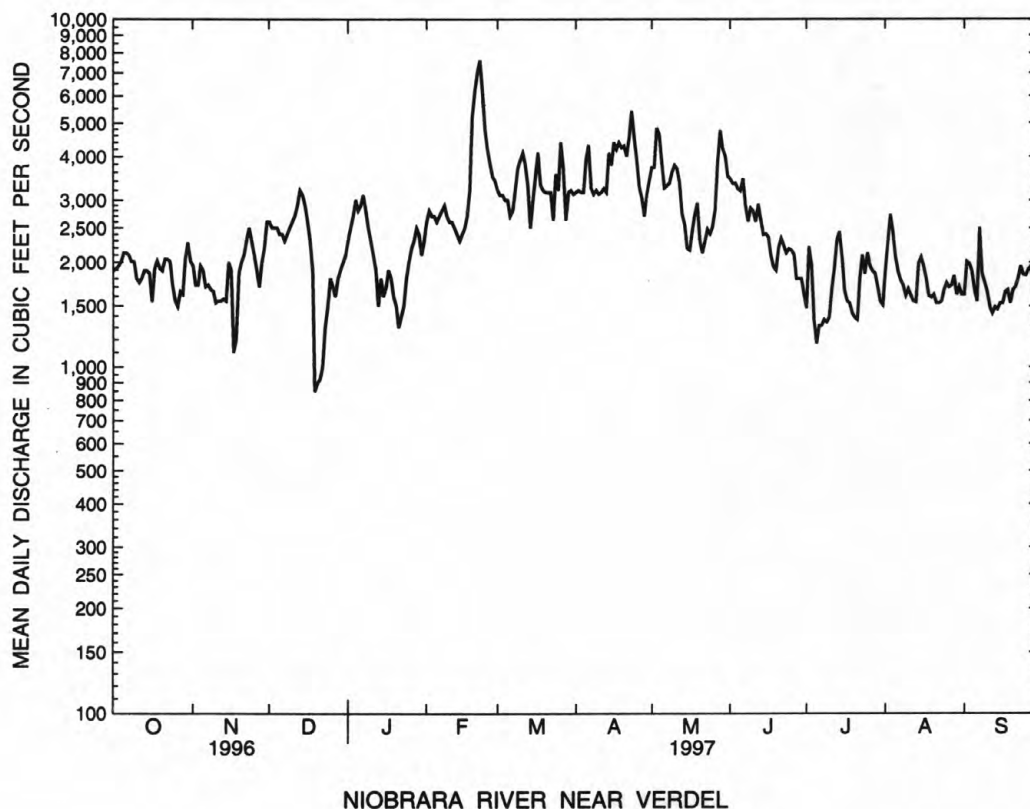
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1938 - 1997

ANNUAL TOTAL	856880	892970	
ANNUAL MEAN	2341	2446	1679
HIGHEST ANNUAL MEAN			2461
LOWEST ANNUAL MEAN			1269
HIGHEST DAILY MEAN	10000	May 28	*7600 Feb 22
LOWEST DAILY MEAN	850	Dec 19	850 Dec 19
ANNUAL SEVEN-DAY MINIMUM	1070	Aug 29	1180 Dec 19
INSTANTANEOUS PEAK FLOW			39000
INSTANTANEOUS PEAK STAGE			*7.92 Feb 22
ANNUAL RUNOFF (AC-FT)	1700000	1771000	1216000
10 PERCENT EXCEEDS	3400	3720	2610
50 PERCENT EXCEEDS	2100	2190	1490
90 PERCENT EXCEEDS	1260	1530	872

* Backwater from ice.



MISSOURI-LEWIS AND CLARK RIVER BASIN

61

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 U.S. Army Corps of Engineers.

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, 436,000 acre-ft, Feb. 23; minimum contents, 294,000 acre-ft, Apr. 1.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,207.69	423,000	--
Oct. 31	1,206.56	393,000	-30,000
Nov. 30	1,207.52	419,000	+26,000
Dec. 31	1,206.20	383,000	-36,000
CAL YR 1996.....	--	--	-25,000
Jan. 31	1,206.36	387,000	+4,000
Feb. 28	1,206.90	402,000	+15,000
Mar. 31	1,202.97	302,000	-100,000
Apr. 30	1,207.15	388,000	+86,000
May 31	1,206.92	381,000	-7,000
June 30	1,206.06	359,000	-22,000
July 31	1,206.23	364,000	+5,000
Aug. 31	1,207.20	389,000	+25,000
Sept. 30	1,206.86	380,000	-9,000
WTR YR 1997.....	--	--	-43,000

NOTE.--Lake frozen over Nov. 25 to Mar. 17.

MISSOURI RIVER MAIN STEM

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: Dec. 26, July 24 and Sept. 4. 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52900	53800	51200	21800	29000	38000	72200	83000	72000	64800	63200	65600
2	53000	53900	50900	23100	29600	38800	75600	83000	72100	67200	63300	65900
3	52800	54300	49200	23600	29600	39400	77100	83200	71400	66500	63100	65500
4	53000	54600	46200	24100	28300	38800	76900	81000	69800	65600	63600	e65500
5	53300	55100	43900	23900	27800	37100	81000	81000	68100	64400	63400	65400
6	53700	55800	41600	23000	28900	37700	86700	81100	67200	63900	63400	65100
7	53700	56500	39300	25200	29000	39300	88400	83000	67300	63300	64400	65900
8	53500	57000	35200	26000	28500	39100	91600	85100	67300	62200	65400	65900
9	53300	56900	31900	25800	28100	40700	91900	85500	66900	65100	65500	65400
10	53400	56700	29700	23500	28300	44200	97400	87300	66000	65200	66100	65500
11	53500	56400	27000	21000	28600	49900	96300	87100	65500	65800	66000	65600
12	53600	56100	26000	23000	29000	49000	93900	83700	66500	66100	65600	65900
13	53500	56100	25800	24200	29200	48300	96700	81400	68300	67500	65400	66300
14	53500	56200	25700	24700	29900	47100	96700	80200	65600	66600	65400	66100
15	53700	56600	24800	24300	30300	45600	97000	79800	64700	64600	65900	66100
16	54800	58300	24600	23700	29600	46500	95200	80200	64500	64900	65700	66400
17	56800	58900	25000	24300	29400	46900	91700	77500	64000	65100	66400	66300
18	56100	54300	22400	25000	29800	48400	89300	75900	63900	65700	66000	66000
19	54900	53800	15100	25600	32500	48000	89900	74700	63700	66600	65800	67100
20	54600	54200	15500	25600	34400	46000	90400	74500	64200	67100	66000	66600
21	54100	54100	20600	25400	35000	47300	88600	74300	65900	67500	65800	65800
22	53400	53700	22900	25400	33100	47900	89100	74200	67100	67900	65800	66700
23	53500	53600	19700	25600	32700	45900	88100	74300	66500	67200	66100	67900
24	53900	52400	17600	26000	33700	45900	87000	75100	66000	e67100	66300	66100
25	54100	51200	16900	25900	36000	46600	85300	72800	65000	67000	66200	66000
26	54600	50600	e18900	26000	37200	50100	84700	73500	64100	65200	66400	65800
27	54500	50800	20200	26200	36900	56900	85100	74400	64600	65000	65800	67700
28	54100	50700	21000	26100	36900	59000	85200	75000	64500	66600	66000	69600
29	54600	51300	21300	26600	---	60200	85300	73700	64700	64000	65700	69200
30	53800	51500	21200	26800	---	62500	86800	72600	64700	63300	66400	69200
31	53900	---	21100	27500	---	66600	---	72100	---	63000	66000	---
TOTAL	1672100	1635400	872400	768900	871300	1457700	2641100	2440200	1992100	2032000	2026100	1992100
MEAN	53940	54510	28140	24800	31120	47020	88040	78720	66400	65550	65360	66400
MAX	56800	58900	51200	27500	37200	66600	97400	87300	72100	67900	66400	69600
MIN	52800	50600	15100	21000	27800	37100	72200	72100	63700	62200	63100	65100
AC-FT	3317000	3244000	1730000	1525000	1728000	2891000	5239000	4840000	3951000	4030000	4019000	3951000

e Estimated

MISSOURI RIVER MAIN STEM

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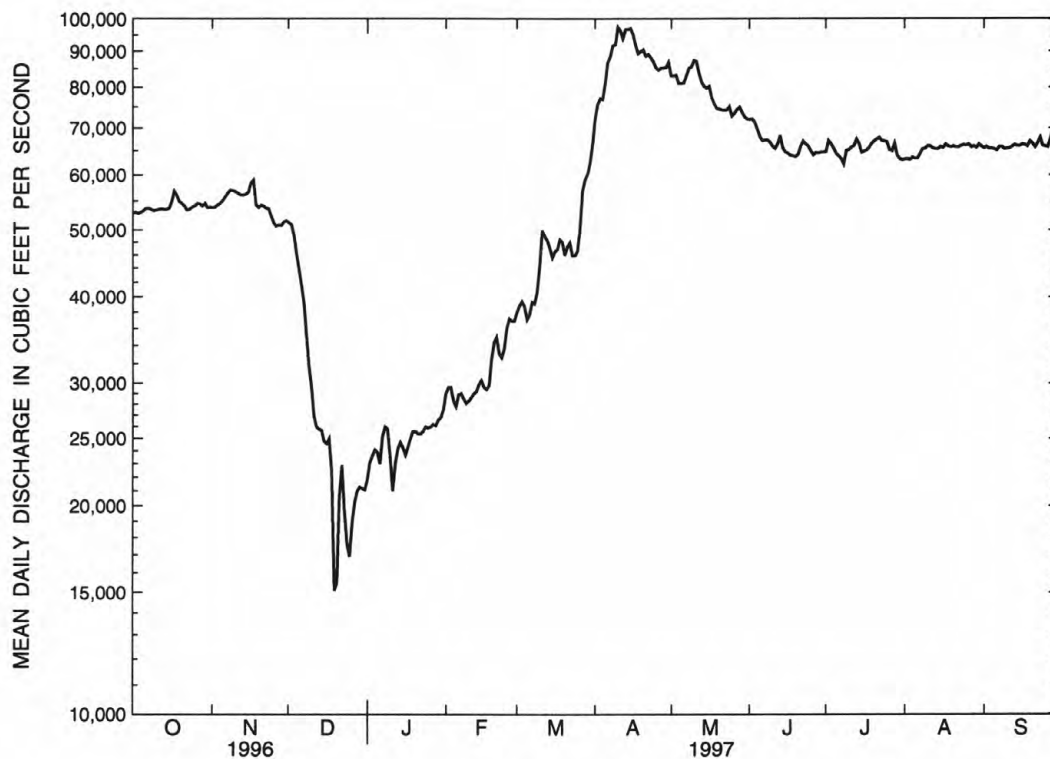
06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35410	29890	18080	15590	16820	23070	33410	33920	35700	36340	36850	36860
MAX	63260	62930	36770	27720	31120	47020	88040	78720	66400	65550	65360	66400
(WY)	1976	1976	1987	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		*WATER YEARS 1953 - 1997	
ANNUAL TOTAL	16021910		20401400			
ANNUAL MEAN	43780		55890		29370	
HIGHEST ANNUAL MEAN					55890	
LOWEST ANNUAL MEAN					19770	
HIGHEST DAILY MEAN	79900	Jul 17	97400	Apr 10	105000	Jun 25 1953
LOWEST DAILY MEAN	7410	Jan 19	15100	Dec 19	3000	Dec 11 1961
ANNUAL SEVEN-DAY MINIMUM	18000	Jan 18	18300	Dec 19	5430	Feb 22 1963
INSTANTANEOUS PEAK FLOW			100000	Apr 10	101000	Apr 3 1960
INSTANTANEOUS PEAK STAGE			25.83	Apr 8	30.65	Feb 19 1971
ANNUAL RUNOFF (AC-FT)	31780000		40470000		21280000	
10 PERCENT EXCEEDS	56400		81000		46400	
50 PERCENT EXCEEDS	48400		63000		29900	
90 PERCENT EXCEEDS	22000		25600		11300	

* Post-regulation period, revised.



MISSOURI RIVER AT SIOUX CITY, IA

OMAHA CREEK BASIN

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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	69	e58	e60	e150	e80	73	97	e200	74	48	33
2	57	73	e54	e70	e300	e82	74	109	e160	68	47	32
3	56	73	e54	e80	e250	e82	77	125	e180	62	45	33
4	58	77	e52	e82	e180	e86	79	110	e160	63	43	32
5	58	76	e52	e86	e150	e90	107	111	e140	63	42	31
6	57	73	e52	e88	e130	e110	133	109	e130	69	42	32
7	56	70	e52	e92	e120	e130	86	e108	e120	64	42	35
8	56	69	e50	e70	e110	167	86	e104	e110	63	40	33
9	56	69	e50	e50	e100	633	82	e98	e100	60	39	32
10	55	67	e52	e42	e96	190	84	e92	e90	61	40	31
11	56	67	e50	e38	e94	137	85	e90	e88	72	43	30
12	57	66	e50	e38	e88	121	79	e86	e86	76	47	29
13	58	67	e48	e40	e82	116	97	e84	e180	65	45	36
14	58	69	e48	e42	e78	92	103	e80	e140	61	44	34
15	58	81	e46	e42	e76	98	122	e76	e120	56	59	31
16	58	146	e46	e44	e74	104	106	e76	e100	55	45	31
17	60	146	e40	e44	e80	101	94	e72	e80	56	39	30
18	60	79	e34	e42	e100	98	91	e70	66	53	38	29
19	60	73	e40	e44	e200	100	86	e68	67	52	39	29
20	61	71	e44	e46	e380	102	113	e64	67	54	41	28
21	60	70	e42	e48	e400	100	121	e60	113	54	38	28
22	60	67	e36	e50	e250	94	106	e58	76	53	37	43
23	65	70	e34	e48	e160	90	104	e56	69	53	35	81
24	63	e56	e36	e48	e120	90	95	e54	131	52	37	49
25	62	e48	e38	e46	e100	87	90	e70	94	49	38	35
26	62	e48	e40	e44	e94	82	87	e80	72	48	36	32
27	62	e50	e44	e44	e84	81	89	e100	70	47	37	31
28	63	e53	e46	e42	e80	80	90	e350	68	57	38	30
29	74	e62	e48	e42	---	79	91	e300	70	49	37	29
30	83	e60	e50	e48	---	76	112	e280	101	47	35	28
31	71	---	e60	e70	---	74	---	e240	---	46	33	---
TOTAL	1880	2165	1446	1670	4126	3652	2842	3477	3248	1802	1269	1017
MEAN	60.6	72.2	46.6	53.9	147	118	94.7	112	108	58.1	40.9	33.9
MAX	83	146	60	92	400	633	133	350	200	76	59	81
MIN	55	48	34	38	74	74	73	54	66	46	33	28
AC-FT	3730	4290	2870	3310	8180	7240	5640	6900	6440	3570	2520	2020

e Estimated

OMAHA CREEK BASIN

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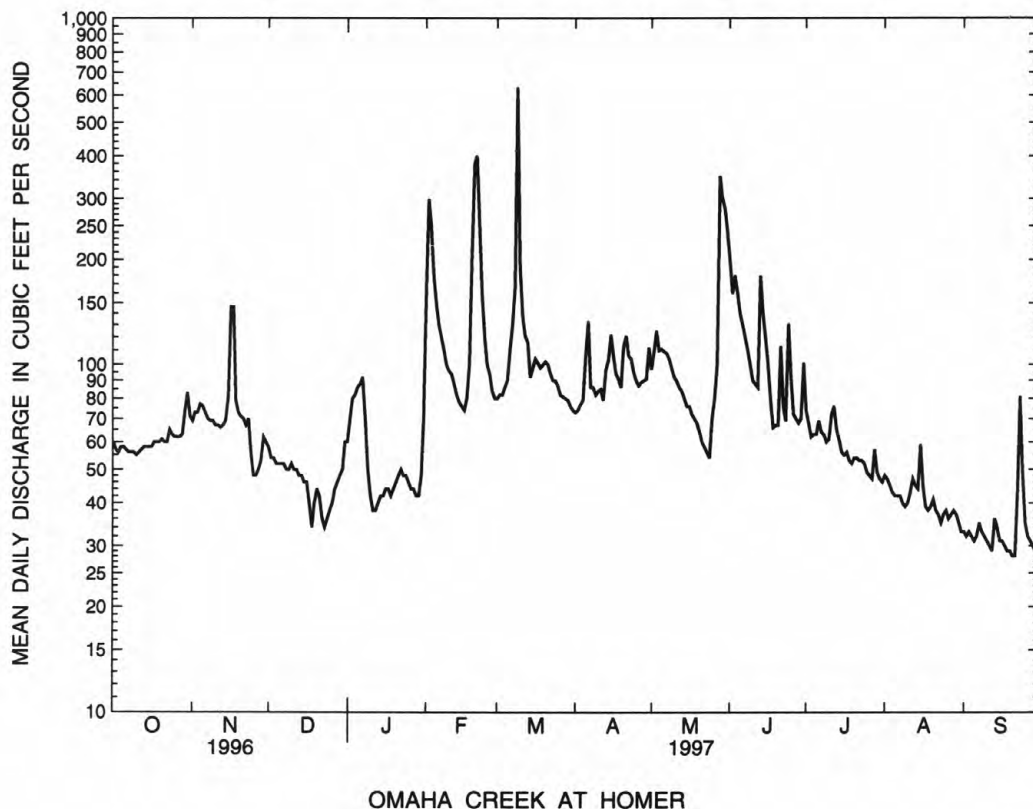
06601000 OMAHA CREEK AT HOMER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.2	20.7	17.7	17.5	48.9	72.7	54.7	58.5	86.5	56.2	32.5	26.1
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL TOTAL	36019		28594			
ANNUAL MEAN	98.4		78.3		42.8	
MEDIUM OF ANNUAL MEANS					33.2	
HIGHEST ANNUAL MEAN					130	
LOWEST ANNUAL MEAN					6.20	
HIGHEST DAILY MEAN	6190	Jul 17	633	Mar 9	6840	Feb 18 1971
LOWEST DAILY MEAN	23	Mar 7	28	Sep 20	.10	Sep 16 1948
ANNUAL SEVEN-DAY MINIMUM	32	Mar 3	29	Sep 15	.16	Sep 8 1955
INSTANTANEOUS PEAK FLOW (STAGE)			1820 (8.50) Mar 9		21500	Jul 17 1996
INSTANTANEOUS PEAK STAGE			*9.12 Jan 8		**28.47	Feb 19 1971
ANNUAL RUNOFF (AC-FT)	71440		56720		30990	
10 PERCENT EXCEEDS	142		120		79	
50 PERCENT EXCEEDS	63		67		17	
90 PERCENT EXCEEDS	43		37		4.0	

* From floodmark; backwater from ice.
 ** From floodmark.



MISSOURI MAIN STEM

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: May 22 and Aug.17. 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 raingage and satellite data collection platform at station.

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

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	53900	55000	53200	23200	29400	38600	73300	86900	73100	67100	63900	66600
2	53900	55000	53100	23900	30200	39900	76400	85100	73000	67800	64100	66500
3	53800	55400	51900	24700	30500	41000	78000	85200	72300	68000	64300	66600
4	53900	55800	48900	25700	29600	41300	78900	84400	70600	67200	64500	66300
5	53800	56300	46600	25700	28500	40100	80900	83800	69500	66100	64700	66000
6	54200	57100	44300	24900	29100	39800	84600	84200	69300	64900	64700	66000
7	54500	57300	42600	24700	29700	41800	87900	84900	69200	64500	64900	66400
8	54600	57700	39600	25700	29600	42300	90700	86000	69300	64000	65800	67400
9	54500	58000	36200	25900	29100	44500	93000	87100	68400	64800	66300	66900
10	54400	58400	34000	25700	29100	46200	96500	88000	67900	66000	66600	66200
11	54600	58200	31300	23700	29400	53400	98700	88400	67400	66100	66700	66500
12	54800	57400	29400	23500	29500	52500	99100	88600	67700	66300	66500	66400
13	55200	57000	28700	25200	29400	52300	99400	86200	68800	67100	66300	67000
14	55400	56500	28300	25900	29500	51300	99400	84200	67700	67600	66300	66900
15	55700	57800	27700	26000	30500	49000	99900	83100	66300	66800	66400	66700
16	56500	59400	26700	25300	30500	49300	99500	81200	65700	66000	65900	66900
17	57200	61200	26500	25400	30400	49100	97700	79800	64700	66200	e67000	66900
18	57400	58500	25600	25600	32800	50400	95600	78900	64500	66400	66200	66900
19	56100	56300	22400	26300	37400	51500	94200	78100	64400	66600	66200	67600
20	56000	56200	18000	26700	36900	49100	93900	76500	65400	67000	66700	67500
21	55900	55600	19800	26800	38700	50400	91800	75000	67000	67200	66700	67000
22	55300	54600	24100	27500	36000	51400	89200	e74700	67900	67600	66700	67600
23	55000	54500	23500	26700	34800	50000	88200	74600	68800	68100	66900	68400
24	55200	53700	21200	26700	34900	49500	89100	75300	69000	68200	67200	67400
25	55400	52500	19900	26800	36400	50300	89400	73900	68100	68300	67000	66900
26	55700	52300	21300	26600	38000	50700	88600	74100	66600	67000	67300	67600
27	55500	52400	22800	26700	38400	56200	87500	75500	66600	66000	67400	69200
28	55300	52900	23000	26600	38200	58800	86300	75700	66600	67000	67000	70400
29	55700	52900	23500	27200	---	60600	86600	75000	66500	66500	67100	70100
30	55600	53400	23300	27500	---	63900	87200	73900	66800	65200	67000	69900
31	55000	---	23200	28100	---	67700	---	73000	---	64500	67000	---
TOTAL	1710000	1679300	960600	800900	906500	1532900	2701500	2501300	2039100	2062100	2051300	2018700
MEAN	55160	55980	30990	25840	32380	49450	90050	80690	67970	66520	66170	67290
MAX	57400	61200	53200	28100	38700	67700	99900	88600	73100	68300	67400	70400
MIN	53800	52300	18000	23200	28500	38600	73300	73000	64400	64000	63900	66000
AC-FT	3392000	3331000	1905000	1589000	1798000	3041000	5358000	4961000	4045000	4090000	4069000	4004000

e Estimated

MISSOURI MAIN STEM

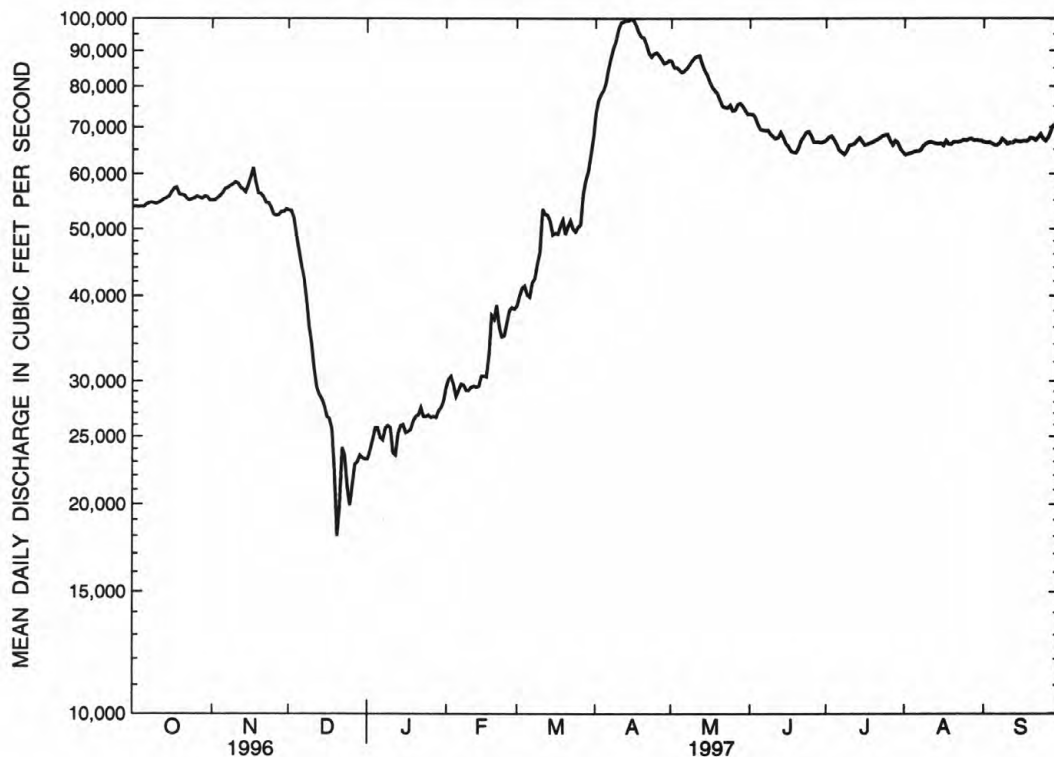
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06601200 MISSOURI RIVER AT DECATUR, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35180	27150	19130	17650	19480	25170	37770	39200	39910	40560	38340	39510
MAX	61360	59040	32010	25840	32380	49450	90050	80690	67970	66520	66170	67290
(WY)	1996	1996	1996	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1988 - 1997	
ANNUAL TOTAL	16519800		20964200			
ANNUAL MEAN	45140		57440		31630	
HIGHEST ANNUAL MEAN					57440	
LOWEST ANNUAL MEAN					21450	
HIGHEST DAILY MEAN	79400 Jul 18		99900 Apr 15		99900 Apr 15 1997	
LOWEST DAILY MEAN	11100 Jan 20		18000 Dec 20		7130 Dec 22 1990	
ANNUAL SEVEN-DAY MINIMUM	19500 Jan 19		21100 Dec 20		9660 Dec 12 1990	
INSTANTANEOUS PEAK FLOW			100000 Apr 15		100000 Apr 15 1997	
INSTANTANEOUS PEAK STAGE			31.99 Apr 15		32.31 Jul 18 1996	
ANNUAL RUNOFF (AC-FT)	32770000		41580000		22910000	
10 PERCENT EXCEEDS	57600		84300		56300	
50 PERCENT EXCEEDS	49000		64000		29400	
90 PERCENT EXCEEDS	23300		26700		13400	



MISSOURI RIVER AT DECATUR

MISSOURI MAIN STEM

06610000 MISSOURI RIVER AT OMAHA, NE

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.--Estimated daily discharges: Nov. 24, 25, Aug. 25-28, and Sept. 3. 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. 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55800	58500	56600	25600	33600	42800	73300	93000	81100	76100	68300	68400
2	56500	58200	56300	25600	37200	44500	78200	93400	77700	75800	68000	69700
3	57100	57800	56000	27000	38700	45600	80800	92600	77000	77200	68200	e68000
4	57600	57300	52600	30600	38000	45900	81700	93600	77600	77700	68300	67300
5	58100	57500	50600	33400	35400	44500	81100	93400	76200	76300	67800	67900
6	58500	58400	48400	31900	33800	42700	84200	91600	75900	74900	66800	68100
7	59300	59200	46200	29000	34200	43500	88100	92400	76000	73500	66900	68900
8	59500	59700	43200	28200	34800	44500	92400	93700	76000	73000	67100	70200
9	59200	59000	40300	29300	34500	46800	92400	92400	76100	71100	68200	71200
10	58400	60500	38600	29700	34000	53900	97300	92400	75500	72000	68800	70700
11	57800	61200	37300	29000	34000	59100	102000	92300	75000	72500	70500	69900
12	57600	61300	34800	27000	34600	62200	105000	93000	74500	71900	70500	69800
13	57400	60400	33300	26600	34900	61500	106000	92700	76700	70900	70100	70000
14	57400	59300	32900	28500	35100	60100	105000	89400	77900	71000	69400	70000
15	57200	58400	32700	29400	35800	57200	107000	86600	76200	71500	69100	69600
16	58100	61200	32000	29600	37200	54400	108000	85500	75300	70700	69000	70000
17	59100	63800	30300	29200	37700	54600	105000	83200	73400	70300	69300	69600
18	60800	64600	29900	29300	41400	55300	102000	83000	72200	69200	69900	69400
19	60500	59900	28400	29600	58900	58600	97700	83000	71700	68800	70800	69400
20	59800	58700	24800	30600	54400	57300	96600	82400	71000	69100	70000	69300
21	59500	59200	21000	31100	57400	54900	96500	81500	76800	70600	69400	69700
22	59300	58600	22500	32400	52100	56800	95200	81200	80200	70700	69000	70100
23	60000	58300	26800	35100	48800	57100	94300	79900	77200	71000	68300	71300
24	59600	e58500	26300	33200	44100	54600	94600	80900	76600	70200	68900	71000
25	59500	e57400	23900	32000	42100	56000	93700	82000	81100	70700	e68600	70200
26	59700	54900	22500	31800	42600	56600	92000	81600	79700	70000	e68300	69800
27	60100	53600	23400	31400	43300	59100	91000	84200	75700	68700	e69000	69900
28	60100	54500	25100	31700	42900	63100	90700	86700	74200	68800	e69600	70300
29	60500	54700	25500	31600	---	64700	89300	87500	73600	70600	69600	71700
30	59900	55200	25900	31800	---	67100	91800	86600	75500	70000	69400	71700
31	59300	---	25900	32200	---	69400	---	84600	---	68500	68600	---
TOTAL	1823200	1759800	1074000	933400	1131500	1694400	2815100	2716300	2283600	2223300	2135700	2093100
MEAN	58810	58660	34650	30110	40410	54660	93840	87620	76120	71720	68890	69770
MAX	60800	64600	56600	35100	58900	69400	108000	93700	81100	77700	70800	71700
MIN	55800	53600	21000	25600	33600	42700	73300	79900	71000	68500	66800	67300
MED	59300	58600	32000	29700	37500	56000	94500	86700	76100	70900	69000	69900
AC-FT	3616000	3491000	2130000	1851000	2244000	3361000	5584000	5388000	4530000	4410000	4236000	4152000

eEstimated

MISSOURI MAIN STEM

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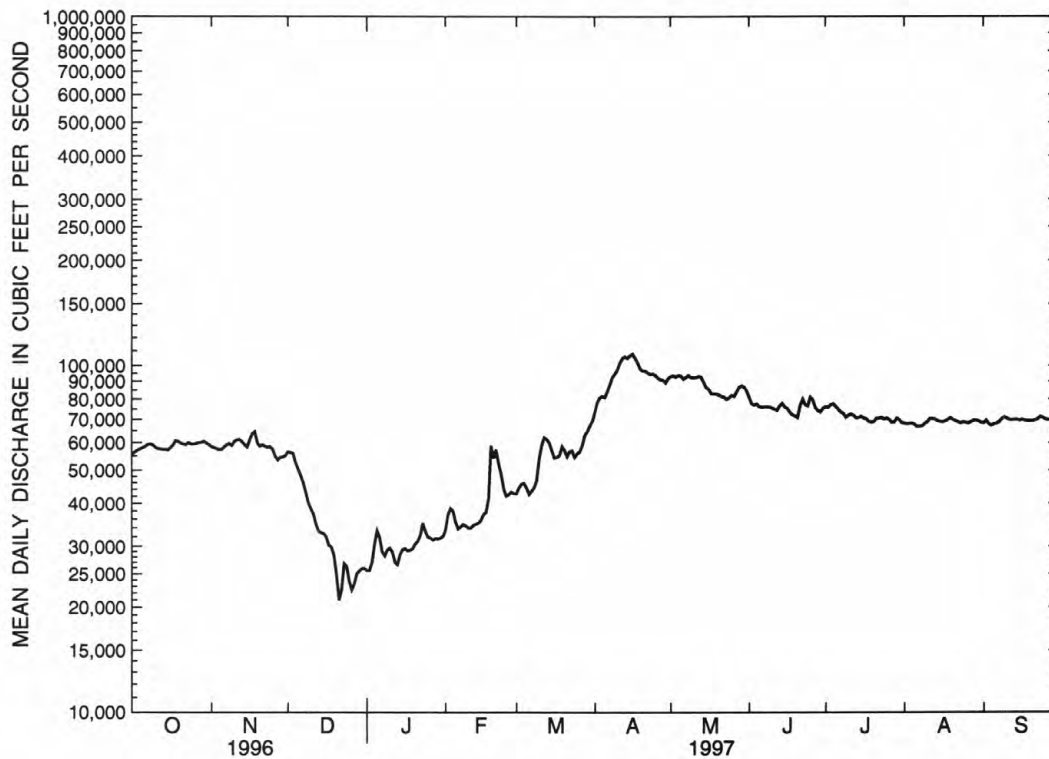
06610000 MISSOURI RIVER AT OMAHA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37710	32680	20070	17080	19410	27960	38790	38480	41800	40580	39240	39170
MAX	64570	66130	42800	33250	40410	54660	93840	87620	76120	78560	66890	69770
(WY)	1996	1976	1987	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 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	*WATER YEARS 1953 - 1997
ANNUAL TOTAL	18510700	22683400	
ANNUAL MEAN	50580	62150	32790
HIGHEST ANNUAL MEAN			62150
LOWEST ANNUAL MEAN			20490
HIGHEST DAILY MEAN	116000	Jun 23	116000
LOWEST DAILY MEAN	15500	Jan 21	2440
ANNUAL SEVEN-DAY MINIMUM	23200	Jan 20	4300
INSTANTANEOUS PEAK FLOW			120000
INSTANTANEOUS PEAK STAGE			30.26
ANNUAL RUNOFF (AC-FT)	36720000	44990000	23750000
10 PERCENT EXCEEDS	63300	89300	52700
50 PERCENT EXCEEDS	55300	67100	32300
90 PERCENT EXCEEDS	26400	31700	13200

* Post-regulation period, revised.



MISSOURI RIVER AT OMAHA

PLATTE RIVER BASIN

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.--Estimated daily discharges: Dec. 15-29, and Jan. 7, 10-19, 24-29. 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	737	322	263	227	210	196	2370	4060	2920	2500	2360	1040
2	593	317	262	227	208	196	2340	3890	3190	2320	1900	1040
3	521	317	259	230	207	196	2370	3580	3700	2260	1640	1090
4	496	311	258	231	203	194	2420	3170	3400	2070	1500	1100
5	552	304	255	223	201	194	2520	2660	3310	2000	1380	1070
6	541	299	253	220	201	193	2480	2490	3760	1970	1320	1030
7	485	299	252	218	199	194	2540	2460	4000	1930	1190	966
8	459	295	250	219	197	194	2550	1950	4060	1830	1120	903
9	437	295	250	219	199	197	2600	2050	4060	1830	1040	894
10	425	289	250	205	200	198	2640	2400	4480	1830	1130	860
11	413	286	250	190	201	201	2610	2620	4870	1820	1200	821
12	397	283	248	170	198	202	2620	2600	4970	1870	1230	755
13	383	283	246	170	199	221	2610	2620	5050	1900	1150	707
14	372	283	247	180	198	255	2630	2610	5100	1870	1050	655
15	362	284	245	200	199	280	2640	2470	5180	1830	1030	619
16	356	288	220	210	197	294	2660	2360	5240	1800	913	627
17	360	283	180	200	197	308	2870	2240	4840	1850	855	620
18	354	282	170	205	197	317	3040	2170	4720	1800	869	592
19	352	286	170	215	197	326	3080	2150	4730	1880	851	619
20	350	282	200	225	197	334	3070	2090	4760	2130	868	645
21	341	279	240	219	197	342	3070	2060	4830	2010	927	631
22	336	277	210	213	197	355	3270	2070	4560	1980	965	697
23	328	273	200	208	197	453	3420	2240	4090	1960	1020	903
24	323	271	180	205	197	513	3500	2430	3790	2000	1070	873
25	319	270	180	195	197	545	3790	3780	3500	1940	1030	821
26	322	269	200	175	197	714	3850	3030	3220	2230	1010	759
27	317	267	200	180	197	1200	3850	2800	3170	2360	1000	704
28	317	267	220	200	197	1650	3880	3070	3080	2390	1010	677
29	333	267	230	210	---	1890	4010	2570	2900	2480	1020	661
30	330	265	231	211	---	2190	4050	2470	2750	2370	1030	581
31	326	---	230	210	---	2380	---	2650	---	3080	1040	---
TOTAL	12537	8593	7049	6410	5581	16922	89350	81810	122230	64090	35718	23960
MEAN	404	286	227	207	199	546	2978	2639	4074	2067	1152	799
MAX	737	322	263	231	210	2380	4050	4060	5240	3080	2360	1100
MIN	317	265	170	170	197	193	2340	1950	2750	1800	851	581
AC-FT	24870	17040	13980	12710	11070	33560	177200	162300	242400	127100	70850	47520

PLATTE RIVER BASIN

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

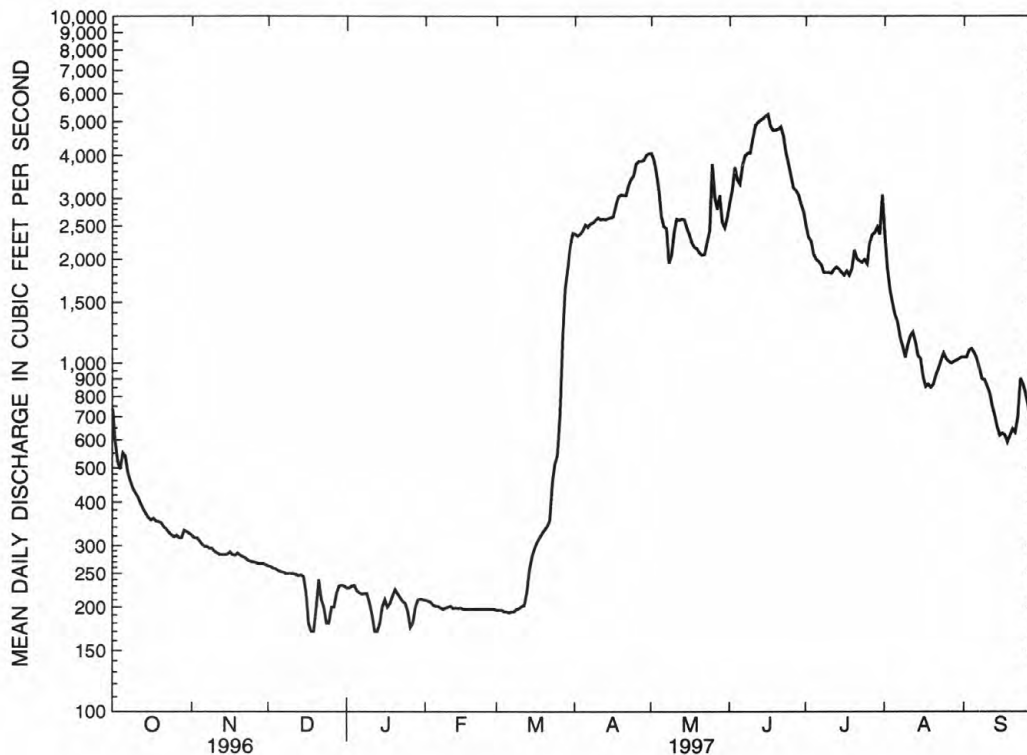
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1997, BY WATER YEAR (WY)

MEAN	511	427	379	336	342	494	631	1185	1686	1533	1271	870
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1929 - 1997	
ANNUAL TOTAL	278250		474250			
ANNUAL MEAN	760		1299		788	
HIGHEST ANNUAL MEAN					2863	1984
LOWEST ANNUAL MEAN					388	1992
HIGHEST DAILY MEAN	3690	Jun 17	5240	Jun 16	17600	Jun 2 1929
LOWEST DAILY MEAN	170	Dec 18	170	Dec 18-19	3.9	May 13 1992
				Jan 12-13		
ANNUAL SEVEN-DAY MINIMUM	196	Dec 17	189	Jan 11	4.4	Jun 20 1992
INSTANTANEOUS PEAK FLOW			5340	Jun 16	^a 17900	Jun 2 1929
INSTANTANEOUS PEAK STAGE			5.78	Jun 16	^b 7.04	Jun 2 1929
ANNUAL RUNOFF (AC-FT)	551900		940700		571000	
10 PERCENT EXCEEDS	1430		3240		1460	
50 PERCENT EXCEEDS	335		645		488	
90 PERCENT EXCEEDS	251		198		210	

a Maximum observed.

b Site and datum then in use.



NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

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 1996 TO SEPTEMBER 1997

						DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)		SPECIFIC CONDUCTANCE (US/CM) (00095)		TEMPERATURE WATER (DEG C) (00010)		TEMPERATURE AIR (DEG C) (00020)													
		DATE		TIME																					
		OCT 22...		1535		336		959		9.5		10.0													
		DEC 11...		0900		250		977		6.0		11.0													
		FEB 09...		1530		200		1240		4.5		4.0													
		MAR 27...		0920		1130		738		9.0		19.0													
		MAY 05...		1345		2530		693		12.0		21.0													
		21...		1830		2050		671		13.5		18.0													
		AUG 13...		1130		1150		645		19.5		21.0													
		SEP 16...		0920		630		656		16.0		12.0													
		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)		PH WATER WHOLE FIELD (STANDARD UNITS) (00400)		BAROMETRIC PRES-SURE (MM OF HG) (00025)		OXYGEN, DIS-SOLVED (MG/L) (00300)		OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)		2,4,5-T DIS-SOLVED (UG/L) (39742)		2,4-D, DIS-SOLVED (UG/L) (39732)		2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)		ACETO-CHLOR, WATER, FLTRD, REC (UG/L) (49260)		ACIFLUORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)		ALACHLOR, WATER, DISS, REC (UG/L) (46342)			
DATE		TIME																							
MAY 05...		1345		2530		7.8		665		8.1		86		<0.035		<0.035		<0.035		<0.002		<0.035		<0.002	
AUG 13...		1130		1150		8.2		664		7.4		93		<0.035		<0.035		<0.035		<0.002		<0.035		E0.003	
E-Estimate.																									
		ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)		ALDI-CARB SULFONE WAT, FLT REC (UG/L) (49313)		ALDICARB SULFOXIDE, WAT, FLT REC (UG/L) (49314)		ATRAZINE, WATER, DISS, REC (UG/L) (39632)		DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)		METHYL AZINPHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)		BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)		BENTAZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)		BROMACIL, WATER, DISS, REC (UG/L) (04029)		BROMOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)		BUTYLATE, WATER, DISS, REC (UG/L) (04028)		CARBARYL WATER, FLTRD, 0.7 U GF, REC (UG/L) (82680)	
DATE																									
MAY 05...		<0.016		<0.016		<0.021		0.004		E0.004		<0.001		<0.002		<0.014		<0.035		<0.035		<0.002		<0.003	
AUG 13...		<0.016		<0.016		<0.021		0.008		E0.006		<0.001		<0.002		<0.014		<0.035		<0.035		<0.002		<0.003	
E-Estimate.																									
		CARBOFURAN WATER, FLTRD, 0.7 U GF, REC (UG/L) (82674)		CHLORAMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)		CHLOROTHALONIL, WAT, FLT REC (UG/L) (49306)		CHLORPYRIFOS DIS-SOLVED (UG/L) (38933)		CLOPYRALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)		CYANAZINE, WATER, DISS, REC (UG/L) (04041)		DCPA WATER, FLTRD, 0.7 U GF, REC (UG/L) (82682)		P,P' DDE DISSOLV (UG/L) (34653)		DACTHAL MONO-ACID, WAT, FLT REC (UG/L) (49304)		DI-AZINON, DIS-SOLVED (UG/L) (39572)		DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)		DICHLOBENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	
DATE																									
MAY 05...		<0.003		<0.011		<0.035		<0.004		<0.050		<0.004		<0.002		<0.006		<0.017		<0.002		<0.035		<0.020	
AUG 13...		<0.003		<0.011		<0.035		E0.003		<0.050		<0.004		<0.002		<0.006		<0.017		<0.002		<0.035		<0.020	
E-Estimate.																									

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WATER QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2, 6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT, FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ESFEN- VAL- ERATE, WAT, FLT GF 0.7U REC (UG/L) (49298)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
MAY 05...	<0.032	<0.001	<0.003	<0.035	<0.017	<0.020	<0.035	E0.003	<0.019	<0.004	<0.003
AUG 13...	<0.032	<0.001	<0.003	<0.035	<0.017	<0.020	<0.035	<0.002	<0.019	<0.004	<0.003
E-Estimate.											
	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	3HYDRXY CARBO- FURAN WAT, FLT GF 0.7U REC (UG/L) (49308)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
MAY 05...	<0.013	<0.035	<0.003	<0.014	<0.002	<0.004	<0.002	<0.050	<0.035	<0.005	<0.026
AUG 13...	<0.013	<0.035	<0.003	<0.014	<0.002	<0.004	<0.002	<0.050	<0.035	0.006	<0.026
	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER SENOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	1-NAPH THOL, WATER, FLTRD, GF 0.7U REC (UG/L) (49295)	NAPPROP- AMIDE WATER FLTRD, 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)
MAY 05...	<0.017	<0.006	<0.002	<0.004	<0.004	<0.007	<0.003	<0.015	<0.024	<0.019	<0.018
AUG 13...	<0.017	<0.006	<0.002	<0.004	<0.004	<0.007	<0.003	<0.015	<0.024	<0.019	<0.018
	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
MAY 05...	<0.004	<0.004	<0.004	<0.005	<0.002	<0.050	E0.005	<0.003	<0.007	<0.004	<0.013
AUG 13...	<0.004	<0.004	<0.004	<0.005	<0.002	<0.050	E0.006	<0.003	<0.007	<0.004	<0.013
E-Estimate.											
	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
MAY 05...	<0.035	<0.035	<0.021	<0.005	E0.005	<0.007	<0.013	<0.002	<0.001	<0.050	<0.002
AUG 13...	<0.035	<0.035	<0.021	<0.005	<0.010	<0.007	<0.013	<0.002	<0.001	<0.050	<0.002
E-Estimate.											

PLATTE RIVER BASIN

06690000 LAKE MCCONAUGHY NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'45", long 101°40'03", in NW1/ 4SW1/4 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, 1,777,000 acre-ft June 29-July 1, elevation, 3,266.1 ft; minimum observed, 1,393,000 acre-ft Oct. 1-5, elevation, 3,252.7 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,252.7	1,393,000	--
Oct. 31.....	3,253.7	1,419,000	+26,000
Nov. 30.....	3,253.7	1,419,000	0
Dec. 31.....	3,253.6	1,417,000	-2,000
CAL YR 1996	--	--	-43,000
Jan. 31.....	3,254.6	1,444,000	+27,000
Feb. 28.....	3,255.9	1,479,000	+35,000
Mar. 31.....	3,255.7	1,473,000	-6,000
Apr. 30.....	3,258.6	1,554,000	+81,000
May 31.....	3,261.2	1,629,000	+75,000
June 30.....	3,266.1	1,777,000	+148,000
July 31.....	3,261.8	1,647,000	-130,000
Aug. 31.....	3,259.9	1,591,000	-56,000
Sept. 30.....	3,257.8	1,532,000	-59,000
WTR YR 1997	--	--	+139,000

PLATTE RIVER BASIN

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06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION (REVISED).--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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1440	201	336	e938	e821	e1040	433	180	234	2700	4970	185
2	e1390	194	342	e943	e777	e1060	418	177	211	2140	3580	155
3	e1350	192	335	e911	e752	e983	397	168	310	1710	3020	132
4	e1360	193	325	e871	e745	937	393	145	818	1330	2720	121
5	e1370	187	334	e803	e763	923	392	124	1200	997	2360	115
6	e1350	184	347	e777	e718	e917	344	87	e2070	806	2380	127
7	e1220	177	350	e740	e684	e903	321	84	e2600	706	2100	148
8	e1160	171	347	e701	e651	e809	330	77	3160	548	2000	157
9	e1080	172	365	e649	e647	e781	e323	67	3780	340	3020	e215
10	e1040	174	389	e580	e631	751	e293	68	4900	245	3430	e410
11	e991	168	400	e512	e633	688	313	66	6400	199	2770	438
12	e947	164	400	e407	e626	641	353	70	7860	239	2430	448
13	e903	163	404	e404	e624	618	412	79	8650	191	2180	474
14	e842	157	409	e404	e648	587	474	76	8580	132	2150	513
15	e907	156	378	e429	e654	e539	549	76	e9200	112	2450	544
16	e895	158	365	e455	e648	537	578	70	e8580	110	2320	560
17	e692	147	e354	e510	e671	e517	e519	56	e8400	105	2020	532
18	e603	154	e353	e621	e678	506	e517	53	e9120	100	1850	520
19	e498	210	e378	e792	e703	354	424	51	e9500	101	1680	486
20	e446	320	e405	e963	e702	277	316	48	e9110	97	e1480	496
21	e434	339	e457	e1080	e782	303	250	46	e8530	93	e1330	541
22	e444	337	e484	e1140	e883	336	200	46	e7490	81	e1040	e634
23	e467	342	e507	e1130	e940	e329	190	50	e6980	73	891	e770
24	e458	332	e534	e1130	e975	e300	162	54	e7190	70	856	920
25	380	352	e606	e1100	e976	271	142	93	e7040	68	717	1030
26	321	349	e645	e1010	980	e350	136	538	e6980	71	625	1100
27	295	349	e725	e1010	991	484	149	766	6490	73	567	1210
28	273	e365	e783	e961	e1010	531	e157	545	5180	72	537	1310
29	271	e372	e841	e926	---	510	161	358	4190	77	e402	1260
30	232	e361	e843	e890	---	481	189	297	3390	82	269	1170
31	211	---	e878	e859	---	463	---	338	---	1550	210	---
TOTAL	24270	7140	14619	24646	21313	18726	9835	4953	168143	15218	58354	16721
MEAN	783	238	472	795	761	604	328	160	5605	491	1882	557
MAX	1440	372	878	1140	1010	1060	578	766	9500	2700	4970	1310
MIN	211	147	325	404	624	271	136	46	211	68	210	115
AC-FT	48140	14160	29000	48890	42270	37140	19510	9820	333500	30180	115700	33170

e Estimated

PLATTE RIVER BASIN

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	299	346	405	516	606	555	551	1051	1507	312	172	243
MAX	2427	2358	1371	1566	1864	2200	2808	9922	12200	5059	1882	1964
(WY)	1985	1985	1985	1970	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1902 - 1997	
ANNUAL TOTAL	209243		383938			
ANNUAL MEAN	572		1052		550	
HIGHEST ANNUAL MEAN					2882	
LOWEST ANNUAL MEAN					76.3	
HIGHEST DAILY MEAN	2850 Sep 23		^e 9500 Jun 19		30800 Jun 16 1921	
LOWEST DAILY MEAN	^e 40 Aug 1		^a 46 May 21		^b .00 Aug 18 1902	
ANNUAL SEVEN-DAY MINIMUM	47 Jul 27		50 May 18		.00 Jul 25 1903	
INSTANTANEOUS PEAK FLOW			^{e,c} 9630 Jun 18		37600 Jun 20 1965	
INSTANTANEOUS PEAK STAGE			Not determined		^d 10.44 Jun 20 1965	
ANNUAL RUNOFF (AC-FT)	415000		761500		398700	
10 PERCENT EXCEEDS	1190		2340		1130	
50 PERCENT EXCEEDS	423		512		228	
90 PERCENT EXCEEDS	86		114		28	

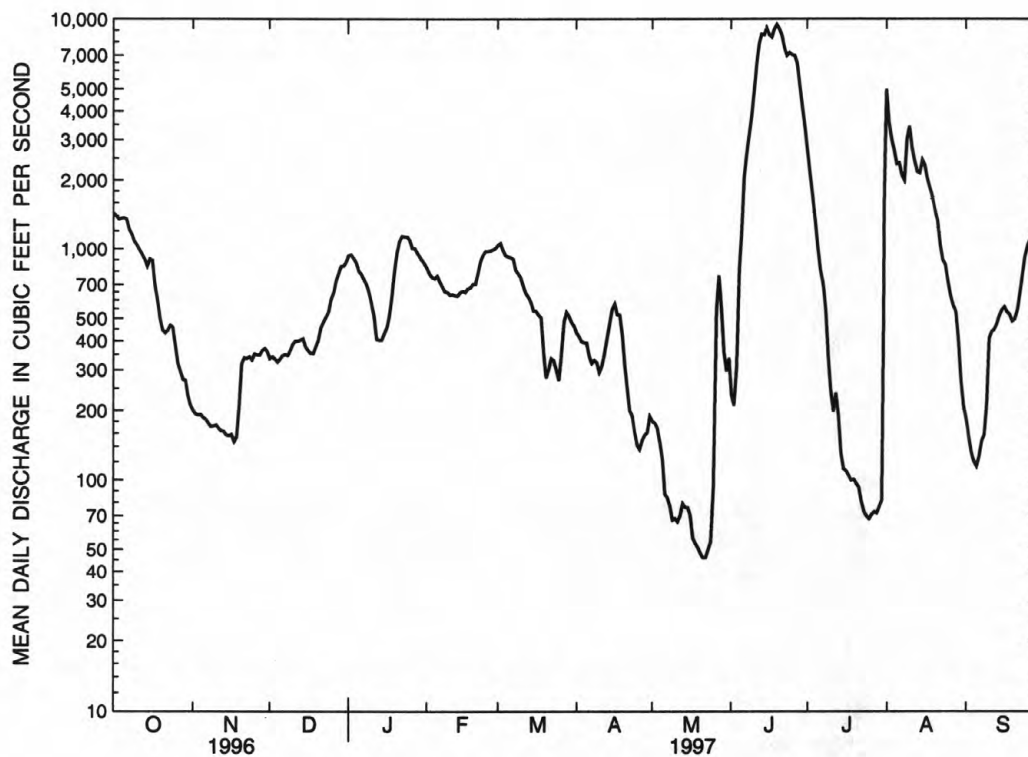
e-Estimated.

a-Also occurred May 22.

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

c-Estimated instantaneous peak flow for all channels.

d-From floodmarks in gage well.



SOUTH PLATTE RIVER AT JULESBURG, CO

PLATTE RIVER BASIN

77

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE

LOCATION.--Lat 41°07'33" long 101°34'35", in NW1/4SW1/4 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2200	258	354	e420	e500	1140	419	190	235	3640	2030	233
2	2000	247	347	e410	e500	1100	419	189	230	2670	4380	209
3	1850	246	327	e400	e490	1050	451	185	252	1940	3240	186
4	1730	240	312	e370	e480	971	435	180	257	1490	2980	152
5	1610	229	319	e340	e460	900	394	161	623	1060	2460	127
6	1490	224	336	e320	e430	864	371	152	1210	702	2470	122
7	1470	216	329	e320	e400	851	357	121	2140	570	2350	127
8	1400	211	326	e330	e350	781	327	100	2730	516	1970	132
9	1310	210	334	e340	e300	685	334	93	3280	432	2270	119
10	1210	208	347	e340	e300	639	337	91	3940	263	3580	131
11	1180	206	377	e300	e330	561	378	75	5000	244	3730	194
12	1110	207	392	e280	e380	493	365	76	6340	311	2990	250
13	1060	207	397	e280	e450	457	391	78	7750	319	2530	276
14	1010	207	390	e310	e500	440	461	77	8630	e250	2320	305
15	927	206	382	e360	e620	459	502	74	9410	e195	2460	341
16	908	212	365	e380	e780	460	569	74	10100	145	2700	363
17	878	206	e290	e370	e960	478	608	71	9550	117	2310	381
18	780	217	e250	e390	e1080	477	565	70	9290	99	1980	371
19	713	214	e240	e420	e1020	454	559	61	9820	94	1640	367
20	663	224	e270	e420	999	354	489	58	9750	107	1470	371
21	592	284	e290	e400	956	271	374	55	9320	124	1300	395
22	567	325	e280	e390	986	259	281	55	8550	94	1170	452
23	553	334	e270	e370	1040	273	234	57	7860	80	938	558
24	536	346	e245	e320	1100	264	198	55	7850	74	789	680
25	499	334	e240	e290	1140	252	165	48	8070	73	689	848
26	420	e340	e260	e280	1140	248	151	62	8360	78	642	984
27	360	e350	e290	e280	1130	271	149	213	8350	87	523	1110
28	336	360	e320	e310	1120	348	150	430	7270	90	540	1270
29	324	359	e360	e380	---	416	157	376	5660	80	539	1370
30	301	358	e380	e450	---	444	165	295	4600	73	375	1330
31	276	---	e410	e480	---	439	---	236	---	75	283	---
TOTAL	30263	7785	10029	11050	19941	17099	10755	4058	176427	16092	59648	13754
MEAN	976	260	324	356	712	552	359	131	5881	519	1924	458
MAX	2200	360	410	480	1140	1140	608	430	10100	3640	4380	1370
MIN	276	206	240	280	300	248	149	48	230	73	283	119
AC-FT	60030	15440	19890	21920	39550	33920	21330	8050	349900	31920	118300	27280

e Estimated

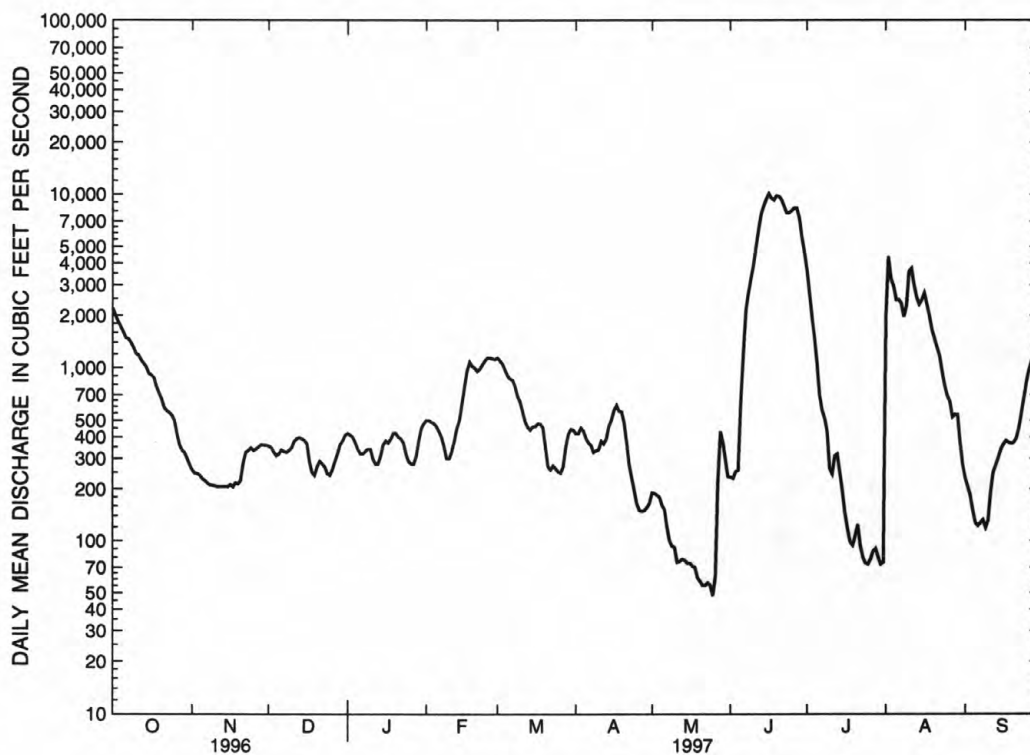
PLATTE RIVER BASIN

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	540	441	529	855	1108	862	883	1407	3015	895	343	624
MAX	2392	2183	1323	1693	2280	1519	2767	7044	13800	6081	1924	2189
(WY)	1985	1985	1985	1984	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1983 - 1997	
ANNUAL TOTAL	219547		376901			
ANNUAL MEAN	600		1033		954	
HIGHEST ANNUAL MEAN					2941	
LOWEST ANNUAL MEAN					281	
HIGHEST DAILY MEAN	4860	Sep 20	10100	Jun 16	18100	Jun 6 1995
LOWEST DAILY MEAN	62	Aug 14	48	May 25	.00	Sep 11 1994
ANNUAL SEVEN-DAY MINIMUM	77	Aug 9	56	May 19	.00	Sep 11 1994
INSTANTANEOUS PEAK FLOW (STAGE)			10300(9.39)	Jun 16	20100	Jun 6 1995
INSTANTANEOUS PEAK STAGE			9.41	Jun 19	11.29	Jun 6 1995
ANNUAL RUNOFF (AC-FT)	435500		747600		691300	
10 PERCENT EXCEEDS	1490		2390		2000	
50 PERCENT EXCEEDS	332		375		399	
90 PERCENT EXCEEDS	111		123		44	



SOUTH PLATTE RIVER AT ROSCOE

PLATTE RIVER BASIN

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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.

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 September 1996.

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

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	16	19	53	15	14	18
2	---	---	---	---	---	---	17	17	32	14	136	17
3	---	---	---	---	---	---	18	16	21	14	73	15
4	---	---	---	---	---	---	19	15	19	14	21	16
5	---	---	---	---	---	---	18	15	18	14	16	16
6	---	---	---	---	---	---	17	15	17	13	16	15
7	---	---	---	---	---	---	16	15	18	14	15	15
8	---	---	---	---	---	---	15	16	17	71	14	15
9	---	---	---	---	---	---	15	17	16	59	14	16
10	---	---	---	---	---	---	15	17	16	18	13	15
11	---	---	---	---	---	---	15	16	15	17	14	15
12	---	---	---	---	---	---	15	16	15	17	15	14
13	---	---	---	---	---	---	14	16	15	16	15	14
14	---	---	---	---	---	---	15	16	15	16	15	14
15	---	---	---	---	---	---	16	15	21	16	15	14
16	---	---	---	---	---	---	16	15	45	19	27	16
17	---	---	---	---	---	---	17	15	33	20	42	18
18	---	---	---	---	---	---	17	15	21	18	20	16
19	---	---	---	---	---	---	16	14	19	17	16	33
20	---	---	---	---	---	---	16	14	18	18	18	56
21	---	---	---	---	---	---	15	14	18	19	18	23
22	---	---	---	---	---	---	14	14	21	19	18	21
23	---	---	---	---	---	---	13	14	55	20	18	18
24	---	---	---	---	---	---	13	14	23	20	16	16
25	---	---	---	---	---	---	13	14	17	17	15	16
26	---	---	---	---	---	---	14	35	16	14	15	19
27	---	---	---	---	---	---	14	201	16	14	15	18
28	---	---	---	---	---	---	14	100	15	15	15	16
29	---	---	---	---	---	---	15	36	15	90	15	16
30	---	---	---	---	---	---	18	25	15	40	19	16
31	---	---	---	---	---	---	---	24	---	15	22	---
TOTAL	---	---	---	---	---	---	466	805	655	703	715	547
MEAN	---	---	---	---	---	---	15.5	26.0	21.8	22.7	23.1	18.2
MAX	---	---	---	---	---	---	19	201	55	90	136	56
MIN	---	---	---	---	---	---	13	14	15	13	13	14
AC-FT	---	---	---	---	---	---	924	1600	1300	1390	1420	1080

PLATTE RIVER BASIN

06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.68	.20	.047	.11	2.91	7.06	1.31	5.87	39.6	7.73	4.40	6.03
MAX	130	1.77	.34	.76	18.4	55.6	15.5	26.0	179	52.7	23.1	49.5
(WY)	1947	1972	1970	1973	1949	1948	1996	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

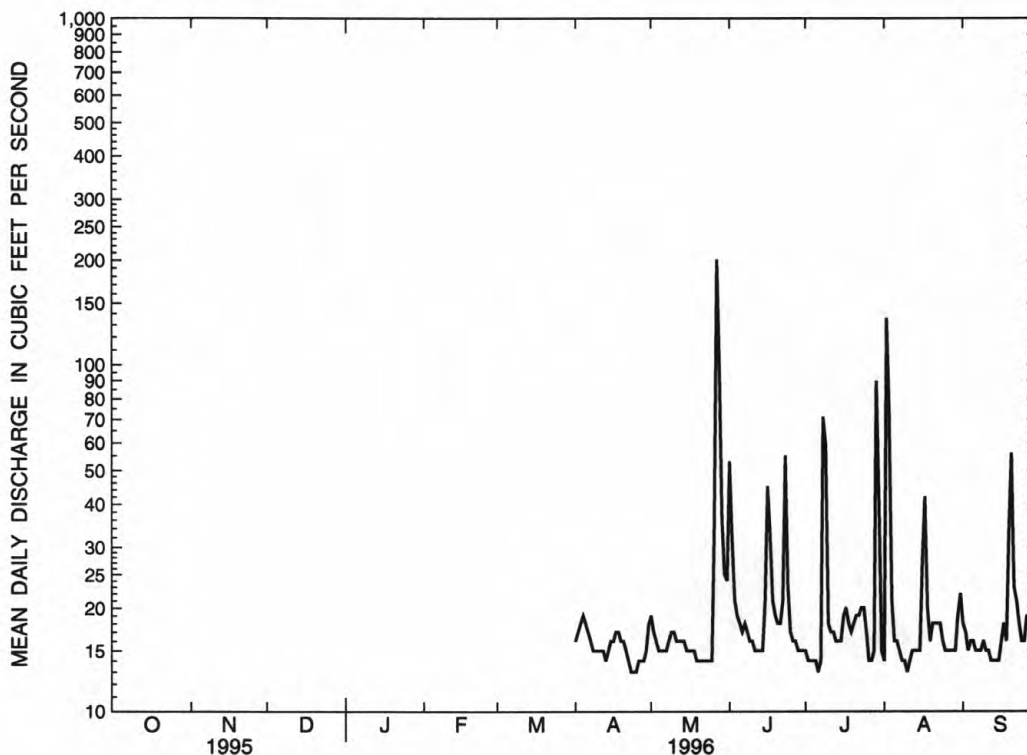
FOR 1996 WATER YEAR

WATER YEARS 1946-53, 1969-75, 1996

ANNUAL MEAN			6.71	
HIGHEST ANNUAL MEAN			27.4	1947
LOWEST ANNUAL MEAN			.099	1953
HIGHEST DAILY MEAN			1850	Jun 23 1947
LOWEST DAILY MEAN			.00	Jul 13 1946
ANNUAL SEVEN-DAY MINIMUM			.00	Jul 21 1946
INSTANTANEOUS PEAK FLOW	242	May 27	2800	Jun 23 1947
INSTANTANEOUS PEAK STAGE	*9.22	May 27	**23.41	Jun 23 1947
ANNUAL RUNOFF (AC-FT)			4860	
10 PERCENT EXCEEDS			5.5	
50 PERCENT EXCEEDS			.00	
90 PERCENT EXCEEDS			.00	

* Maximum stage since station re-established in April.

** Site and datum then in use.



PLUM CREEK NEAR SMITHFIELD

PLATTE RIVER BASIN

81

06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

REMARKS.--Records fair except for estimated periods, 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	16	16	19	e15	e16	17	14	17	18	12	7.8	8.1
2	16	16	18	19	e15	16	15	17	18	12	8.3	8.1
3	15	16	17	20	e15	16	16	19	18	12	8.0	8.4
4	16	17	17	19	e16	16	16	17	20	12	7.8	8.3
5	16	17	17	e12	e15	16	17	16	16	12	7.5	8.5
6	16	17	17	e11	15	15	16	16	16	12	8.9	8.7
7	16	17	17	e11	16	15	14	16	15	12	9.2	8.3
8	16	16	16	e12	16	16	13	16	15	12	8.5	7.9
9	15	16	16	e10	15	16	13	15	15	11	7.4	7.9
10	15	16	17	e8.6	e15	16	14	15	15	11	7.4	7.9
11	15	16	17	e8.0	15	16	14	15	15	11	9.6	7.9
12	16	16	17	e7.6	15	17	22	15	16	10	15	7.9
13	16	16	17	e7.8	e15	17	19	15	16	10	9.8	7.9
14	15	16	16	e9.0	15	17	18	15	15	9.4	12	7.7
15	16	e15	16	e8.6	15	15	20	14	15	9.7	19	7.7
16	16	e14	e15	e7.8	16	15	18	14	15	9.2	11	7.7
17	16	e13	e13	e9.0	18	16	16	15	15	9.0	9.4	7.8
18	16	e16	e11	e12	18	16	16	15	14	9.1	9.2	7.7
19	16	19	e9.0	e14	18	15	16	15	14	9.4	9.1	7.7
20	17	20	e10	e16	17	15	16	15	15	9.1	9.4	7.9
21	17	20	e11	e16	17	16	17	15	16	9.4	9.4	8.1
22	16	18	e11	e16	17	16	19	15	16	9.3	9.4	8.3
23	16	18	e9.0	e15	16	15	17	16	15	9.3	9.0	9.6
24	16	e16	e8.0	e15	16	15	17	16	15	8.8	8.9	11
25	16	e14	e7.8	14	16	15	16	16	14	8.8	8.7	11
26	16	e15	e8.0	e10	16	16	16	18	14	8.8	8.6	9.9
27	16	e15	e9.0	e8.0	17	15	16	19	14	8.1	8.6	9.5
28	15	e15	e9.6	e9.0	17	16	17	18	14	8.0	8.6	9.6
29	16	e16	e10	e11	---	15	17	18	13	7.9	8.8	9.3
30	16	e18	e11	e13	---	14	17	17	12	7.8	8.4	10
31	16	---	e12	e15	---	14	---	18	---	7.8	8.2	---
TOTAL	492	490	418.4	379.4	448	485	492	498	459	307.9	290.9	256.3
MEAN	15.9	16.3	13.5	12.2	16.0	15.6	16.4	16.1	15.3	9.93	9.38	8.54
MAX	17	20	19	20	18	17	22	19	20	12	19	11
MIN	15	13	7.8	7.6	15	14	13	14	12	7.8	7.4	7.7
AC-FT	976	972	830	753	889	962	976	988	910	611	577	508

e Estimated

PLATTE RIVER BASIN

06767500 PLUM CREEK NEAR SMITHFIELD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946-53, 1969-75, 1996-97, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.1	1.28	.94	.92	3.78	7.63	2.25	6.51	38.1	7.86	4.69	6.18
MAX	130	16.3	13.5	12.2	18.4	55.6	16.4	26.0	179	52.7	23.1	49.5
(WY)	1947	1997	1997	1997	1949	1948	1997	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

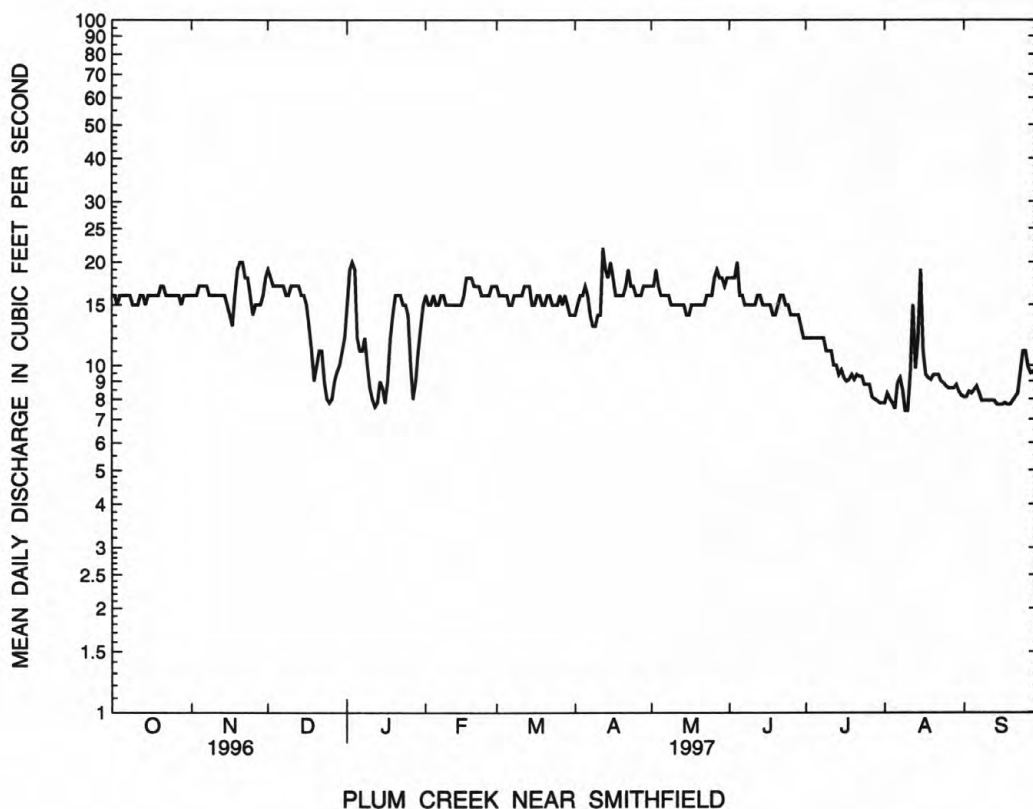
FOR 1997 WATER YEAR

WATER YEARS 1946-53, 1969-75, 1996-97

ANNUAL TOTAL	5016.9		
ANNUAL MEAN	13.7		7.18
HIGHEST ANNUAL MEAN			27.4 1947
LOWEST ANNUAL MEAN			.099 1953
HIGHEST DAILY MEAN	22	Apr 12	1850 Jun 23 1947
LOWEST DAILY MEAN	7.4	Aug 9	.00 Jul 13 1946
ANNUAL SEVEN-DAY MINIMUM	7.7	Sep 13	.00 Jul 21 1946
INSTANTANEOUS PEAK FLOW (STAGE)	34 (4.65)	Apr 13	2800 Jun 23 1947
INSTANTANEOUS PEAK STAGE	*5.46	Jan 11	**23.41 Jun 23 1947
ANNUAL RUNOFF (AC-FT)	9950		5200
10 PERCENT EXCEEDS	17		15
50 PERCENT EXCEEDS	15		.00
90 PERCENT EXCEEDS	8.3		.00

* Backwater from ice.

** Site and datum then in use.



PLATTE RIVER BASIN

83

06768000 PLATTE RIVER NEAR OVERTON, NE

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1958 to current year.

WATER TEMPERATURES: January 1958 to current year.

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.

COOPERATION.--Records provided by Nebraska Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,180 microsiemens Mar. 15-16 (south channel); minimum daily, 717 microsiemens Aug. 16 (north channel)

WATER TEMPERATURES: Maximum daily, 32.0 °C June 23, 28, July 2, 5 (north channel); minimum daily, 1.0 °C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)	ALKA- LINITY LAB (MG/L AS CaCO ₃) (90410)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 21	1430	1870	1160	8.4	9.5	705	11	197	110	13
FEB 20	1500	2030	882	8.3	7.0	700	13	203	100	11
APR 02	1100	1900	500	8.7	10.5	710	9.9	146	110	12
MAY 14	0930	1540	953	8.7	12.5	703	10	--	--	--
MAY 26	1130	1350	933	7.4	--	746	9.0	--	--	--
MAY 28	1230	1800	869	8.9	14.5	754	10	--	--	--
MAY 27	1030	1780	767	8.9	14.5	753	9.2	--	--	--
JUN 24	1030	10300	892	8.1	22.5	699	6.4	--	--	--
JUL 21	1500	564	856	8.3	26.0	700	9.2	201	73	13
AUG 15	1000	4060	905	7.9	22.0	690	7.0	--	--	--
SEP 17	1030	2810	852	8.4	21.0	702	8.9	--	--	--

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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, DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)
OCT 21	330	45	0.70	25	1.5	0.03	1.5	0.03	--	--
FEB 20	310	44	0.60	27	2.7	0.02	2.7	<0.02	--	--
APR 02	340	48	0.60	13	1.8	0.01	1.8	0.04	0.86	0.26
MAY 14	--	--	--	--	0.87	0.01	0.88	<0.01	0.90	--
MAY 26	--	--	--	--	0.76	0.01	0.77	<0.01	0.93	--
MAY 28	--	--	--	--	0.69	0.01	0.70	<0.01	0.80	--
MAY 27	--	--	--	--	--	<0.01	0.61	<0.01	0.73	--
JUN 24	--	--	--	--	0.33	0.01	0.34	0.06	0.61	0.40
JUL 21	210	27	0.6	28	0.57	0.02	0.59	<0.01	0.69	--
AUG 15	--	--	--	--	1.3	0.02	1.3	<0.01	0.72	--
SEP 17	--	--	--	--	0.51	0.01	0.52	<0.01	0.86	--

DATE	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, 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)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	MANGA- IRON, DIS- SOLVED (μ G/L AS FE) (01046)	NESE, DIS- SOLVED (μ G/L AS MN) (01056)
OCT 21	--	--	--	--	--	0.03	0.04	195	<3.0	3.0
FEB 20	--	--	--	--	--	0.09	0.13	168	8.0	3.0
APR 02	0.90	0.30	2.7	2.1	0.12	0.04	0.03	185	<3.0	1.0
MAY 14	0.90	<0.20	1.8	--	0.13	<0.01	<0.01	--	--	--
MAY 26	0.90	0.30	1.7	1.1	0.22	0.07	0.02	--	--	--
MAY 28	0.80	0.30	1.5	0.99	0.13	0.03	0.02	--	--	--
MAY 27	0.70	0.30	1.3	0.89	0.10	<0.01	0.02	--	--	--
JUN 24	0.70	0.50	1.0	0.79	0.19	0.16	0.13	--	--	--
JUL 21	0.70	0.30	1.3	0.90	0.07	<0.01	0.01	129	<3.0	20.0
AUG 15	0.70	0.50	2.0	1.8	0.17	0.14	0.11	--	--	--
SEP 17	0.90	0.30	1.4	0.84	0.14	0.03	<0.01	--	--	--

PLATTE RIVER BASIN

85

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. .

PERIOD OF RECORD.--April 1996 to September 1996.

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

REMARKS.-- Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	22	23	17	107	147	78
2	---	---	---	---	---	---	20	16	15	155	174	78
3	---	---	---	---	---	---	18	14	17	90	256	72
4	---	---	---	---	---	---	17	27	16	67	209	78
5	---	---	---	---	---	---	15	24	16	58	198	85
6	---	---	---	---	---	---	15	19	16	55	203	81
7	---	---	---	---	---	---	15	15	17	58	188	84
8	---	---	---	---	---	---	16	21	18	52	225	87
9	---	---	---	---	---	---	16	20	23	48	198	92
10	---	---	---	---	---	---	17	20	24	43	152	88
11	---	---	---	---	---	---	17	18	17	39	151	78
12	---	---	---	---	---	---	19	22	16	48	148	69
13	---	---	---	---	---	---	21	22	17	52	113	39
14	---	---	---	---	---	---	20	21	15	46	91	33
15	---	---	---	---	---	---	15	21	14	48	87	34
16	---	---	---	---	---	---	18	29	18	47	120	32
17	---	---	---	---	---	---	18	24	21	51	172	31
18	---	---	---	---	---	---	17	21	15	47	157	32
19	---	---	---	---	---	---	18	25	13	51	145	80
20	---	---	---	---	---	---	15	23	12	68	161	153
21	---	---	---	---	---	---	14	20	15	72	145	184
22	---	---	---	---	---	---	16	19	12	82	140	130
23	---	---	---	---	---	---	12	20	14	105	143	70
24	---	---	---	---	---	---	25	16	22	103	141	59
25	---	---	---	---	---	---	e28	14	26	96	133	56
26	---	---	---	---	---	---	32	18	56	90	120	54
27	---	---	---	---	---	---	40	19	227	83	88	50
28	---	---	---	---	---	---	51	18	301	96	72	41
29	---	---	---	---	---	---	32	18	158	153	62	40
30	---	---	---	---	---	---	25	19	98	160	65	36
31	---	---	---	---	---	---	---	19	---	155	79	---
TOTAL	---	---	---	---	---	---	624	625	1266	2425	4483	2124
MEAN	---	---	---	---	---	---	20.8	20.2	42.2	78.2	145	70.8
MAX	---	---	---	---	---	---	51	29	301	160	256	184
MIN	---	---	---	---	---	---	12	14	12	39	62	31
AC-FT	---	---	---	---	---	---	1240	1240	2510	4810	8890	4210

eEstimated

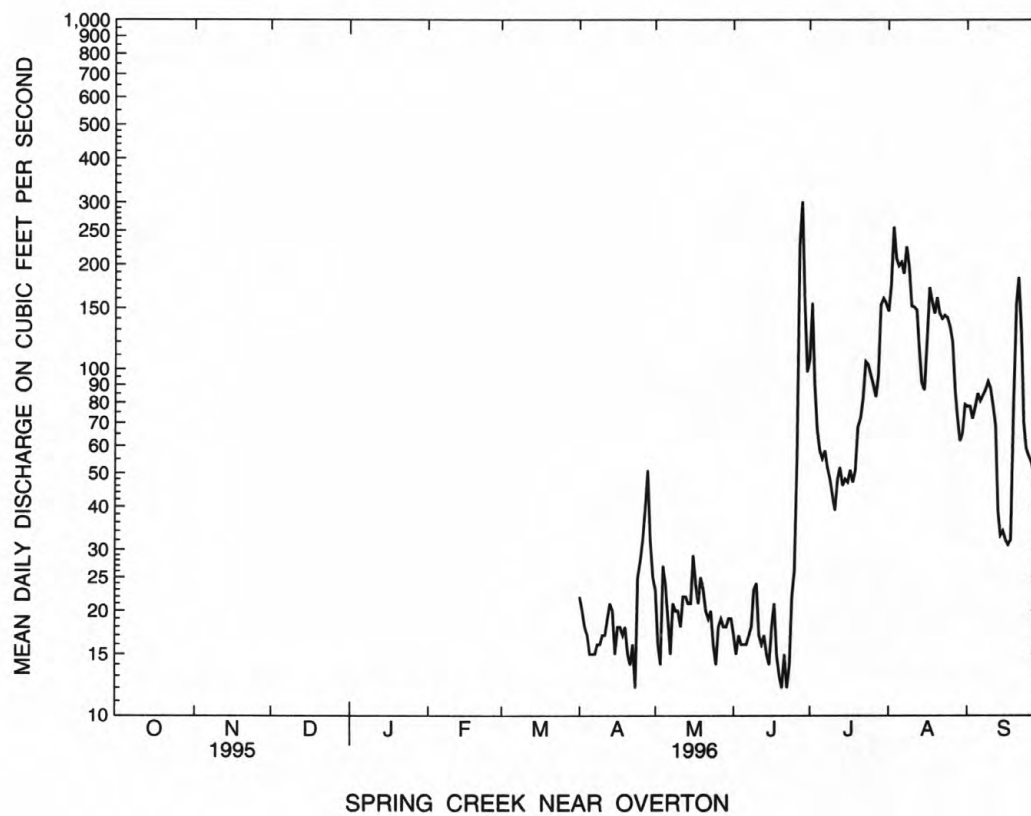
PLATTE RIVER BASIN

06768020 SPRING CREEK NEAR OVERTON, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW 333
INSTANTANEOUS PEAK STAGE *7.50

* Maximum stage since station established.



PLATTE RIVER BASIN

87

06768020 SPRING CREEK NEAR OVERTON, NE--Continued

PERIOD OF RECORD.--April 1996 to September 1996.

REMARKS.--Records fair except those for estimated periods, 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	36	24	25	e21	29	22	21	18	35	29	80	84
2	36	22	28	e25	29	21	23	20	31	28	75	78
3	34	21	27	33	27	23	26	19	33	26	80	59
4	31	23	27	32	25	22	28	15	32	26	88	55
5	29	24	25	26	25	22	26	16	31	26	91	61
6	30	24	28	24	25	22	25	15	30	25	129	54
7	30	24	25	24	24	19	23	16	32	17	136	83
8	28	23	23	32	24	20	21	22	30	11	135	61
9	28	22	26	e25	e22	23	21	16	30	25	145	57
10	29	23	27	e17	e21	21	21	13	32	32	154	52
11	24	23	25	e12	e20	24	16	13	32	26	211	48
12	26	22	26	e12	e19	23	17	15	28	28	243	39
13	26	21	26	e12	e21	26	26	12	27	38	140	17
14	25	22	27	e15	25	22	24	10	28	40	179	13
15	26	23	24	e17	27	24	28	10	28	35	187	12
16	24	31	27	e15	27	21	28	11	29	30	158	11
17	26	25	23	e13	30	23	21	12	27	33	137	11
18	27	e23	e18	e16	30	23	22	14	23	39	132	11
19	24	e26	e15	25	30	22	23	16	20	46	127	12
20	23	29	e13	27	31	20	22	15	24	49	122	12
21	22	34	e15	30	28	24	22	20	32	50	112	10
22	22	34	e16	31	25	24	21	22	45	40	77	13
23	21	32	e16	27	25	24	18	29	45	30	59	17
24	25	23	e14	31	23	23	14	33	43	24	60	28
25	25	e20	e11	e20	e22	22	14	37	40	30	64	23
26	26	e18	e11	e13	e22	19	13	36	43	36	74	17
27	26	e20	e12	e12	e22	21	12	46	43	51	57	14
28	26	24	e13	e12	24	24	14	47	39	50	50	13
29	27	32	e15	e17	---	23	15	42	40	52	70	11
30	25	30	e15	e22	---	22	21	37	38	63	68	11
31	24	---	e16	24	---	20	---	36	---	76	80	---
TOTAL	831	742	639	662	702	689	626	683	990	1111	3520	987
MEAN	26.8	24.7	20.6	21.4	25.1	22.2	20.9	22.0	33.0	35.8	114	32.9
MAX	36	34	28	33	31	26	28	47	45	76	243	84
MIN	21	18	11	12	19	19	12	10	20	11	50	10
AC-FT	1650	1470	1270	1310	1390	1370	1240	1350	1960	2200	6980	1960

e Estimated

PLATTE RIVER BASIN

06768020 SPRING CREEK NEAR OVERTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.8	24.7	20.6	21.4	25.1	22.2	20.8	21.1	37.6	57.0	129	51.9
MAX	26.8	24.7	20.6	21.4	25.1	22.2	20.9	22.0	42.2	78.2	145	70.8
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996
MIN	26.8	24.7	20.6	21.4	25.1	22.2	20.8	20.2	33.0	35.8	114	32.9
(WY)	1997	1997	1997	1997	1997	1997	1996	1996	1997	1997	1997	1997

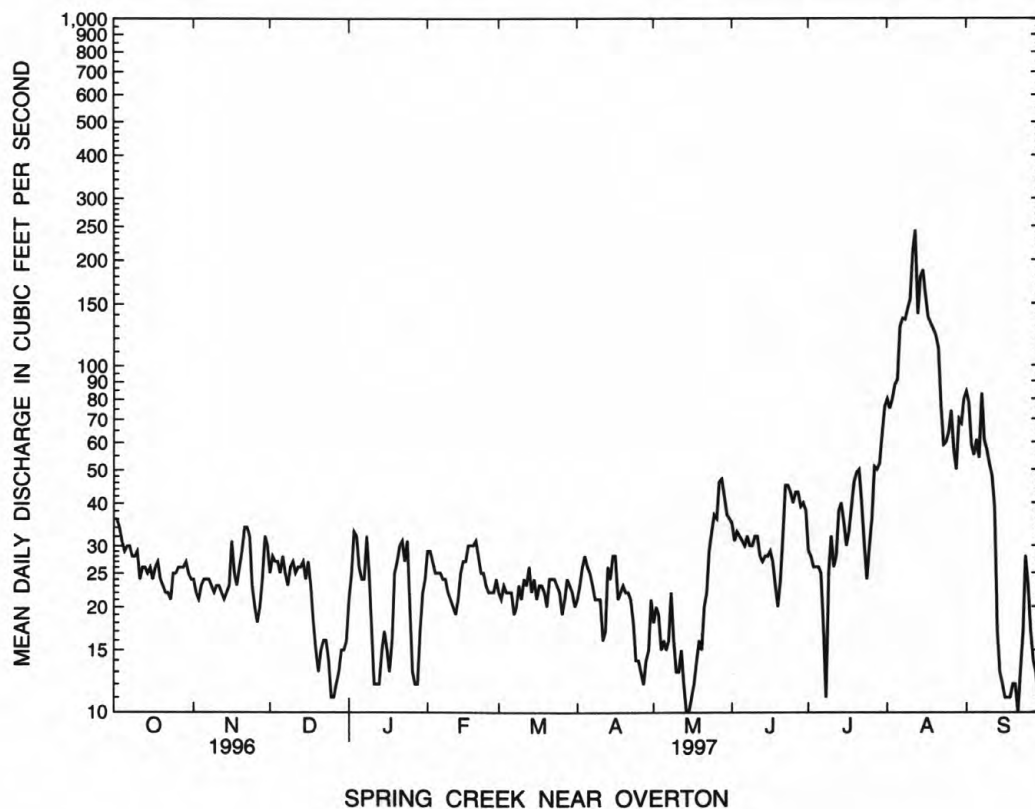
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	12182		
ANNUAL MEAN			33.4
HIGHEST ANNUAL MEAN			33.4
LOWEST ANNUAL MEAN			33.4
HIGHEST DAILY MEAN	243	Aug 12	301
LOWEST DAILY MEAN	10	May 14	10
ANNUAL SEVEN-DAY MINIMUM	11	Sep 15	11
INSTANTANEOUS PEAK FLOW	279	Aug 12	333
INSTANTANEOUS PEAK STAGE	6.54	Aug 12	*7.50
ANNUAL RUNOFF (AC-FT)	24160		24180
10 PERCENT EXCEEDS	59		96
50 PERCENT EXCEEDS	25		26
90 PERCENT EXCEEDS	14		15

* Maximum stage since station established in April 1996.



PLATTE RIVER BASIN

89

06769000 BUFFALO CREEK NEAR OVERTON, NE

LOCATION.--Lat 40°44'00", 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.

PERIOD OF RECORD.--June 1949 to September 1958. April 1996 to September 1997.

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 1995 TO SEPTEMBER 1996 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	5.7	e50	55	170	93
2	---	---	---	---	---	---	---	5.3	e60	55	177	117
3	---	---	---	---	---	---	---	e6.9	e63	53	255	132
4	---	---	---	---	---	---	---	7.2	77	55	362	141
5	---	---	---	---	---	---	---	6.6	78	56	239	149
6	---	---	---	---	---	---	---	6.5	72	55	211	106
7	---	---	---	---	---	---	---	6.6	68	57	216	87
8	---	---	---	---	---	---	---	e9.0	70	57	210	113
9	---	---	---	---	---	---	---	11	70	57	238	118
10	---	---	---	---	---	---	8.1	49	72	57	189	117
11	---	---	---	---	---	---	7.7	32	72	57	181	90
12	---	---	---	---	---	---	7.4	16	73	57	190	72
13	---	---	---	---	---	---	7.0	8.7	72	58	190	47
14	---	---	---	---	---	---	7.2	30	60	58	169	19
15	---	---	---	---	---	---	8.1	e32	54	58	134	15
16	---	---	---	---	---	---	7.6	e36	60	84	134	15
17	---	---	---	---	---	---	7.1	38	60	129	152	15
18	---	---	---	---	---	---	8.0	38	57	130	174	14
19	---	---	---	---	---	---	7.8	40	58	131	178	20
20	---	---	---	---	---	---	6.8	44	61	131	180	52
21	---	---	---	---	---	---	6.9	47	64	130	189	125
22	---	---	---	---	---	---	5.9	42	63	131	177	85
23	---	---	---	---	---	---	5.7	20	65	131	156	39
24	---	---	---	---	---	---	5.6	26	63	138	163	26
25	---	---	---	---	---	---	6.3	e30	56	131	166	22
26	---	---	---	---	---	---	6.2	e30	56	123	154	18
27	---	---	---	---	---	---	5.4	e30	55	123	135	17
28	---	---	---	---	---	---	5.7	e35	55	146	95	16
29	---	---	---	---	---	---	5.4	e35	55	169	80	16
30	---	---	---	---	---	---	5.4	e40	55	197	75	14
31	---	---	---	---	---	---	---	e40	---	210	64	---
TOTAL	---	---	---	---	---	---	---	803.5	1894	3079	5403	1910
MEAN	---	---	---	---	---	---	---	25.9	63.1	99.3	174	63.7
MAX	---	---	---	---	---	---	---	49	78	210	362	149
MIN	---	---	---	---	---	---	---	5.3	50	53	64	14
AC-FT	---	---	---	---	---	---	---	1590	3760	6110	10720	3790

e Estimated

PLATTE RIVER BASIN

06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949-58, 1996, BY WATER YEAR (WY)

MEAN	12.1	2.18	1.34	1.27	2.11	3.09	2.31	12.6	37.5	42.8	45.5	36.8
MAX	33.1	5.32	4.51	3.80	5.57	15.3	8.90	25.9	108	106	174	71.1
(WY)	1951	1952	1952	1952	1952	1952	1952	1996	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

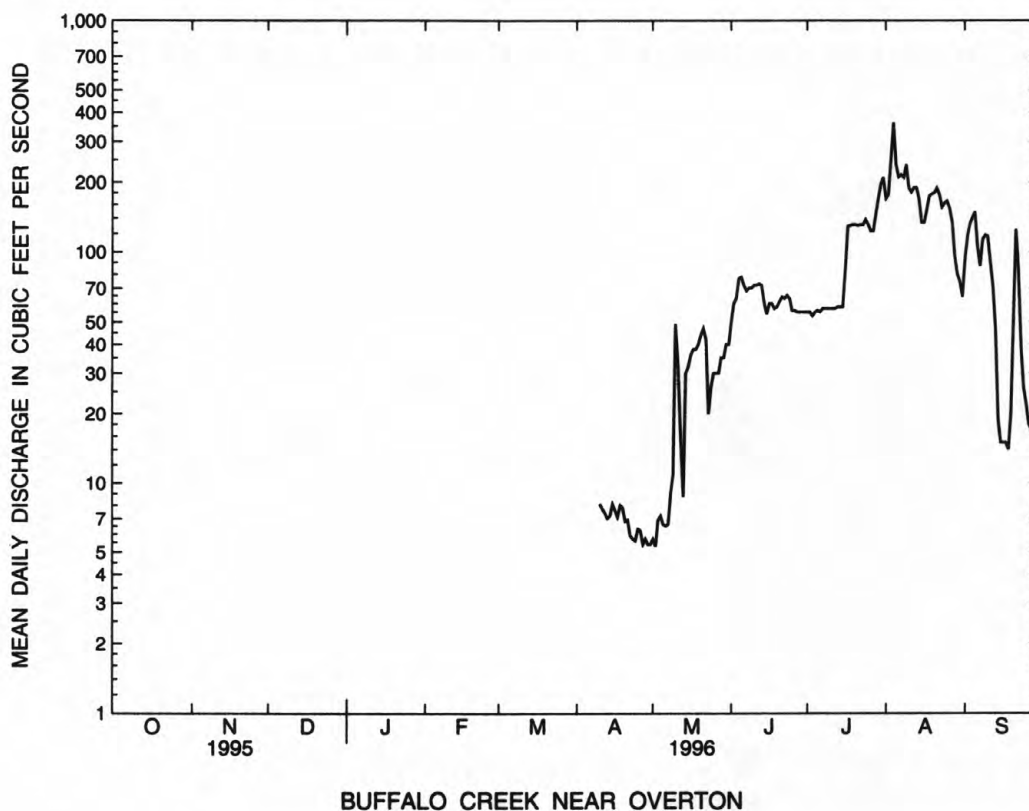
SUMMARY STATISTICS

WATER YEAR 1996

WATER YEARS 1949-58, 1996

HIGHEST ANNUAL MEAN			34.5	1951
LOWEST ANNUAL MEAN			3.07	1955
HIGHEST DAILY MEAN			379	Jul 12 1958
LOWEST DAILY MEAN			.00	Apr 26 1953
ANNUAL SEVEN-DAY MINIMUM			.00	Jul 16 1953
INSTANTANEOUS PEAK FLOW	387	Aug 4	387	Aug 4 1996
INSTANTANEOUS PEAK STAGE	*9.70	Aug 4	10.47	Jul 12 1958

* Maximum stage since station re-established in April; stage may have been higher since station discontinued in 1958.



PLATTE RIVER BASIN

91

06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

REMARKS.-- Records fair 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	13	14	e17	e11	e12	e11	11	9.4	52	e45	70	115
2	13	16	e17	e12	e10	e11	12	9.9	48	e43	68	109
3	13	16	e16	e12	e10	e11	10	10	44	39	67	102
4	12	16	e16	e11	e10	e9.0	12	8.8	55	39	63	81
5	12	17	17	e10	e9.6	e9.0	12	9.6	64	37	55	81
6	13	17	20	e8.0	e9.0	e9.0	13	9.6	61	30	67	88
7	13	16	18	e8.4	e9.0	e10	12	9.5	53	19	85	81
8	11	17	17	e8.6	e9.0	e10	11	9.3	49	13	95	94
9	12	15	19	e7.0	e8.0	e11	10	38	46	32	107	72
10	12	16	19	e6.0	e7.0	e13	9.8	53	51	39	119	54
11	11	16	18	e5.4	e9.0	e13	9.5	58	55	30	140	62
12	11	15	18	e4.9	e9.0	e12	9.0	51	54	30	192	58
13	12	16	19	e5.0	e9.0	e12	12	40	54	27	183	39
14	12	16	19	e5.0	e9.8	e12	10	43	51	32	149	13
15	13	16	17	e4.8	e10	e9.0	13	41	52	38	198	9.1
16	11	e14	17	e5.0	e12	e9.0	14	39	60	35	234	8.1
17	11	e12	14	e6.0	e13	e10	13	40	49	27	159	7.5
18	11	e13	e10	e8.0	e13	e11	13	40	40	26	125	5.7
19	10	e14	e8.0	e10	e13	12	13	40	49	28	125	6.4
20	11	e13	e7.0	e11	e13	12	12	38	e52	31	119	6.1
21	12	e12	e9.0	e11	e13	14	12	22	e58	34	117	5.5
22	11	e13	e10	e10	e10	12	11	11	e60	31	114	6.0
23	10	e11	e9.0	e9.0	e9.0	12	11	13	e62	29	100	7.1
24	13	e9.0	e8.0	e8.0	e8.4	12	10	36	e62	25	88	9.5
25	11	e10	e6.0	e7.0	e8.0	12	9.9	56	e64	31	82	9.2
26	12	e10	e7.0	e6.0	e8.0	11	9.9	49	e54	32	64	10
27	13	e11	e7.0	e5.4	e8.0	11	8.9	45	e58	45	44	8.6
28	13	e13	e8.0	e6.0	e10	12	9.9	55	e48	48	33	8.1
29	14	e15	e8.6	e7.0	---	13	9.8	58	e36	52	58	7.4
30	16	e17	e9.0	e9.0	---	11	10	40	e40	58	91	7.1
31	15	---	e10	e11	---	11	---	43	---	59	109	---
TOTAL	377	426.0	414.6	248.5	278.8	347.0	333.7	1025.1	1581	1084	3320	1170.4
MEAN	12.2	14.2	13.4	8.02	9.96	11.2	11.1	33.1	52.7	35.0	107	39.0
MAX	16	17	20	12	13	14	14	58	64	59	234	115
MIN	10	9.0	6.0	4.8	7.0	9.0	8.9	8.8	36	13	33	5.5
AC-FT	748	845	822	493	553	688	662	2030	3140	2150	6590	2320

e Estimated

PLATTE RIVER BASIN

06769000 BUFFALO CREEK NEAR OVERTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949-58, 1996-97, BY WATER YEAR (WY)

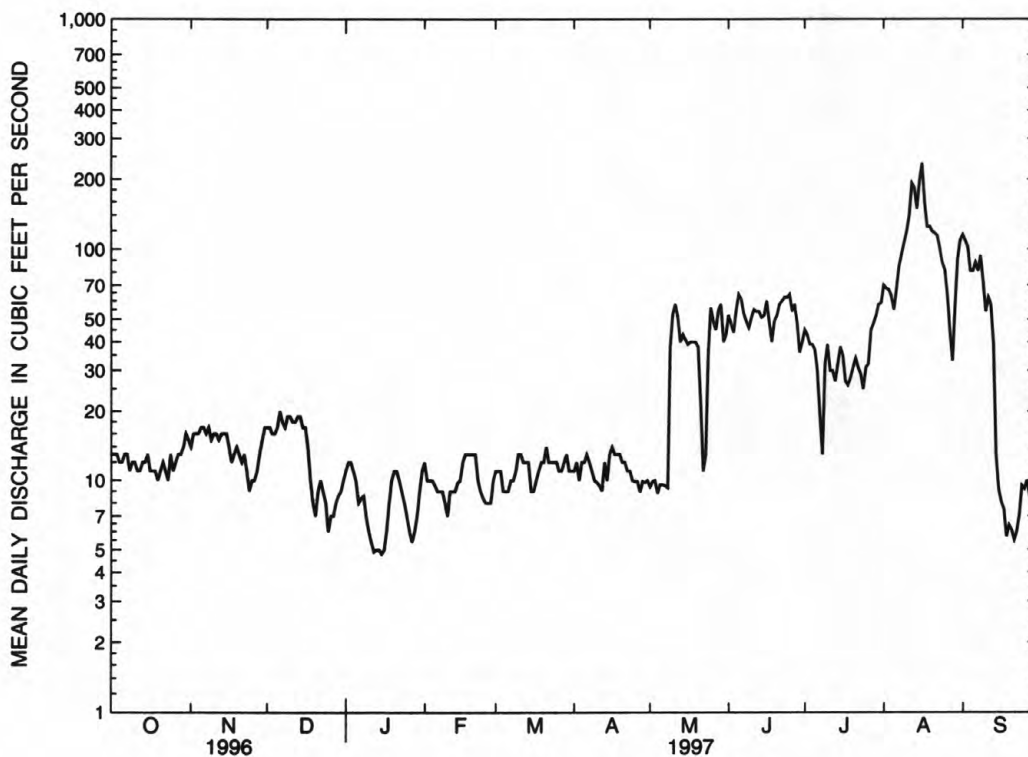
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.1	3.38	2.54	1.95	2.89	3.90	3.19	14.5	38.9	42.2	50.6	37.0
MAX	33.1	14.2	13.4	8.02	9.96	15.3	11.1	33.1	108	106	174	71.1
(WY)	1951	1997	1997	1997	1997	1952	1997	1997	1951	1951	1996	1950
MIN	.30	.000	.000	.000	.000	.000	.000	2.12	10.4	2.04	.000	.88
(WY)	1957	1955	1955	1954	1955	1956	1955	1958	1956	1954	1955	1955

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1949-58, 1996-97

ANNUAL TOTAL	10606.1	
ANNUAL MEAN	29.1	15.5
HIGHEST ANNUAL MEAN		34.5
LOWEST ANNUAL MEAN		3.07
HIGHEST DAILY MEAN	234	379
LOWEST DAILY MEAN	4.8	.00
ANNUAL SEVEN-DAY MINIMUM	5.2	.00
INSTANTANEOUS PEAK FLOW	257	387
INSTANTANEOUS PEAK STAGE	8.68	10.47
ANNUAL RUNOFF (AC-FT)	21040	11210
10 PERCENT EXCEEDS	64	58
50 PERCENT EXCEEDS	13	4.3
90 PERCENT EXCEEDS	8.0	.00



BUFFALO CREEK NEAR OVERTON

PLATTE RIVER BASIN

93

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.

PERIOD OF RECORD.--March 1996 to September 1996.

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 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	36	1.2	8.0	3.6
2	---	---	---	---	---	---	.00	.00	12	1.1	10	5.2
3	---	---	---	---	---	---	.00	.00	9.7	1.1	12	5.3
4	---	---	---	---	---	---	.00	.00	9.7	1.5	9.1	4.0
5	---	---	---	---	---	---	.00	.00	10	1.5	9.2	2.3
6	---	---	---	---	---	---	.00	.00	10	1.1	8.7	3.0
7	---	---	---	---	---	---	.00	.00	10	1.8	6.0	3.8
8	---	---	---	---	---	---	.00	.00	10	3.9	5.6	4.6
9	---	---	---	---	---	---	.00	.00	11	2.5	5.5	6.6
10	---	---	---	---	---	---	.00	.00	11	2.5	5.2	6.1
11	---	---	---	---	---	---	.00	.00	11	2.5	5.9	4.2
12	---	---	---	---	---	---	.00	.00	10	2.5	6.1	1.5
13	---	---	---	---	---	---	.00	.00	9.7	2.4	4.0	.43
14	---	---	---	---	---	---	.00	.00	8.8	2.4	4.4	.00
15	---	---	---	---	---	---	.00	.00	21	2.4	3.1	.00
16	---	---	---	---	---	---	.00	.00	70	2.4	6.2	.00
17	---	---	---	---	---	---	.00	.00	3.2	2.3	7.6	.00
18	---	---	---	---	---	---	.00	.00	2.1	2.3	7.5	.00
19	---	---	---	---	---	---	.00	.00	3.6	2.6	7.9	.00
20	---	---	---	---	---	---	.00	.00	2.8	2.3	6.3	.00
21	---	---	---	---	---	.00	.00	.00	3.3	2.3	5.8	.00
22	---	---	---	---	---	.00	.00	.00	8.6	2.5	7.3	.00
23	---	---	---	---	---	.00	.00	.00	28	4.4	7.5	.00
24	---	---	---	---	---	.00	.00	2.5	1.9	8.5	7.9	.00
25	---	---	---	---	---	.00	.00	7.3	1.4	8.3	8.6	.00
26	---	---	---	---	---	.00	.00	24	1.3	8.4	8.9	.00
27	---	---	---	---	---	.00	.00	167	1.5	7.2	7.4	.00
28	---	---	---	---	---	.00	.00	73	1.6	6.6	6.0	.00
29	---	---	---	---	---	.00	.00	9.9	1.9	9.8	4.3	.00
30	---	---	---	---	---	.00	.00	9.1	1.2	7.6	3.0	.00
31	---	---	---	---	---	.00	---	9.9	---	6.9	2.9	---
TOTAL	---	---	---	---	---	---	0.00	302.70	322.3	114.8	207.9	50.63
MEAN	---	---	---	---	---	---	.000	9.76	10.7	3.70	6.71	1.69
MAX	---	---	---	---	---	---	.00	167	70	9.8	12	6.6
MIN	---	---	---	---	---	---	.00	.00	1.2	1.1	2.9	.00
AC-FT	---	---	---	---	---	---	.00	600	639	228	412	100

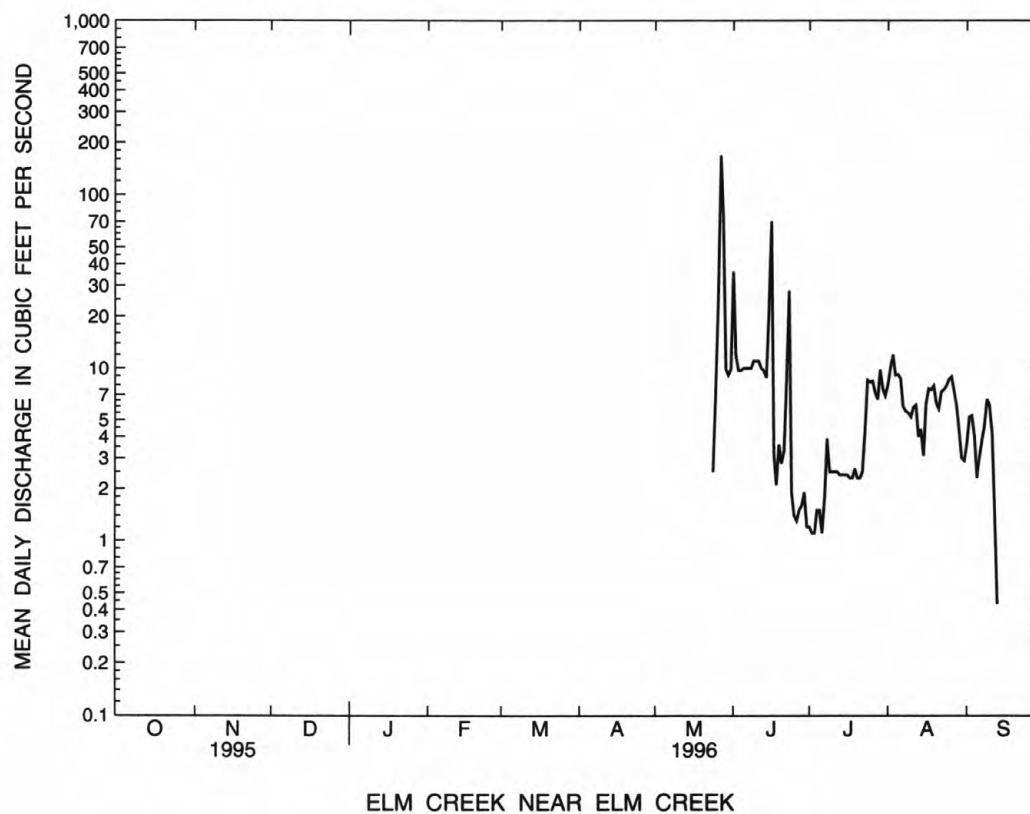
PLATTE RIVER BASIN

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	181	May 27
INSTANTANEOUS PEAK STAGE	*8.21	May 27

* Maximum stage since station established.



PLATTE RIVER BASIN

95

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

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

REMARKS.-- Records fair.

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	.00	.00	.00	.00	.00	.00	.00	.00	e1.1	11	3.4	.05
2	.00	.00	.00	.00	.00	.00	.00	.00	e1.2	12	.43	.06
3	.00	.00	.00	.00	.00	.00	.00	.00	e1.4	9.2	.37	.71
4	.00	.00	.00	.00	.00	.00	.00	.00	1.4	8.9	.35	5.6
5	.00	.00	.00	.00	.00	.00	.00	.00	1.2	8.2	3.1	7.8
6	.00	.00	.00	.00	.00	.00	.00	.00	.96	11	8.7	8.9
7	.00	.00	.00	.00	.00	.00	.00	.00	2.0	7.1	10	13
8	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.16	11	8.3
9	.00	.00	.00	.00	.00	.00	.00	.00	2.8	1.2	11	2.1
10	.00	.00	.00	.00	.00	.00	.00	.00	3.2	2.6	12	6.6
11	.00	.00	.00	.00	.00	.00	.00	.00	3.6	5.0	14	6.8
12	.00	.00	.00	.00	.00	.00	.00	.00	3.0	1.1	13	6.7
13	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.36	13	3.6
14	.00	.00	.00	.00	.00	.00	.00	.00	1.8	.78	16	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.66	15	.00
16	.00	1.1	.00	.00	.00	.00	.00	.62	1.1	.16	12	.00
17	.00	.00	.00	.00	.00	.00	.00	2.5	.91	.15	12	.00
18	.00	.00	.00	.00	.00	.00	.00	2.1	.64	.18	12	.00
19	.00	.00	.00	.00	.00	.00	.00	2.0	1.8	.40	11	.00
20	.00	1.1	.00	.00	.00	.00	.00	1.9	9.7	.85	11	.00
21	.00	.00	.00	.00	.00	.00	.00	1.5	11	4.5	11	.00
22	.00	.00	.00	.00	.00	.00	.00	1.0	12	5.5	11	.00
23	.00	.00	.00	.00	.00	.00	.00	.77	12	1.6	13	.00
24	.00	.00	.00	.00	.00	.00	.00	1.7	12	.52	13	.00
25	.00	.00	.00	.00	.00	.00	.00	.98	13	.04	10	.00
26	.00	.00	.00	.00	.00	.00	.00	e.42	11	.17	9.1	.00
27	.00	.00	.00	.00	.00	.00	.00	e.60	12	3.2	8.7	.00
28	.00	.00	.00	.00	.00	.00	.00	e.70	11	7.1	8.2	.00
29	.00	.00	.00	.00	---	.00	.00	e.80	11	7.8	6.3	.00
30	.00	.00	.00	.00	---	.00	.00	e.90	10	8.2	.06	.00
31	.00	---	.00	.00	---	.00	---	e1.0	---	7.6	.05	---
TOTAL	0.00	2.20	0.00	0.00	0.00	0.00	0.00	19.49	159.31	127.23	279.76	70.22
MEAN	.000	.073	.000	.000	.000	.000	.000	.63	5.31	4.10	9.02	2.34
MAX	.00	1.1	.00	.00	.00	.00	.00	2.5	13	12	16	13
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.64	.04	.05	.00
AC-FT	.00	4.4	.00	.00	.00	.00	.00	39	316	252	555	139

e Estimated

PLATTE RIVER BASIN

06769525 ELM CREEK NEAR ELM CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.073	.000	.000	.000	.000	.000	5.20	8.03	3.90	7.87	2.01
MAX	.000	.073	.000	.000	.000	.000	.000	9.76	10.7	4.10	9.02	2.34
(WY)	1997	1997	1997	1997	1997	1997	1996	1996	1996	1997	1997	1997
MIN	.000	.073	.000	.000	.000	.000	.000	.63	5.31	3.70	6.71	1.69
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1996	1996	1996

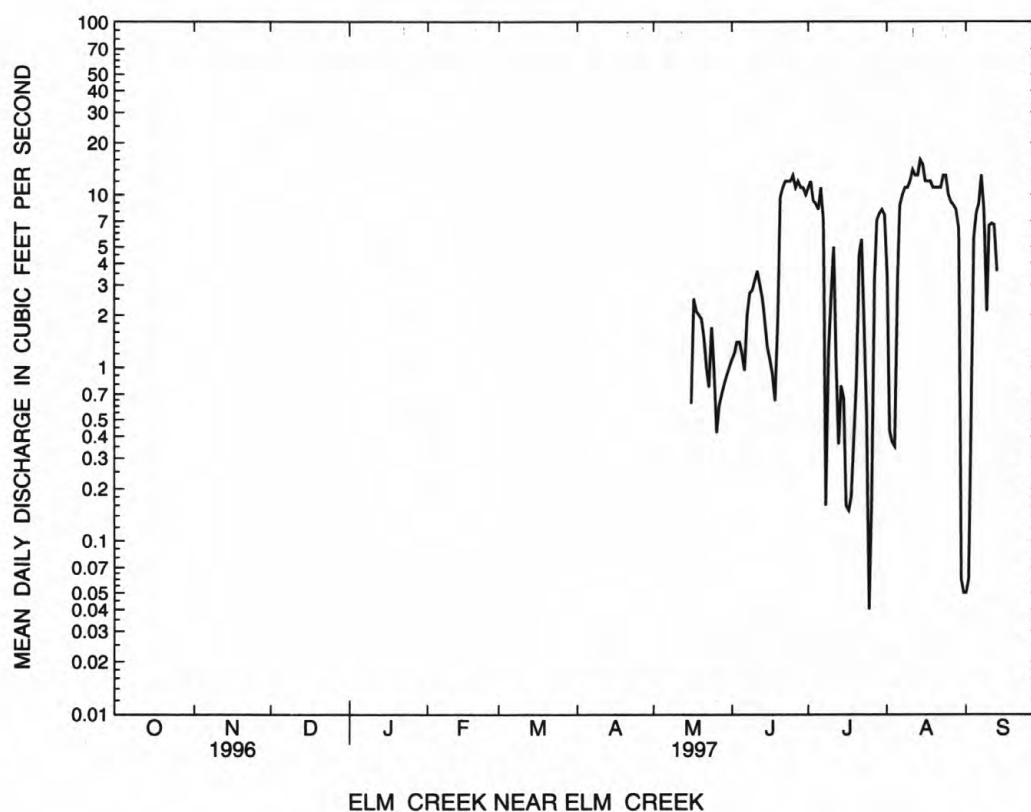
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	658.21	
ANNUAL MEAN	1.80	1.80
HIGHEST ANNUAL MEAN		1.80 1997
LOWEST ANNUAL MEAN		1.80 1997
HIGHEST DAILY MEAN	16 Aug 14	167 May 27 1996
LOWEST DAILY MEAN	.00 Oct 1	.00 Mar 21 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1	.00 Mar 21 1996
INSTANTANEOUS PEAK FLOW	44 Sep 7	181 May 27 1996
INSTANTANEOUS PEAK STAGE	4.28 Sep 7	*8.21 May 27 1996
ANNUAL RUNOFF (AC-FT)	1310	1310
10 PERCENT EXCEEDS	9.0	9.7
50 PERCENT EXCEEDS	.00	.00
90 PERCENT EXCEEDS	.00	.00

* Maximum stage since station established March 1996.



PLATTE RIVER BASIN

97

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

LOCATION.--Lat 40°39'21", long 099°09'4139", 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..

PERIOD OF RECORD.--March 1996 to September 1996.

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 1995 TO SEPTEMBER 1996 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.4	5.0	6.3	23	7.0	1.2
2	---	---	---	---	---	---	2.1	4.6	5.5	23	6.0	1.1
3	---	---	---	---	---	---	3.5	5.1	5.2	21	5.6	1.1
4	---	---	---	---	---	---	2.8	5.0	5.1	18	5.2	.92
5	---	---	---	---	---	---	2.4	4.9	4.9	19	6.2	.93
6	---	---	---	---	---	---	2.0	4.7	5.1	20	5.4	.75
7	---	---	---	---	---	---	2.5	4.8	4.9	20	7.3	.79
8	---	---	---	---	---	---	2.1	5.0	4.9	35	6.9	e.80
9	---	---	---	---	---	---	2.3	13	4.8	17	6.2	e.90
10	---	---	---	---	---	---	2.8	7.3	4.5	14	5.6	e1.0
11	---	---	---	---	---	---	4.8	6.2	4.7	13	5.4	e1.0
12	---	---	---	---	---	---	5.3	7.6	5.1	12	5.3	e1.1
13	---	---	---	---	---	.65	5.1	7.0	5.1	11	5.3	e1.2
14	---	---	---	---	---	.74	5.1	5.7	5.4	9.3	4.5	e1.2
15	---	---	---	---	---	.69	5.0	5.8	11	12	4.1	e1.3
16	---	---	---	---	---	.73	5.5	7.9	40	12	4.0	1.4
17	---	---	---	---	---	.73	4.5	6.6	16	8.2	3.5	1.4
18	---	---	---	---	---	.72	5.5	5.8	13	8.4	3.2	1.9
19	---	---	---	---	---	.72	5.6	5.5	12	9.5	3.0	4.8
20	---	---	---	---	---	.70	5.6	5.0	12	9.3	2.9	3.2
21	---	---	---	---	---	.67	5.3	5.0	13	6.6	3.1	2.8
22	---	---	---	---	---	.73	5.4	4.8	16	6.4	3.2	2.5
23	---	---	---	---	---	.65	4.6	5.0	32	7.7	2.5	2.5
24	---	---	---	---	---	.85	4.2	5.1	22	8.4	2.0	2.6
25	---	---	---	---	---	.78	5.0	5.9	21	7.1	2.1	2.8
26	---	---	---	---	---	.87	5.3	16	21	6.4	2.2	3.2
27	---	---	---	---	---	.94	5.2	25	22	6.1	2.1	3.3
28	---	---	---	---	---	.91	5.2	13	23	5.7	2.0	2.9
29	---	---	---	---	---	.77	5.2	7.5	23	31	2.3	3.1
30	---	---	---	---	---	.80	5.2	6.1	24	8.0	1.9	3.0
31	---	---	---	---	---	.79	---	6.9	---	7.7	1.3	---
TOTAL	---	---	---	---	---	---	127.5	222.8	392.5	415.8	127.3	56.69
MEAN	---	---	---	---	---	---	4.25	7.19	13.1	13.4	4.11	1.89
MAX	---	---	---	---	---	---	5.6	25	40	35	7.3	4.8
MIN	---	---	---	---	---	---	2.0	4.6	4.5	5.7	1.3	.75
AC-FT	---	---	---	---	---	---	253	442	779	825	252	112

e Estimated.

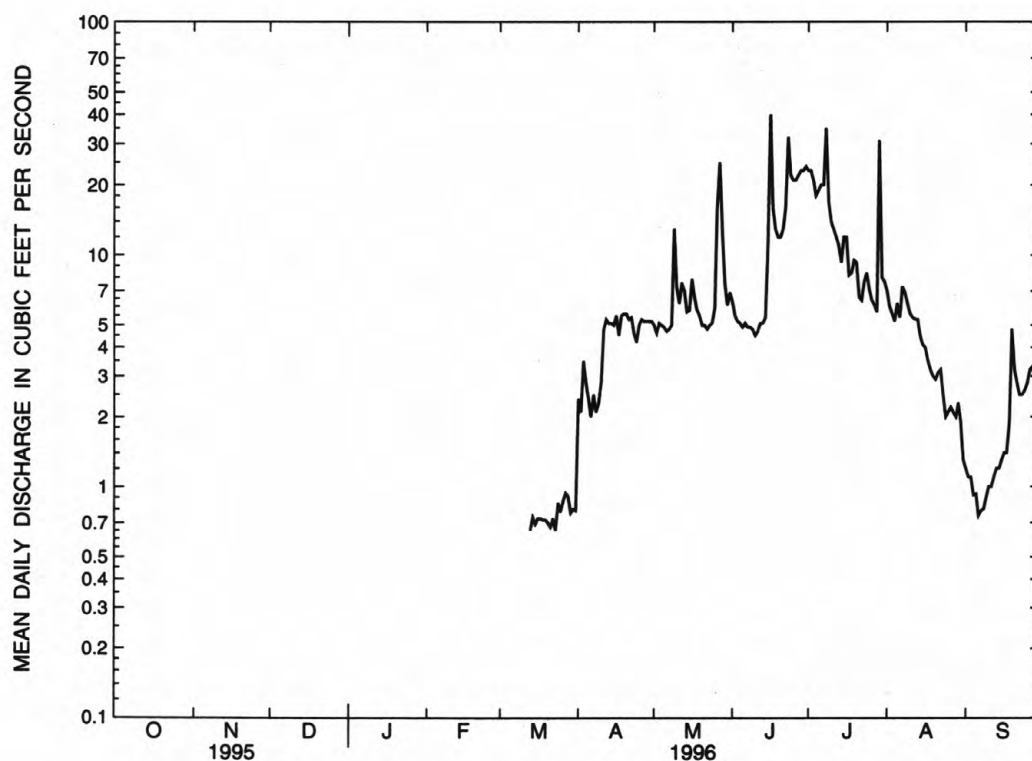
PLATTE RIVER BASIN

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

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	78	Jun 16
INSTANTANEOUS PEAK STAGE	*3.39	Jun 16

* Maximum stage since station established.



WHISKY SLOUGH 1 MI E OF PHELPS-KEARNEY CO LINE

PLATTE RIVER BASIN

99

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

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

REMARKS.-- Records fair 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	2.6	2.9	4.9	3.2	3.6	4.0	3.1	2.7	3.4	1.4	.00	.00
2	2.6	2.7	5.2	3.5	3.6	4.1	3.2	2.8	3.4	1.1	.02	.00
3	2.8	2.4	4.8	4.5	3.5	4.0	3.2	2.6	3.9	.93	.00	.00
4	2.6	2.8	4.9	4.7	3.5	4.4	3.5	2.3	5.7	1.1	.00	.00
5	2.4	2.9	4.9	5.0	3.5	4.4	3.4	2.4	5.4	.78	.00	.01
6	2.6	3.0	4.6	5.0	3.8	4.4	3.3	2.4	5.1	.52	.00	.01
7	2.7	2.9	4.6	4.6	3.9	3.8	3.0	2.4	5.3	.58	.00	.98
8	2.6	2.8	4.4	4.2	4.0	4.1	2.7	2.3	5.2	.66	.00	.04
9	2.9	2.8	4.5	e3.5	4.2	4.9	2.5	2.4	5.4	1.2	.00	.00
10	3.0	2.7	5.0	e3.0	3.9	4.5	2.5	2.1	5.5	1.1	.00	.00
11	2.5	2.7	4.6	e2.3	3.9	5.2	3.3	2.4	5.5	.72	.12	.00
12	2.6	2.7	4.9	e2.3	3.9	5.2	4.0	2.6	5.7	.67	.00	.00
13	3.0	2.8	5.0	e2.1	3.8	5.2	2.4	2.1	5.4	.54	.00	.00
14	3.2	2.8	5.0	e2.1	3.4	6.2	2.5	2.2	5.0	.49	.02	.00
15	3.4	3.2	5.0	e2.3	3.8	4.0	3.5	2.3	4.4	.34	.00	.00
16	3.3	10	5.0	e2.8	3.6	3.2	3.3	1.8	4.4	.34	.00	.00
17	3.6	8.1	5.0	e2.7	3.7	4.1	2.7	2.1	4.1	.61	.00	.00
18	4.0	6.7	e4.0	e2.9	3.9	4.2	2.8	2.2	3.8	.80	.00	.00
19	3.5	6.6	e3.4	3.2	4.0	3.2	3.1	2.1	3.2	.59	.00	.00
20	3.4	8.0	e2.8	3.1	4.0	3.7	3.0	2.2	3.0	.61	.00	.00
21	3.2	7.7	e3.5	3.9	4.0	4.3	3.0	2.0	2.8	.54	.00	.00
22	3.1	7.3	4.2	4.0	4.0	4.3	2.8	2.0	2.3	.14	.00	.00
23	3.0	6.8	e3.6	4.0	4.0	3.9	2.7	2.6	1.7	.02	.00	.49
24	3.0	6.2	e2.8	4.1	4.1	3.9	2.7	3.0	1.5	.00	.00	.15
25	3.1	5.6	e2.4	e3.0	3.9	3.7	2.6	3.0	1.5	.00	.00	.07
26	3.0	5.2	e2.5	e2.3	4.0	3.1	2.7	3.4	1.3	.00	.17	.10
27	2.9	5.1	e2.5	e2.2	3.8	3.4	2.4	3.9	1.2	.00	.12	.10
28	3.0	4.6	e2.7	e2.1	3.9	3.8	2.6	3.8	1.1	.00	.05	.15
29	3.1	5.4	e2.9	e2.3	---	3.8	2.7	3.8	1.2	.00	.01	.19
30	3.0	5.2	3.1	2.5	---	3.4	2.7	3.7	1.4	.00	.00	.25
31	2.7	---	3.4	3.2	---	2.9	---	3.3	---	.00	.00	---
TOTAL	92.4	140.6	126.1	100.6	107.2	127.3	87.9	80.9	108.8	15.78	0.51	2.54
MEAN	2.98	4.69	4.07	3.25	3.83	4.11	2.93	2.61	3.63	.51	.016	.085
MAX	4.0	10	5.2	5.0	4.2	6.2	4.0	3.9	5.7	1.4	.17	.98
MIN	2.4	2.4	2.4	2.1	3.4	2.9	2.4	1.8	1.1	.00	.00	.00
AC-FT	183	279	250	200	213	252	174	160	216	31	1.0	5.0

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 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.98	4.69	4.07	3.25	3.83	4.11	3.59	4.90	8.35	6.96	2.06	.99
MAX	2.98	4.69	4.07	3.25	3.83	4.11	4.25	7.19	13.1	13.4	4.11	1.89
(WY)	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996	1996
MIN	2.98	4.69	4.07	3.25	3.83	4.11	2.93	2.61	3.63	.51	.016	.085
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

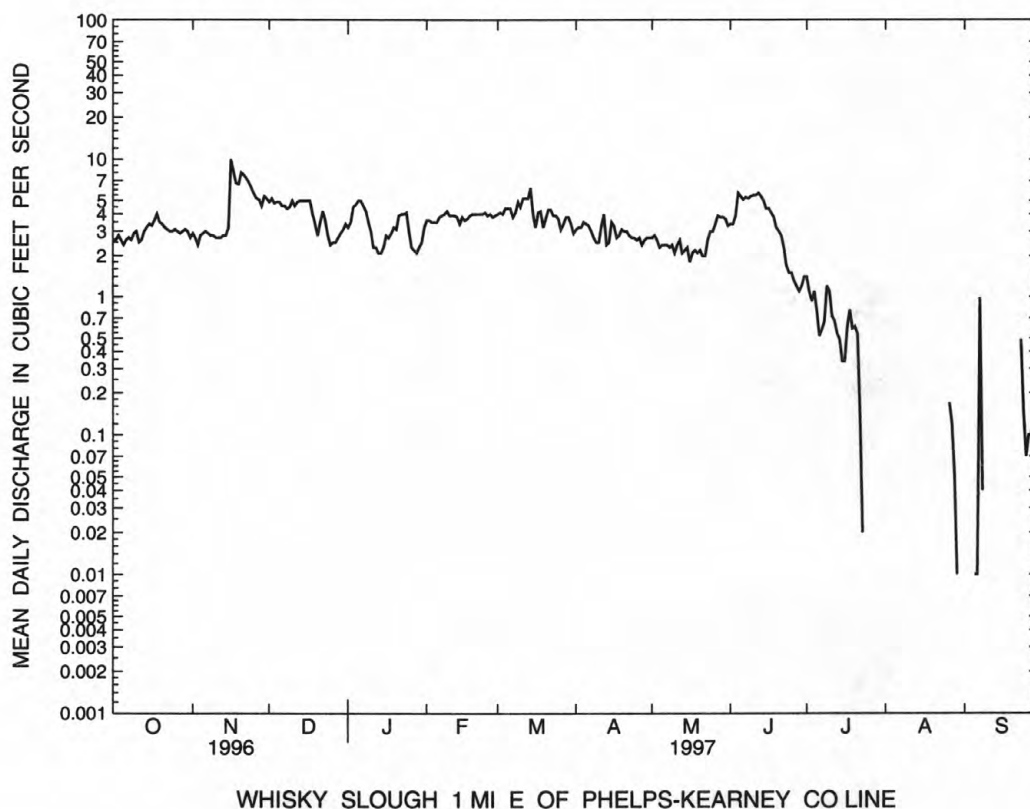
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	990.63	
ANNUAL MEAN	2.71	2.71
HIGHEST ANNUAL MEAN		2.71 1997
LOWEST ANNUAL MEAN		2.71 1997
HIGHEST DAILY MEAN	10 Nov 16	40 Jun 16 1996
LOWEST DAILY MEAN	.00 Jul 24	.00 Jul 24 1997
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 24	.00 Jul 24 1997
INSTANTANEOUS PEAK FLOW	15 Nov 16	78 Jun 16 1996
INSTANTANEOUS PEAK STAGE	1.76 Nov 16	*3.39 Jun 16 1996
ANNUAL RUNOFF (AC-FT)	1960	1970
10 PERCENT EXCEEDS	5.0	7.0
50 PERCENT EXCEEDS	2.9	3.2
90 PERCENT EXCEEDS	.00	.04

* Maximum stage since station established March 1996.



PLATTE RIVER BASIN

101

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 and 1.6 mi west of Highway 44, and 2 mi south of Kearney..

PERIOD OF RECORD.--March 1996 to September 1996.

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

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e12	10	e12	86	22	32	38
2	---	---	---	---	---	e12	7.7	e12	36	25	27	28
3	---	---	---	---	---	e12	18	e12	28	32	42	21
4	---	---	---	---	---	12	16	e12	26	40	37	20
5	---	---	---	---	---	12	11	e12	25	45	45	18
6	---	---	---	---	---	19	6.9	e14	24	47	43	16
7	---	---	---	---	---	25	10	e14	22	47	89	18
8	---	---	---	---	---	25	9.5	e60	21	377	76	19
9	---	---	---	---	---	30	10	e120	21	146	40	19
10	---	---	---	---	---	28	11	60	20	51	33	18
11	---	---	---	---	---	12	e10	30	20	32	32	18
12	---	---	---	---	---	11	e10	40	21	29	30	18
13	---	---	---	---	---	10	e10	31	20	30	29	17
14	---	---	---	---	---	13	e10	22	21	32	31	17
15	---	---	---	---	---	12	e10	20	24	31	33	18
16	---	---	---	---	---	12	e11	22	245	54	37	19
17	---	---	---	---	---	11	e11	18	106	50	38	17
18	---	---	---	---	---	11	e11	18	39	51	34	20
19	---	---	---	---	---	11	e11	17	31	63	34	133
20	---	---	---	---	---	17	e11	16	27	386	39	162
21	---	---	---	---	---	9.8	e12	15	28	236	44	48
22	---	---	---	---	---	9.4	e12	14	29	59	47	30
23	---	---	---	---	---	11	e12	13	142	96	49	24
24	---	---	---	---	---	21	e12	13	69	82	43	22
25	---	---	---	---	---	26	e12	16	35	46	37	26
26	---	---	---	---	---	39	e14	149	30	28	35	27
27	---	---	---	---	---	18	e14	351	28	24	35	22
28	---	---	---	---	---	28	e14	154	26	21	37	19
29	---	---	---	---	---	22	e14	52	24	226	42	17
30	---	---	---	---	---	21	e14	39	23	173	37	15
31	---	---	---	---	---	17	---	101	---	49	49	---
TOTAL	---	---	---	---	---	529.2	345.1	1479	1297	2630	1256	904
MEAN	---	---	---	---	---	17.1	11.5	47.7	43.2	84.8	40.5	30.1
MAX	---	---	---	---	---	39	18	351	245	386	89	162
MIN	---	---	---	---	---	9.4	6.9	12	20	21	27	15
AC-FT	---	---	---	---	---	1050	685	2930	2570	5220	2490	1790

e Estimated.

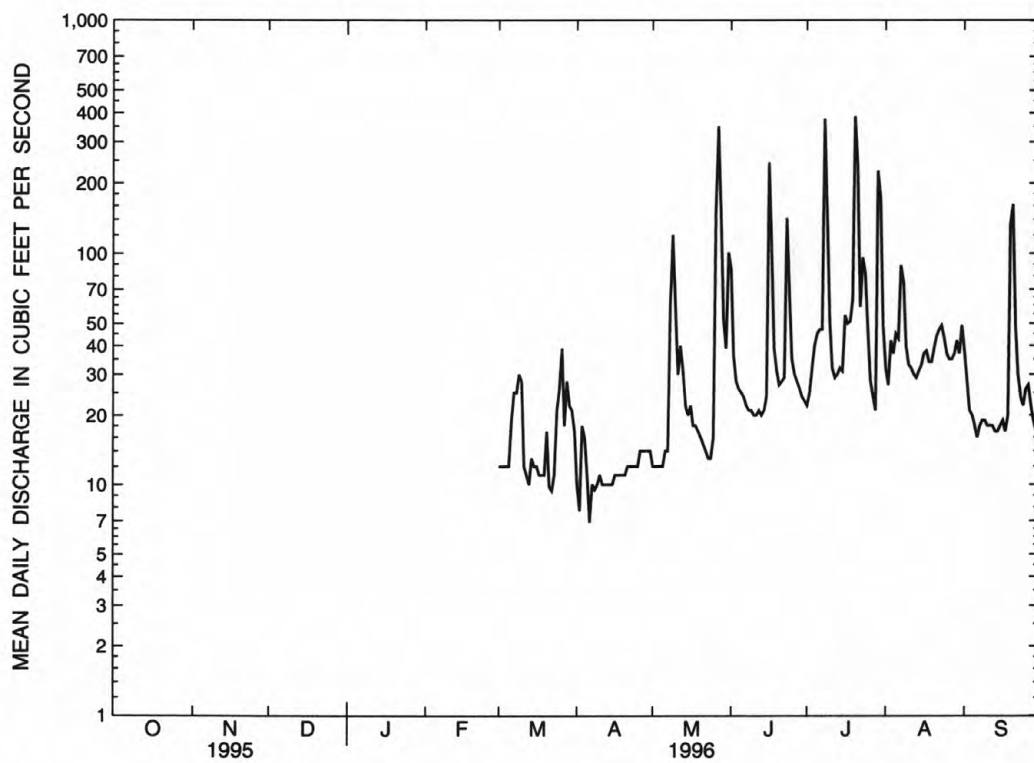
PLATTE RIVER BASIN

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

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE570 July 8
*6.57 July 8

* Maximum stage since station established.



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

PLATTE RIVER BASIN

103

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

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

REMARKS.-- Records fair 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	15	18	e20	e11	e20	21	15	21	20	17	28	10
2	17	18	e20	e10	e25	19	17	21	20	26	29	10
3	17	15	e19	e13	e20	18	18	21	20	28	25	10
4	16	17	19	8.8	9.4	22	18	19	20	31	15	10
5	15	17	19	e13	14	21	18	19	19	33	20	10
6	16	17	20	e21	13	20	19	19	17	29	22	10
7	16	17	20	e20	15	18	17	19	17	34	26	10
8	18	16	20	e15	e13	17	17	19	18	31	20	11
9	18	15	19	e13	e13	22	16	19	17	25	15	10
10	17	18	22	e10	e12	19	17	16	17	31	10	10
11	16	18	19	e6.0	e10	22	45	17	17	36	19	10
12	15	16	19	e6.0	e12	20	70	18	17	30	31	9.6
13	16	17	18	e6.0	e13	24	21	16	16	31	18	8.5
14	16	18	18	e9.0	e13	31	19	14	16	22	18	7.4
15	16	20	20	e7.0	e14	20	25	13	14	20	38	6.6
16	16	62	18	e6.0	e15	17	22	11	14	23	27	6.3
17	19	57	e13	e8.0	16	20	17	12	15	29	13	6.1
18	19	e30	e10	e10	20	20	17	13	14	26	12	5.4
19	16	e16	e8.0	e13	21	17	18	14	14	30	13	5.7
20	17	e16	e9.0	e21	21	15	18	14	16	29	18	5.7
21	18	e15	e10	e23	22	19	18	14	14	27	15	5.4
22	19	e14	e8.0	e21	21	19	19	15	13	30	13	5.0
23	19	e13	e7.0	e16	21	18	19	20	12	24	12	5.2
24	16	e12	e6.0	e11	24	18	19	24	12	21	11	5.7
25	18	e11	e6.4	e9.0	21	18	18	21	15	20	10	7.3
26	18	e10	e7.0	e8.0	19	14	18	22	17	22	10	8.4
27	17	e12	e8.0	e7.0	e17	14	18	34	19	23	10	7.8
28	16	e14	e8.0	e8.0	19	17	17	30	20	19	10	8.3
29	17	e16	e8.0	e10	---	18	17	25	20	21	9.9	8.0
30	20	e20	e10	e13	---	17	20	22	18	25	10	7.3
31	17	---	e10	e15	---	14	---	20	---	24	10	---
TOTAL	526	575	438.4	367.8	473.4	589	627	582	498	817	537.9	240.7
MEAN	17.0	19.2	14.1	11.9	16.9	19.0	20.9	18.8	16.6	26.4	17.4	8.02
MAX	20	62	22	23	25	31	70	34	20	36	38	11
MIN	15	10	6.0	6.0	9.4	14	15	11	12	17	9.9	5.0
AC-FT	1040	1140	870	730	939	1170	1240	1150	988	1620	1070	477

e Estimated

PLATTE RIVER BASIN

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 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.0	19.2	14.1	11.9	16.9	18.0	16.2	33.2	29.9	55.6	28.9	19.1
MAX	17.0	19.2	14.1	11.9	16.9	19.0	20.9	47.7	43.2	84.8	40.5	30.1
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996
MIN	17.0	19.2	14.1	11.9	16.9	17.1	11.5	18.8	16.6	26.4	17.4	8.02
(WY)	1997	1997	1997	1997	1997	1996	1996	1997	1997	1997	1997	1997

SUMMARY STATISTICS

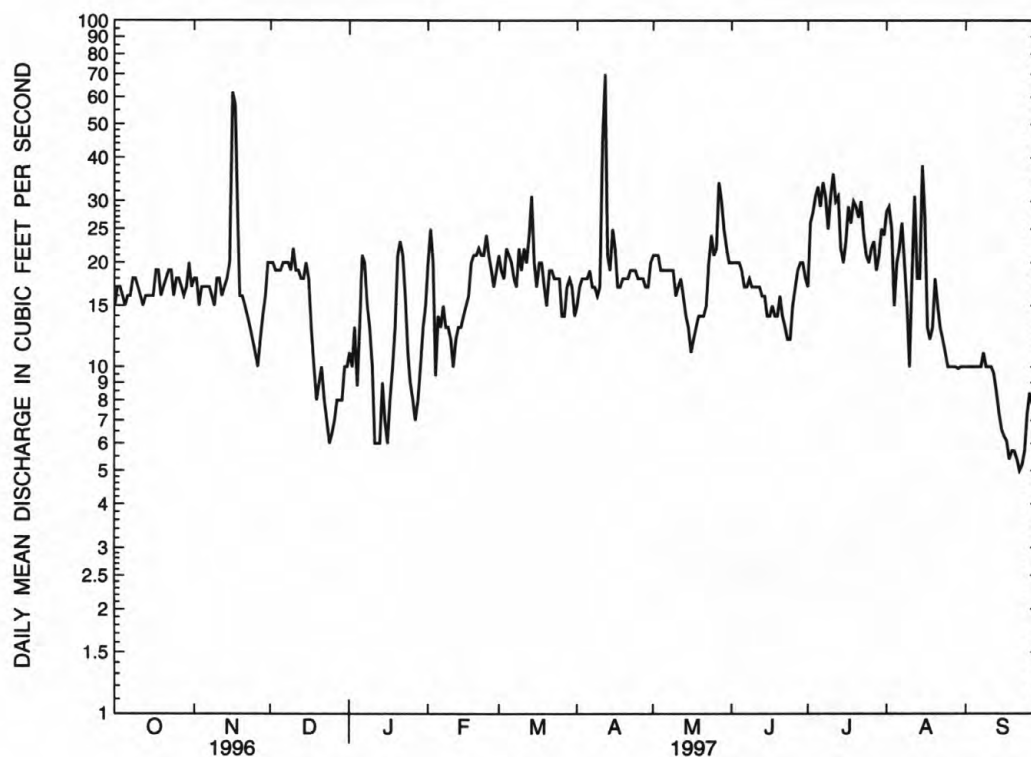
FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	6272.2	
ANNUAL MEAN	17.2	17.2
HIGHEST ANNUAL MEAN		17.2 1997
LOWEST ANNUAL MEAN		17.2 1997
HIGHEST DAILY MEAN	70 Apr 12	386 Jul 20 1996
LOWEST DAILY MEAN	5.0 Sep 22	5.0 Sep 22 1997
ANNUAL SEVEN-DAY MINIMUM	5.4 Sep 18	5.4 Sep 18 1997
INSTANTANEOUS PEAK FLOW (STAGE)	116 (4.41) Apr 12	570 Jul 8 1996
INSTANTANEOUS PEAK STAGE	*5.01 Jan 14	**6.57 Jul 8 1996
ANNUAL RUNOFF (AC-FT)	12440	12450
10 PERCENT EXCEEDS	25	38
50 PERCENT EXCEEDS	17	18
90 PERCENT EXCEEDS	8.7	10

* Backwater from ice.

** Maximum stage since station established March 1996.



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

PLATTE RIVER BASIN

105

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4060	1940	2550	e1900	e2200	2700	2170	1850	1620	6360	549	1570
2	3740	2120	2570	e2300	e2000	2720	2090	2000	1520	4850	580	1670
3	3580	2220	2500	e2400	e1850	2780	2110	2050	1490	3510	639	1620
4	3530	2110	2440	e2350	e1800	2660	2320	1920	1670	2600	603	1620
5	3510	2060	2150	e2200	e1800	2560	2420	1840	1530	2100	714	1570
6	3600	2100	2410	e1700	e1700	2440	2320	1790	1540	1930	848	1670
7	3490	2110	2440	e1600	e1650	2350	2340	1830	1570	1550	1330	2140
8	3300	2070	2400	e2300	e1600	2360	2380	1830	1560	1020	1480	2110
9	3190	2200	2360	e1800	e1550	2500	2360	1800	1700	735	1430	2020
10	2860	2090	2390	e1400	e1700	2620	2140	1820	1990	581	1510	1900
11	3150	1980	2330	e1100	e1750	2670	1950	1860	2450	510	1720	1790
12	3070	1810	2430	e980	e1800	2630	1990	1770	2810	416	2580	1800
13	2850	1810	2510	e1000	e1900	2620	2090	1590	3160	358	3180	1920
14	2530	1890	2570	e1300	e2100	2520	2070	1500	3810	447	3740	1870
15	2200	1980	2500	e1350	e2300	2540	1980	1550	4820	597	4200	1720
16	2200	2450	2520	e1300	2470	2550	2060	1620	6370	665	3850	1840
17	2120	2320	2160	e1400	2510	2590	1110	1710	7540	558	3610	2070
18	1990	2290	1580	e1550	2570	2280	1670	1730	7760	417	3170	2340
19	2000	2310	e1250	e1900	2660	2180	1850	1480	8130	314	3430	2450
20	1940	2320	e1200	e2100	e2550	2070	2130	1290	8840	241	2880	2440
21	1900	2260	e1250	e2150	e2600	2080	2230	1060	9160	203	2570	2510
22	1890	2190	e1300	e1900	2690	2350	2190	889	9270	308	2520	2600
23	1520	2240	e1250	e1600	2660	2340	2250	1010	9330	587	2470	2750
24	1400	2110	e1140	e1300	2650	2380	2300	1240	9380	447	2370	2950
25	1390	2060	e980	e1160	2590	2370	2180	1390	8810	335	2230	2930
26	1500	2120	e980	e1080	2630	2330	2040	1470	7820	443	2020	2800
27	1770	2270	e1100	e1100	2560	2330	1980	1630	6480	384	1510	2700
28	1450	2350	e1200	e1300	2570	2330	1880	1680	6450	334	1220	2600
29	1030	2440	e1350	e1600	---	2300	1860	1660	6560	366	1020	2630
30	893	2530	e1500	e1900	---	2280	1910	1620	6570	374	959	2480
31	1310	---	e1700	e2200	---	2280	---	1620	---	384	1090	---
TOTAL	74963	64750	59010	51220	61410	75710	62370	50099	151710	33924	62022	65080
MEAN	2418	2158	1904	1652	2193	2442	2079	1616	5057	1094	2001	2169
MAX	4060	2530	2570	2400	2690	2780	2420	2050	9380	6360	4200	2950
MIN	893	1810	980	980	1550	2070	1110	889	1490	203	549	1570
AC-FT	148700	128400	117000	101600	121800	150200	123700	99370	300900	67290	123000	129100

e Estimated

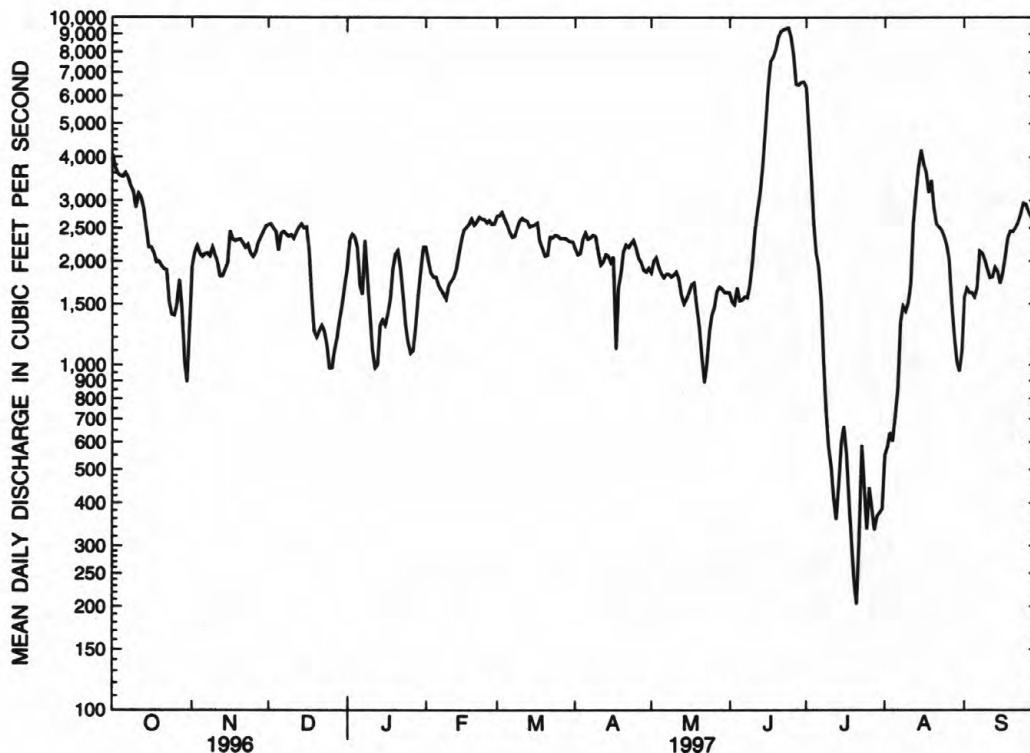
PLATTE RIVER BASIN

06770200 PLATTE RIVER NEAR KEARNEY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1670	1667	1812	2000	2423	2673	2443	2646	3884	2070	1306	1986
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1983 - 1997	
ANNUAL TOTAL	686765		812268			
ANNUAL MEAN	1876		2225		2210	
MEDIAN OF ANNUAL MEANS					1824	
HIGHEST ANNUAL MEAN					5418	
LOWEST ANNUAL MEAN					797	
HIGHEST DAILY MEAN	4910	Sep 24	9380	Jun 24	22300	Jun 29 1983
LOWEST DAILY MEAN	699	Jul 6	203	Jul 21	3.0	Sep 7 1990
ANNUAL SEVEN-DAY MINIMUM	845	Jul 2	348	Jul 19	13	Sep 2 1990
INSTANTANEOUS PEAK FLOW (STAGE)			9590	Jun 24	23700(7.42)	Jun 29 1983
INSTANTANEOUS PEAK STAGE			5.85	Jun 24	8.62	Feb 24 1994
ANNUAL RUNOFF (AC-FT)	1362000		1611000		1601000	
10 PERCENT EXCEEDS	2740		3160		4440	
50 PERCENT EXCEEDS	1800		2070		1570	
90 PERCENT EXCEEDS	1040		1010		409	



PLATTE RIVER NEAR KEARNEY

PLATTE RIVER BASIN

107

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE

LOCATION.--Lat 40°38'28", long 098°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..

PERIOD OF RECORD.--March 1996 to September 1996.

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

REMARKS.-- Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.2	10	22	13	13	9.4
2	---	---	---	---	---	---	5.6	10	18	13	12	6.5
3	---	---	---	---	---	---	5.1	11	16	15	9.0	7.9
4	---	---	---	---	---	---	4.4	11	16	11	8.6	4.6
5	---	---	---	---	---	---	4.5	10	15	9.3	9.7	2.9
6	---	---	---	---	---	---	4.9	11	14	12	11	4.3
7	---	---	---	---	---	---	4.8	12	13	12	19	3.1
8	---	---	---	---	---	---	4.5	13	12	50	12	3.4
9	---	---	---	---	---	---	4.4	24	12	17	12	1.6
10	---	---	---	---	---	---	4.3	20	12	15	12	.87
11	---	---	---	---	---	---	4.2	16	12	14	8.9	3.2
12	---	---	---	---	---	---	4.7	20	11	14	15	2.5
13	---	---	---	---	---	3.4	4.8	19	11	17	17	1.7
14	---	---	---	---	---	3.2	5.8	16	11	17	12	1.4
15	---	---	---	---	---	3.6	6.5	15	17	12	15	1.5
16	---	---	---	---	---	3.6	8.7	18	80	11	10	2.0
17	---	---	---	---	---	3.7	8.9	14	37	9.8	12	2.7
18	---	---	---	---	---	3.6	8.0	14	28	9.7	13	4.2
19	---	---	---	---	---	3.7	8.2	13	24	18	15	11
20	---	---	---	---	---	3.6	7.9	12	21	25	7.6	9.5
21	---	---	---	---	---	3.6	8.0	11	19	11	12	9.1
22	---	---	---	---	---	3.6	7.7	11	19	9.4	7.2	8.3
23	---	---	---	---	---	3.9	8.2	11	41	11	8.6	5.7
24	---	---	---	---	---	4.2	8.4	12	25	14	13	4.9
25	---	---	---	---	---	2.9	8.6	14	21	12	12	8.4
26	---	---	---	---	---	.00	8.2	36	19	14	15	6.5
27	---	---	---	---	---	.17	8.4	54	18	11	9.3	5.9
28	---	---	---	---	---	3.6	8.8	32	18	7.6	4.4	7.5
29	---	---	---	---	---	3.7	9.5	25	16	13	3.8	7.9
30	---	---	---	---	---	4.8	10	21	14	11	3.7	9.4
31	---	---	---	---	---	5.3	---	27	---	13	8.2	---
TOTAL	---	---	---	---	---	---	202.2	543	612	441.8	341.0	157.87
MEAN	---	---	---	---	---	---	6.74	17.5	20.4	14.3	11.0	5.26
MAX	---	---	---	---	---	---	10	54	80	50	19	11
MIN	---	---	---	---	---	---	4.2	10	11	7.6	3.7	.87
AC-FT	---	---	---	---	---	---	401	1080	1210	876	676	313

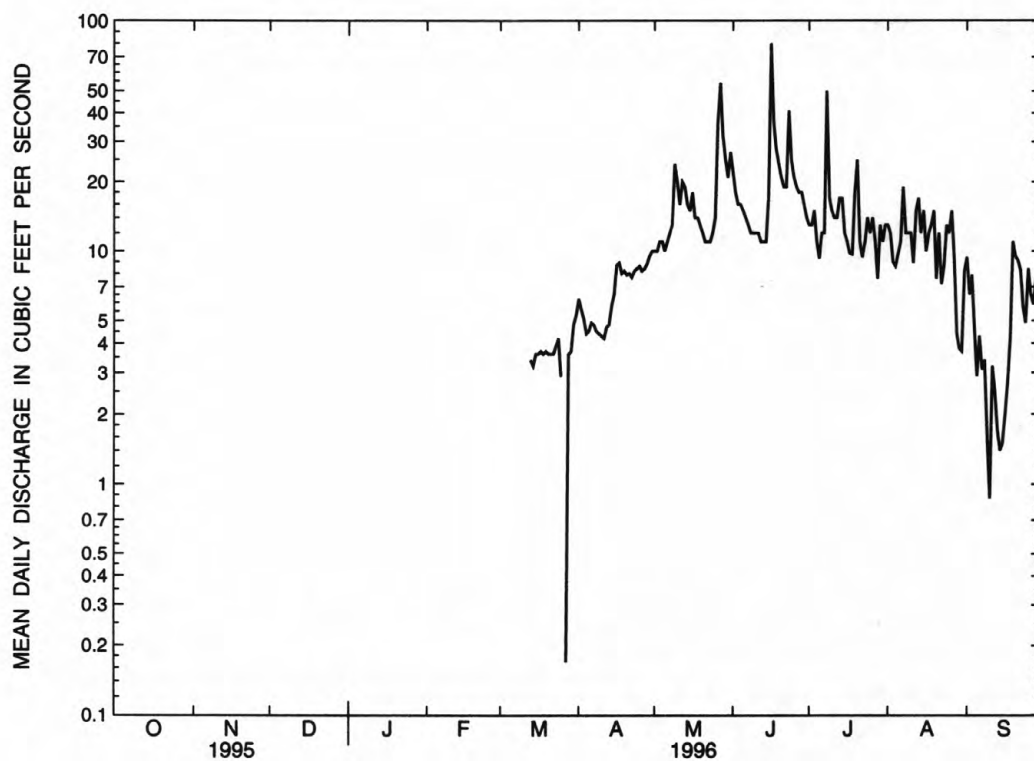
PLATTE RIVER BASIN

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	140	Jun 16
INSTANTANEOUS PEAK STAGE	*6.19	Jun 16

* Maximum stage since station established; from floodmark.



FORT KEARNEY SLOUGH NEAR NEWARK

PLATTE RIVER BASIN

109

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

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

REMARKS.-- Records 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	9.1	4.5	21	2.9	7.8	10	7.2	7.2	10	3.8	.38	2.3
2	1.8	4.0	24	8.8	7.2	11	8.3	7.4	10	4.1	.82	.48
3	4.9	12	14	14	7.7	16	13	7.8	10	3.8	1.0	2.2
4	7.8	14	21	12	6.3	8.5	16	7.8	22	3.8	1.2	1.2
5	8.7	9.4	26	1.7	4.3	8.1	11	7.9	11	3.4	3.5	.68
6	5.9	7.1	20	.11	7.2	8.2	7.5	7.8	8.3	3.4	2.2	.05
7	4.3	4.2	11	3.6	7.1	9.2	6.8	7.8	7.1	3.8	.64	1.9
8	6.6	2.0	12	7.1	7.1	12	6.1	7.6	6.7	3.3	.89	.00
9	3.7	6.7	16	7.9	7.7	9.4	7.4	6.8	6.4	3.3	.05	.00
10	3.5	4.2	15	7.8	7.6	14	7.8	6.2	6.6	2.7	.93	.00
11	8.9	.88	13	7.6	7.8	12	7.6	5.9	7.3	2.8	2.9	.00
12	7.7	1.8	8.2	6.9	7.7	19	7.2	4.6	7.7	2.2	.00	.05
13	6.4	3.9	8.4	7.5	7.9	17	7.0	5.7	7.8	2.5	.00	.06
14	7.6	6.8	9.2	7.9	7.8	8.1	7.9	6.5	7.8	1.8	.00	.06
15	6.6	17	2.3	6.9	7.9	8.4	7.8	5.8	8.0	2.2	.00	.07
16	10	10	7.7	.51	7.8	17	7.3	7.3	7.6	1.3	.00	.10
17	1.8	5.7	1.9	4.4	9.4	22	8.1	6.8	7.8	1.4	.00	.12
18	4.3	18	.54	7.8	9.2	9.6	8.1	7.3	7.6	.92	2.0	.19
19	12	33	1.2	7.8	8.2	14	8.0	6.9	7.4	.33	3.7	.19
20	7.9	43	2.3	7.8	11	16	7.8	6.7	7.5	.10	.00	.25
21	.97	19	.10	8.1	8.3	7.6	7.5	6.6	6.5	.60	.10	.46
22	5.9	21	.00	7.8	8.1	6.9	7.7	6.7	5.6	.92	.00	.81
23	6.9	13	.00	7.8	7.8	7.6	7.7	8.2	7.3	1.0	.00	1.8
24	11	3.6	.00	7.7	7.7	8.0	7.8	10	6.5	.01	.55	3.8
25	14	8.1	.16	6.8	9.2	7.7	7.8	9.9	5.4	.45	.97	3.5
26	7.1	3.8	.43	7.8	12	8.0	7.8	9.5	4.3	1.1	2.6	3.6
27	.40	7.7	3.3	6.8	12	7.1	7.7	5.4	4.0	.35	3.7	3.7
28	8.4	16	.50	7.7	19	4.0	5.7	6.7	3.8	.28	3.6	3.7
29	19	26	.00	7.9	---	.29	6.9	7.2	4.2	.81	3.8	3.7
30	.08	18	.00	7.9	---	.70	7.6	6.8	3.9	.71	3.4	3.8
31	1.4	---	.01	8.0	---	5.0	---	9.2	---	.00	2.1	---
TOTAL	204.65	344.38	239.24	215.32	238.8	312.39	242.1	224.0	226.1	57.18	41.03	38.77
MEAN	6.60	11.5	7.72	6.95	8.53	10.1	8.07	7.23	7.54	1.84	1.32	1.29
MAX	19	43	26	14	19	22	16	10	22	4.1	3.8	3.8
MIN	.08	.88	.00	.11	4.3	.29	5.7	4.6	3.8	.00	.00	.00
AC-FT	406	683	475	427	474	620	480	444	448	113	81	77

PLATTE RIVER BASIN

06770240 FORT KEARNEY SLOUGH NEAR NEWARK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.60	11.5	7.72	6.95	8.53	10.1	7.40	12.4	14.0	8.05	6.16	3.28
MAX	6.60	11.5	7.72	6.95	8.53	10.1	8.07	17.5	20.4	14.3	11.0	5.26
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996
MIN	6.60	11.5	7.72	6.95	8.53	10.1	6.74	7.23	7.54	1.84	1.32	1.29
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1997	1997

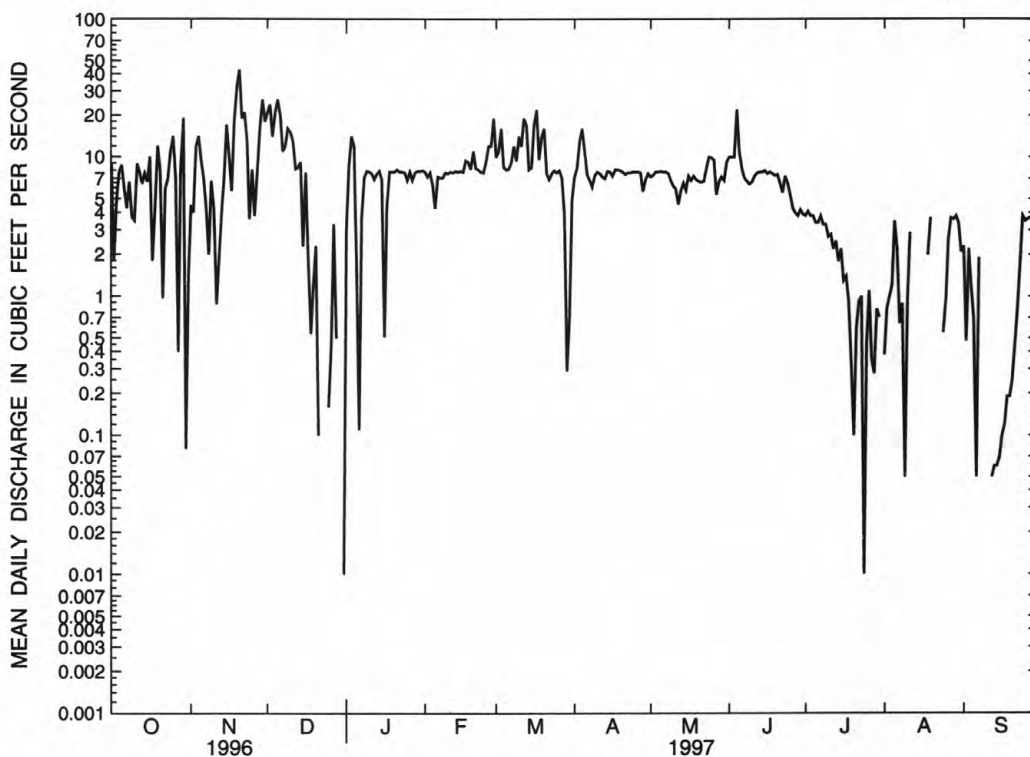
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	2383.96	
ANNUAL MEAN	6.53	6.53
HIGHEST ANNUAL MEAN		6.53 1997
LOWEST ANNUAL MEAN		6.53 1997
HIGHEST DAILY MEAN	43 Nov 20	80 Jun 16 1996
LOWEST DAILY MEAN	.00 Dec 22	.00 Mar 26 1996
ANNUAL SEVEN-DAY MINIMUM	.02 Sep 8	.02 Sep 8 1997
INSTANTANEOUS PEAK FLOW (STAGE)	50 (4.77) Nov 20	140 Jun 16 1996
INSTANTANEOUS PEAK STAGE	5.20 Jun 4	*6.19 Jun 16 1996
ANNUAL RUNOFF (AC-FT)	4730	4730
10 PERCENT EXCEEDS	12	16
50 PERCENT EXCEEDS	6.9	7.7
90 PERCENT EXCEEDS	.19	.67

* Maximum stage since station established March 1996; from floodmark.



FORT KEARNEY SLOUGH NEAR NEWARK

PLATTE RIVER BASIN

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06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE

LOCATION.--Lat 40°38'26", long 098°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.

PERIOD OF RECORD.--March 1996 to September 1996.

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

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.3	3.1	8.7	4.2	3.6	1.8
2	---	---	---	---	---	---	3.1	3.1	5.5	3.6	3.1	1.2
3	---	---	---	---	---	---	3.6	3.1	4.2	2.8	2.9	.73
4	---	---	---	---	---	---	3.4	3.1	4.0	2.2	2.5	.72
5	---	---	---	---	---	---	3.3	3.0	3.8	1.9	2.5	.80
6	---	---	---	---	---	---	3.2	3.0	3.8	1.4	2.1	.95
7	---	---	---	---	---	---	3.0	3.0	3.8	2.8	7.9	.66
8	---	---	---	---	---	---	2.9	3.3	3.8	6.8	8.3	1.2
9	---	---	---	---	---	---	2.8	5.4	3.9	5.6	5.2	1.1
10	---	---	---	---	---	---	2.5	6.0	4.0	5.1	3.8	.85
11	---	---	---	---	---	---	2.5	5.7	4.0	4.9	3.1	.59
12	---	---	---	---	---	---	2.9	6.0	4.2	4.9	3.3	.44
13	---	---	---	---	---	---	2.9	6.3	4.2	5.2	3.4	.43
14	---	---	---	---	---	---	3.3	6.0	4.2	5.1	3.4	.47
15	---	---	---	---	---	---	3.2	5.4	4.2	4.9	3.4	.95
16	---	---	---	---	---	---	3.9	5.6	20	5.2	4.5	1.3
17	---	---	---	---	---	---	4.0	5.6	10	4.3	4.9	1.3
18	---	---	---	---	---	---	3.8	5.1	6.1	2.7	4.2	1.6
19	---	---	---	---	---	3.0	3.7	4.8	5.3	4.9	3.4	7.8
20	---	---	---	---	---	3.2	3.6	4.6	4.9	13	3.1	7.7
21	---	---	---	---	---	3.2	3.5	4.3	4.6	6.9	2.8	7.1
22	---	---	---	---	---	3.2	3.3	4.3	4.6	6.6	2.4	6.1
23	---	---	---	---	---	2.9	3.2	4.4	9.1	6.9	1.8	5.2
24	---	---	---	---	---	2.9	3.0	4.4	6.4	9.2	2.2	4.7
25	---	---	---	---	---	9.9	3.1	5.0	5.6	7.6	1.8	5.5
26	---	---	---	---	---	8.6	2.9	18	5.1	6.2	1.5	6.2
27	---	---	---	---	---	.73	2.8	33	4.8	5.3	.29	5.6
28	---	---	---	---	---	.59	2.9	19	4.7	4.7	1.6	5.1
29	---	---	---	---	---	.87	3.0	13	4.5	5.2	1.2	4.5
30	---	---	---	---	---	2.3	3.2	9.0	4.4	4.4	2.0	4.5
31	---	---	---	---	---	3.8	---	11	---	3.8	2.1	---
TOTAL	---	---	---	---	---	---	96.8	216.6	166.4	158.3	98.29	87.09
MEAN	---	---	---	---	---	---	3.23	6.99	5.55	5.11	3.17	2.90
MAX	---	---	---	---	---	---	4.3	33	20	13	8.3	7.8
MIN	---	---	---	---	---	---	2.5	3.0	3.8	1.4	.29	.43
AC-FT	---	---	---	---	---	---	192	430	330	314	195	173

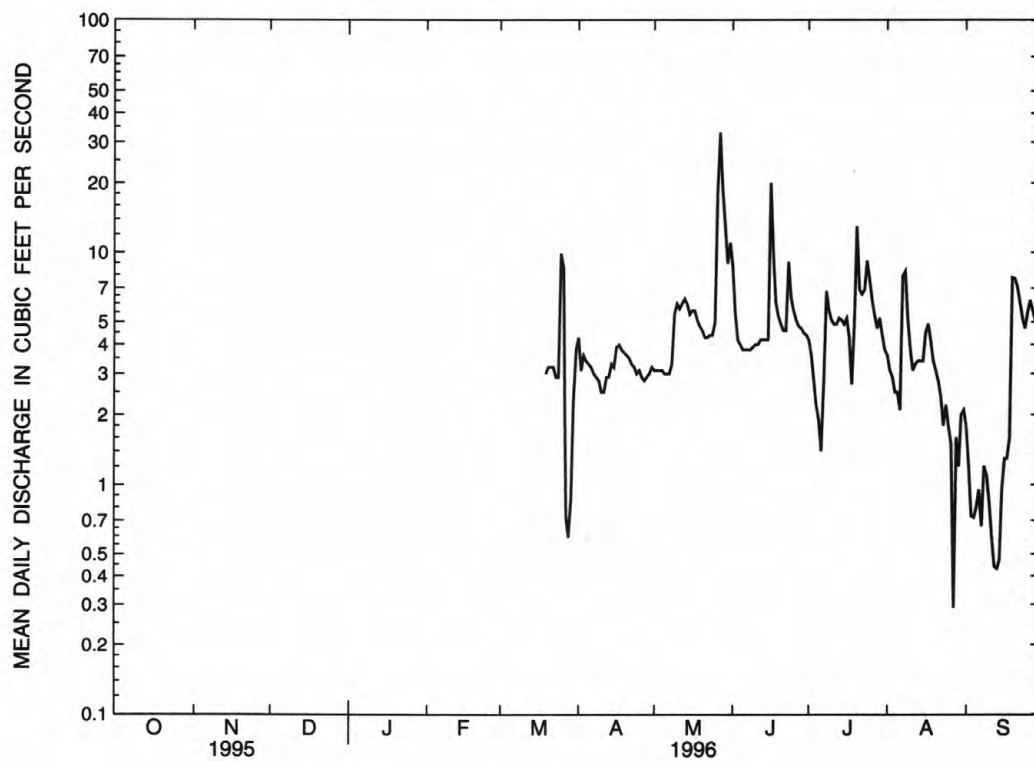
PLATTE RIVER BASIN

06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	46	May 27
INSTANTANEOUS PEAK STAGE	*2.44	May 27

* Maximum stage since station established.



DOWNSTREAM DRAIN NEAR NEWARK

PLATTE RIVER BASIN

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06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

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

REMARKS.-- Records fair.

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	4.1	2.4	7.1	1.9	2.2	3.0	4.5	2.5	4.9	1.2	.05	.17
2	3.4	2.4	6.7	2.3	2.4	2.7	4.1	2.4	4.9	.96	.00	.02
3	3.6	2.7	5.6	2.6	2.9	2.5	8.0	2.5	5.9	1.0	.25	.00
4	3.5	2.7	5.5	2.6	2.4	2.7	9.6	2.5	15	1.1	.51	.00
5	3.5	2.6	5.7	2.6	2.6	2.7	8.2	2.4	12	1.2	.60	.00
6	3.4	2.4	5.2	3.0	3.1	2.5	4.4	2.5	9.1	1.1	.43	.00
7	3.3	2.5	4.3	3.2	2.8	2.5	4.4	2.5	8.0	.94	.56	.00
8	3.4	2.3	4.4	3.0	3.4	2.5	3.2	2.4	7.3	.92	.40	.00
9	3.0	2.4	4.5	2.7	3.6	2.5	2.6	2.5	6.6	.90	.11	.00
10	2.9	2.3	4.8	2.0	3.4	2.5	2.5	2.5	6.3	.76	.00	.00
11	3.2	2.4	4.5	1.2	3.8	2.6	2.9	2.5	6.1	.90	.00	.00
12	3.0	2.3	4.4	.92	3.7	3.3	3.0	2.5	5.9	.21	.00	.00
13	2.9	2.3	4.5	.74	4.0	3.3	2.9	2.5	5.5	.18	.02	.03
14	2.9	2.5	4.6	.82	3.7	3.0	2.6	2.5	5.0	.95	.06	.05
15	3.0	3.0	3.7	.79	4.1	3.0	2.5	2.5	4.8	.86	.00	.08
16	3.1	29	3.7	.80	3.9	3.2	2.6	2.5	4.3	.51	.00	.06
17	2.6	31	3.1	.66	4.8	3.4	2.6	2.5	3.9	.31	.00	.06
18	2.4	23	2.6	.75	3.9	3.7	2.6	2.5	3.6	.40	.10	.25
19	2.6	21	2.1	1.1	3.3	4.2	2.7	2.5	3.2	.06	.32	.15
20	2.4	20	1.9	1.5	3.2	4.4	2.7	2.5	3.0	.07	.00	.15
21	2.1	15	2.0	1.8	3.4	3.9	2.7	2.5	2.4	.49	.00	.17
22	2.3	13	2.0	1.8	3.4	3.6	2.9	2.5	2.1	.57	.00	.32
23	2.3	11	1.6	2.3	3.4	4.1	2.8	2.8	2.0	.32	.07	.52
24	2.5	9.1	1.2	2.3	3.3	4.1	2.9	3.3	2.0	.21	.13	.78
25	2.5	7.6	.99	2.5	2.8	3.5	2.9	3.5	1.8	.23	.12	.99
26	2.3	6.5	.87	2.6	2.9	4.1	2.8	4.6	2.0	.35	.01	1.2
27	2.0	6.2	.89	1.8	2.9	5.0	2.8	6.8	3.4	.44	.00	1.2
28	2.4	6.7	1.0	1.8	2.7	3.8	2.7	5.4	3.6	.52	.10	1.2
29	2.8	7.1	1.1	1.5	---	3.5	2.7	5.0	2.3	.20	.28	1.2
30	2.2	7.3	1.2	2.0	---	3.7	2.6	5.1	1.4	.15	.05	1.2
31	2.2	---	1.5	2.2	---	5.0	---	4.8	---	.00	.08	---
TOTAL	87.8	250.7	103.25	57.78	92.0	104.5	106.4	96.0	148.3	18.01	4.25	9.80
MEAN	2.83	8.36	3.33	1.86	3.29	3.37	3.55	3.10	4.94	.58	.14	.33
MAX	4.1	31	7.1	3.2	4.8	5.0	9.6	6.8	15	1.2	.60	1.2
MIN	2.0	2.3	.87	.66	2.2	2.5	2.5	2.4	1.4	.00	.00	.00
AC-FT	174	497	205	115	182	207	211	190	294	36	8.4	19

PLATTE RIVER BASIN

06770255 DOWNSTREAM DRAIN NEAR NEWARK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.83	8.36	3.33	1.86	3.29	3.37	3.39	5.04	5.24	2.84	1.65	1.61
MAX	2.83	8.36	3.33	1.86	3.29	3.37	3.55	6.99	5.55	5.11	3.17	2.90
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996
MIN	2.83	8.36	3.33	1.86	3.29	3.37	3.23	3.10	4.94	.58	.14	.33
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1997	1997

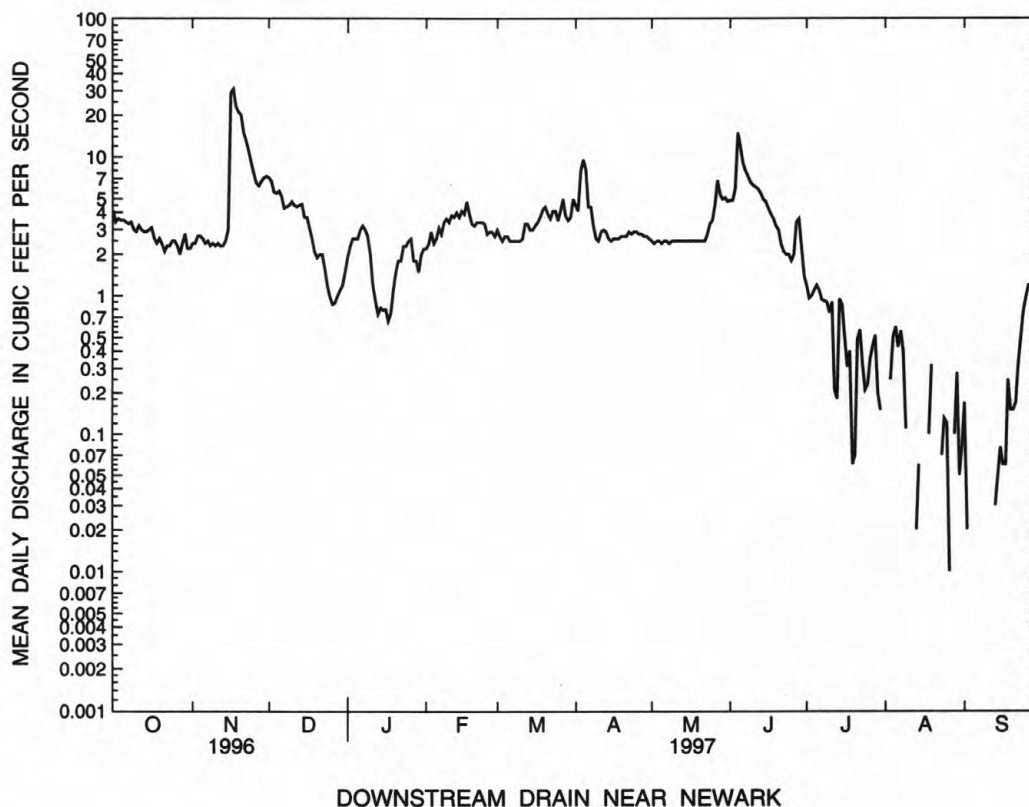
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	1078.79	
ANNUAL MEAN	2.96	2.96
HIGHEST ANNUAL MEAN		2.96 1997
LOWEST ANNUAL MEAN		2.96 1997
HIGHEST DAILY MEAN	31 Nov 17	33 May 27 1996
LOWEST DAILY MEAN	.00 Jul 31	.00 Jul 31 1997
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 3	.00 Sep 3 1997
INSTANTANEOUS PEAK FLOW (STAGE)	42 Nov 16	46 (2.44) May 27 1996
INSTANTANEOUS PEAK STAGE	2.61 Nov 16	*2.61 Nov 16 1996
ANNUAL RUNOFF (AC-FT)	2140	2140
10 PERCENT EXCEEDS	5.3	6.2
50 PERCENT EXCEEDS	2.5	2.9
90 PERCENT EXCEEDS	.08	.29

* Maximum stage since station established March 1996.



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.

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4560	1360	2510	e1950	e2300	2510	2390	2170	1930	6230	414	1130
2	4300	1840	2430	e2300	e2200	2580	2370	2190	1840	5870	437	1480
3	4090	2000	2420	e2500	e2000	2600	2380	2430	1750	4910	567	1720
4	3990	2190	2360	e2500	e1950	2620	2460	2200	2020	3900	658	1760
5	3900	2190	2230	e2400	e1900	2580	2670	1980	2130	3150	697	1750
6	3760	2140	1950	e1900	e1850	2550	2770	1850	1900	2650	737	1710
7	3630	2140	2110	e2050	e1750	2550	2710	1820	1820	2400	875	1760
8	3440	2310	2150	e2600	e1700	2590	2500	1790	1840	2160	1160	2160
9	3310	2440	2170	e2100	e1700	2640	2460	1680	1810	1620	1540	2190
10	3210	2420	2210	e1550	e1800	2710	2500	1640	1910	1320	1800	2170
11	2950	2420	2280	e1250	e1850	2680	2240	1660	2370	1080	2270	2110
12	3160	2320	2360	e1080	e1900	2630	e2350	1760	2780	900	2460	1980
13	3240	2290	2420	e1060	e2050	2530	e2450	1710	3120	701	3080	2010
14	3210	2130	2410	e1300	e2200	2350	e2500	1620	3470	614	4310	2030
15	3150	2320	2260	e1450	e2400	2250	e2400	1640	4070	600	4300	1970
16	2770	3480	1980	e1400	e2600	2270	2450	1660	4780	650	4230	1930
17	2500	3840	1920	e1450	e2700	2380	2620	1670	5660	660	4130	2000
18	2530	3150	e1650	e1600	e2800	2460	1780	1580	6780	638	3740	2120
19	2470	2980	e1350	e1900	e2800	2440	1720	1550	7250	545	3880	2280
20	2420	2900	e1300	e2200	e2600	2310	2130	1550	7830	463	3730	2310
21	2390	2680	e1350	e2250	e2400	2260	2510	1520	8510	413	3700	2380
22	2310	2420	e1400	e2050	e2400	2190	2540	1340	8790	364	3650	2580
23	2260	2410	e1350	e1650	2370	2200	2590	1240	8800	310	3140	3060
24	1890	2390	e1250	e1350	2380	2280	2750	1370	9060	377	2850	3540
25	1670	2320	e1100	e1200	2310	2330	2560	1430	9100	421	2630	3210
26	1570	2320	e1040	e1160	2260	2360	2330	1840	8610	335	2400	3000
27	1470	2190	e1100	e1180	2360	2390	2210	2180	7610	316	2130	2850
28	1840	2200	e1220	e1350	2420	2390	2180	2200	6570	364	1780	2740
29	1670	2760	e1400	e1700	---	2390	2180	2300	6350	332	1480	2720
30	1440	2630	e1600	e2000	---	2390	2280	2280	6320	326	1260	2780
31	1190	---	e1800	e2300	---	2390	---	2070	---	342	1100	---
TOTAL	86290	73180	57080	54730	61950	75800	71980	55920	146780	44961	71135	67430
MEAN	2784	2439	1841	1765	2213	2445	2399	1804	4893	1450	2295	2248
MAX	4560	3840	2510	2600	2800	2710	2770	2430	9100	6230	4310	3540
MIN	1190	1360	1040	1060	1700	2190	1720	1240	1750	310	414	1130
AC-FT	171200	145200	113200	108600	122900	150300	142800	110900	291100	89180	141100	133700

e Estimated

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

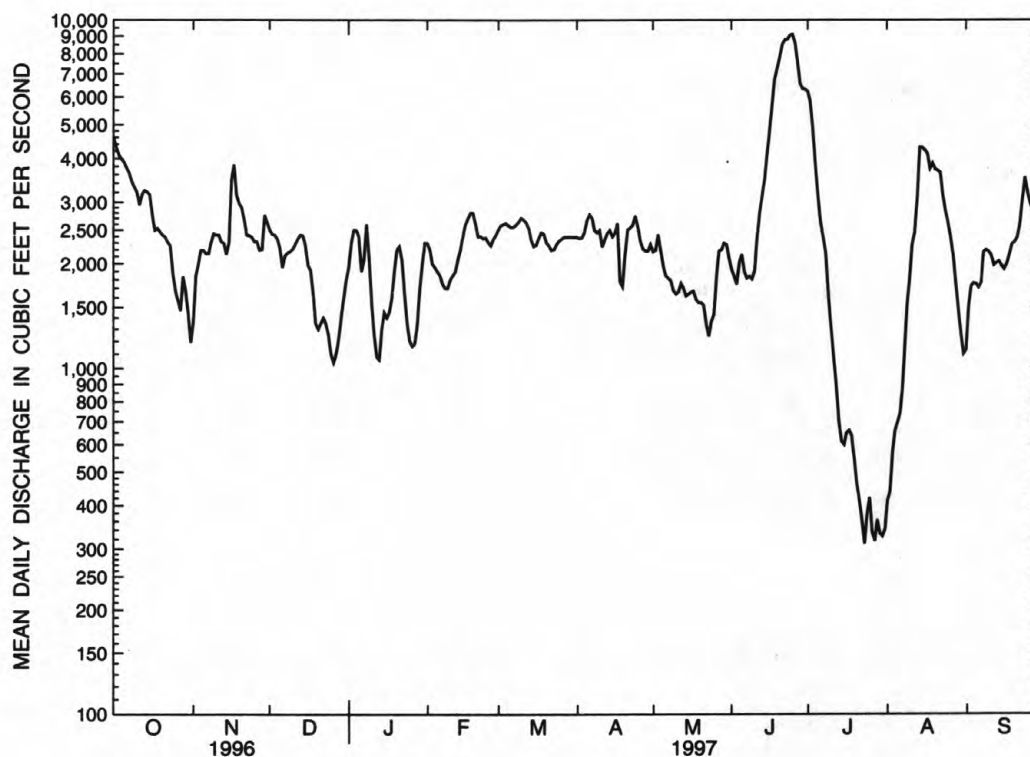
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1238	1322	1359	1449	1998	2406	2039	2251	2532	1184	557	944
MAX	6970	5250	4607	4955	7065	7051	9906	12190	17000	10810	5865	6575
(WY)	1974	1985	1985	1984	1984	1984	1984	1984	1983	1983	1983	1983
MIN	.000	.000	.000	37.0	418	769	544	148	20.0	.000	.000	.000
(WY)	1942	1942	1942	1942	1942	1957	1967	1955	1956	1953	1953	1953

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1942 - 1997	
					(SINCE STORAGE IN LAKE MCCONAUGHY)	
ANNUAL TOTAL	800879		867236			
ANNUAL MEAN	2188		2376		1602	
MEDIAN OF ANNUAL MEANS					1199	
HIGHEST ANNUAL MEAN					5380	
LOWEST ANNUAL MEAN					414	
HIGHEST DAILY MEAN	6160	May 29	9100	Jun 25	23500	Jun 30 1983
LOWEST DAILY MEAN	780	Feb 5	310	Jul 23	*.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	860	Jan 31	347	Jul 26	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW (STAGE)			9260 (4.17)	Jun 24	**23900 (5.97)	Jun 30 1983
INSTANTANEOUS PEAK STAGE			*4.42	Feb 8	6.16	Mar 27 1960
ANNUAL RUNOFF (AC-FT)	1589000		1720000		1161000	
10 PERCENT EXCEEDS	3330		3640		3130	
50 PERCENT EXCEEDS	2140		2250		1140	
90 PERCENT EXCEEDS	1190		1160		131	

* No flow at times in many years.

** Maximum for period of record (1934-96) 30,000 ft³/s, 5.99 ft June 6, 1935.

*** Backwater from ice.



PLATTE RIVER NEAR GRAND ISLAND

PLATTE RIVER BASIN

117

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.

PERIOD OF RECORD.--May 1996 to September 1996.

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

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	84	7.4	.00	.00
2	---	---	---	---	---	---	.00	.00	89	4.7	.00	.00
3	---	---	---	---	---	---	.00	.00	69	2.6	.00	.00
4	---	---	---	---	---	---	.00	.00	45	.99	.00	.00
5	---	---	---	---	---	---	.00	.00	32	.20	.00	.00
6	---	---	---	---	---	---	.00	.00	26	.05	.00	.00
7	---	---	---	---	---	---	.00	.00	23	.00	.00	.00
8	---	---	---	---	---	---	.00	.00	20	.00	.00	.00
9	---	---	---	---	---	---	.00	.00	18	.10	.00	.00
10	---	---	---	---	---	---	.00	.00	15	.00	.00	.00
11	---	---	---	---	---	---	.00	6.2	13	.00	.00	.00
12	---	---	---	---	---	---	.00	15	11	.00	.00	.00
13	---	---	---	---	---	---	.00	12	9.1	.00	.00	.00
14	---	---	---	---	---	---	.00	11	8.2	.00	.00	.00
15	---	---	---	---	---	---	.00	10	7.9	.00	.00	.00
16	---	---	---	---	---	---	.00	9.1	26	.00	.00	.00
17	---	---	---	---	---	---	.00	8.6	50	.00	.00	.00
18	---	---	---	---	---	---	.00	18	55	.00	.00	.00
19	---	---	---	---	---	---	.00	23	57	.00	.00	.00
20	---	---	---	---	---	---	.00	9.9	36	.00	.00	.00
21	---	---	---	---	---	---	.00	4.9	20	.00	.00	.00
22	---	---	---	---	---	---	.00	3.4	16	.00	.00	.00
23	---	---	---	---	---	---	.00	3.5	50	.00	.00	.00
24	---	---	---	---	---	---	.00	4.1	68	.00	.00	.00
25	---	---	---	---	---	---	.00	6.8	64	.00	.00	.00
26	---	---	---	---	---	---	.00	21	52	.00	.00	.00
27	---	---	---	---	---	---	.00	73	34	.00	.00	.00
28	---	---	---	---	---	---	.00	176	20	.00	.00	.00
29	---	---	---	---	---	---	.00	146	13	.00	.00	.00
30	---	---	---	---	---	---	.00	105	9.4	.00	.00	.00
31	---	---	---	---	---	---	---	76	---	.00	.00	---
TOTAL	---	---	---	---	---	---	0.00	742.50	1040.6	16.04	0.00	0.00
MEAN	---	---	---	---	---	---	.000	24.0	34.7	.52	.000	.000
MAX	---	---	---	---	---	---	.00	176	89	7.4	.00	.00
MIN	---	---	---	---	---	---	.00	.00	7.9	.00	.00	.00
AC-FT	---	---	---	---	---	---	.00	1470	2060	32	.00	.00

PLATTE RIVER BASIN

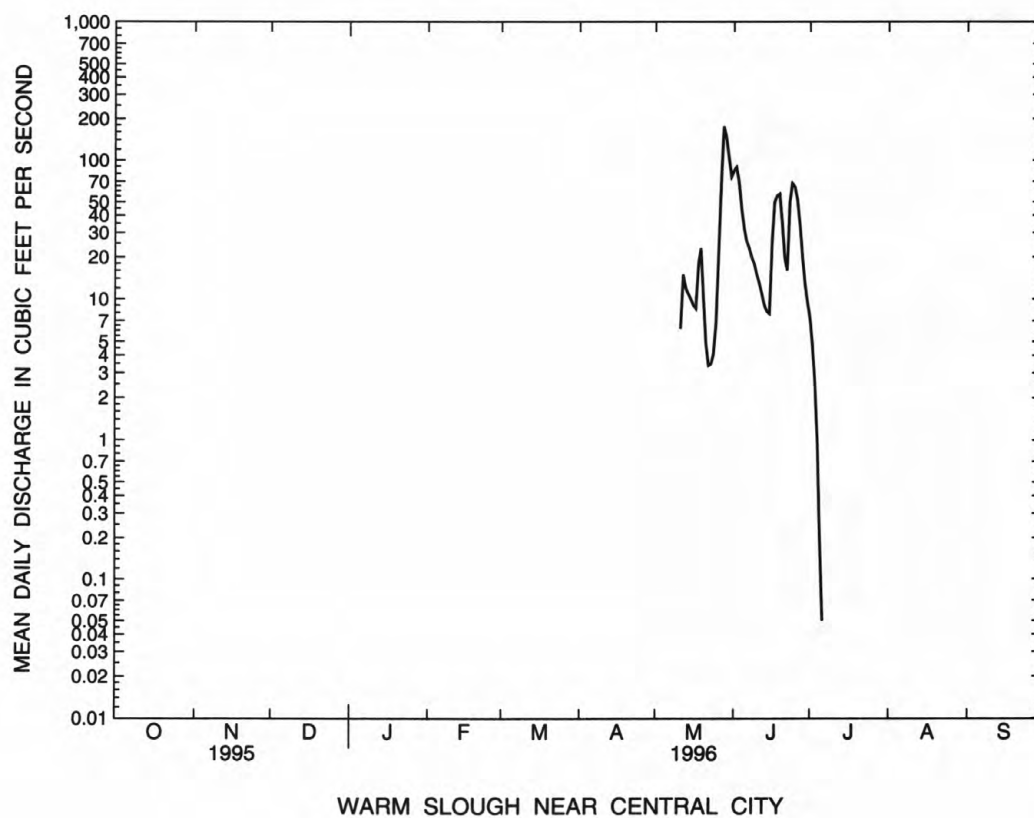
06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE

190 May 28
*6.36 May 28

* Maximum stage since station established.



PLATTE RIVER BASIN

119

06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

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

REMARKS.-- Records fair 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	.00	.00	e6.2	e6.6	e7.8	e7.6	e8.2	19	21	3.9	.00	.00
2	.00	.00	e6.0	e9.0	e7.4	e7.4	e8.6	19	17	4.4	.00	11
3	.00	.00	e5.8	e8.0	e7.0	e7.4	e9.0	19	14	3.7	.00	3.6
4	.00	.00	e5.6	e6.8	e7.0	e7.4	e9.4	20	13	3.3	.00	.86
5	.00	.00	e5.4	e6.0	e6.6	e7.8	e10	23	12	2.6	.00	.10
6	.00	.00	e5.4	e6.0	e6.6	e8.2	e9.0	26	11	2.4	.00	.06
7	.00	.00	e5.4	e6.2	e6.4	e7.4	e8.4	26	9.3	2.0	.00	.05
8	.00	.00	e5.4	e6.2	e6.4	e7.0	e8.0	28	8.3	.80	.00	.06
9	.00	.00	e5.6	e6.0	e6.2	e9.0	e8.4	31	7.5	.55	.00	3.1
10	.00	.00	e5.6	e5.0	e6.0	e11	e8.0	31	7.3	1.4	.00	7.2
11	.00	.00	e5.8	e4.5	e6.2	e11	e8.2	32	8.4	.08	12	5.7
12	.00	.00	e5.8	e4.5	e6.2	e10	e9.0	6.5	15	.00	29	4.0
13	.00	e.1	e6.0	e4.6	e6.2	e9.8	e10	e5.4	14	.00	21	3.7
14	.00	e.2	e6.0	e5.0	e6.4	e9.0	e14	e5.0	15	.00	13	3.0
15	.00	e.3	e6.0	e5.2	e6.8	e8.0	14	e4.5	14	.00	5.5	2.7
16	.00	e.4	e6.0	e5.4	e7.2	e8.0	13	e4.3	13	.00	3.2	3.0
17	.00	e8.0	e5.4	e5.0	e7.8	e8.0	15	e4.2	11	.00	.83	2.5
18	.00	e50	e5.0	e5.0	e9.0	e8.0	19	e4.1	9.5	.00	.04	e2.0
19	.00	e30	e4.8	e6.0	e9.6	e8.8	21	e4.0	9.2	.00	.00	e1.6
20	.00	e20	e5.0	e7.4	e10	e9.4	21	4.0	8.9	.00	.00	e2.0
21	.00	e12	e6.0	e7.0	e10	e9.6	21	3.9	10	.00	.00	e1.0
22	.00	e9.0	e5.4	e6.2	e10	e9.8	24	3.9	10	.00	.00	e.90
23	.00	e7.0	e4.6	e5.6	e10	e10	27	4.1	10	.00	.00	e.60
24	.00	e6.0	e3.6	e5.4	e9.6	e9.6	27	4.7	11	.00	.00	e.60
25	.00	e5.6	e3.5	e5.0	e9.2	e9.4	29	5.1	13	.00	.00	e.80
26	.00	e5.4	e3.6	e4.5	e9.0	e9.2	31	8.9	9.7	.00	.00	e1.0
27	.00	e5.4	e3.7	e4.7	e8.6	e9.0	31	18	7.4	.00	.00	e3.0
28	.00	e5.6	e4.0	e5.0	e8.0	e8.8	31	35	6.2	.00	.00	e2.0
29	.00	e5.8	e4.5	e6.4	---	e8.6	32	41	4.6	.00	.00	e1.0
30	.00	e6.0	e4.6	e7.2	---	e8.4	27	36	3.7	.00	.00	e.80
31	.00	---	e5.0	e8.0	---	e8.2	---	29	---	.00	.00	---
TOTAL	0.00	176.80	160.7	183.4	217.2	270.8	511.2	505.6	324.0	25.13	84.57	67.93
MEAN	.000	5.89	5.18	5.92	7.76	8.74	17.0	16.3	10.8	.81	2.73	2.26
MAX	.00	50	6.2	9.0	10	11	32	41	21	4.4	29	11
MIN	.00	.00	3.5	4.5	6.0	7.0	8.0	3.9	3.7	.00	.00	.00
AC-FT	.00	351	319	364	431	537	1010	1000	643	50	168	135

e Estimated

PLATTE RIVER BASIN

06772775 WARM SLOUGH NEAR CENTRAL CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	5.89	5.18	5.92	7.76	8.74	8.52	20.1	22.7	.66	1.36	1.13
MAX	.000	5.89	5.18	5.92	7.76	8.74	17.0	24.0	34.7	.81	2.73	2.26
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1997	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 WATER YEAR

WATER YEARS 1996 - 1997

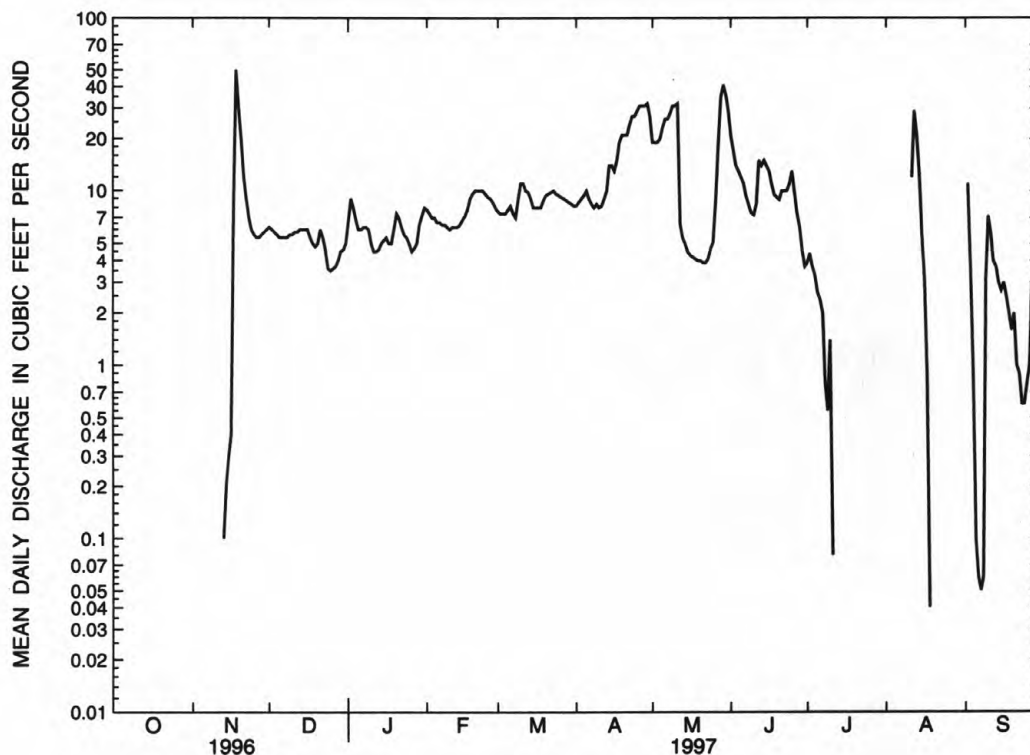
ANNUAL TOTAL	2527.33	
ANNUAL MEAN	6.92	6.92
HIGHEST ANNUAL MEAN		6.92 1997
LOWEST ANNUAL MEAN		6.92 1997
HIGHEST DAILY MEAN	50 Nov 18	176 May 28 1996
LOWEST DAILY MEAN	*.00 Oct 1	.00 Apr 1 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1	.00 Apr 1 1996
INSTANTANEOUS PEAK FLOW	50 Nov 18	190 May 28 1996
INSTANTANEOUS PEAK STAGE	** Nov 18	***6.36 May 28 1996
ANNUAL RUNOFF (AC-FT)	5010	5020
10 PERCENT EXCEEDS	16	20
50 PERCENT EXCEEDS	5.6	4.1
90 PERCENT EXCEEDS	.00	.00

e Estimated

* Many days.

** Maximum stage occurred during missing gage height period.

*** Maximum stage since station established May 1996.



WARM SLOUGH NEAR CENTRAL CITY

PLATTE RIVER BASIN

121

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.

PERIOD OF RECORD.--April 1996 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 1,556 ft above sea level.

REMARKS.-- Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	5.7	131	39	5.3	8.6
2	---	---	---	---	---	---	---	5.6	148	35	4.6	8.0
3	---	---	---	---	---	---	---	6.6	115	31	4.4	7.2
4	---	---	---	---	---	---	---	6.4	85	28	5.6	6.3
5	---	---	---	---	---	---	---	6.1	69	24	14	5.0
6	---	---	---	---	---	---	---	5.9	57	23	13	4.4
7	---	---	---	---	---	---	---	5.8	49	21	21	4.8
8	---	---	---	---	---	---	---	5.9	44	19	24	4.7
9	---	---	---	---	---	---	---	7.8	42	17	20	4.4
10	---	---	---	---	---	---	---	7.3	39	16	18	4.2
11	---	---	---	---	---	---	---	6.8	37	15	19	4.0
12	---	---	---	---	---	---	---	8.7	34	14	17	3.9
13	---	---	---	---	---	---	---	9.2	32	12	16	3.9
14	---	---	---	---	---	---	---	9.3	30	10	14	4.0
15	---	---	---	---	---	---	---	9.2	32	8.9	12	4.9
16	---	---	---	---	---	---	---	8.9	63	8.3	22	4.6
17	---	---	---	---	---	---	---	8.5	78	7.1	26	4.2
18	---	---	---	---	---	---	---	7.4	69	6.0	22	4.4
19	---	---	---	---	---	---	---	7.2	55	5.6	22	8.1
20	---	---	---	---	---	---	---	6.9	43	8.3	21	14
21	---	---	---	---	---	---	---	6.7	39	7.0	19	13
22	---	---	---	---	---	---	---	7.2	37	12	26	12
23	---	---	---	---	---	---	---	10	273	14	24	11
24	---	---	---	---	---	---	---	10	307	11	20	9.7
25	---	---	---	---	---	---	---	15	220	9.7	18	10
26	---	---	---	---	---	---	---	49	146	8.9	16	9.8
27	---	---	---	---	---	---	3.7	163	100	9.2	14	9.1
28	---	---	---	---	---	---	4.6	254	66	8.7	13	9.0
29	---	---	---	---	---	---	6.9	207	51	7.1	12	8.7
30	---	---	---	---	---	---	6.1	143	44	5.7	11	8.6
31	---	---	---	---	---	---	---	116	---	5.0	9.5	---
TOTAL	---	---	---	---	---	---	---	1126.1	2535	446.5	503.4	214.5
MEAN	---	---	---	---	---	---	---	36.3	84.5	14.4	16.2	7.15
MAX	---	---	---	---	---	---	---	254	307	39	26	14
MIN	---	---	---	---	---	---	---	5.6	30	5.0	4.4	3.9
AC-FT	---	---	---	---	---	---	---	2230	5030	886	998	425

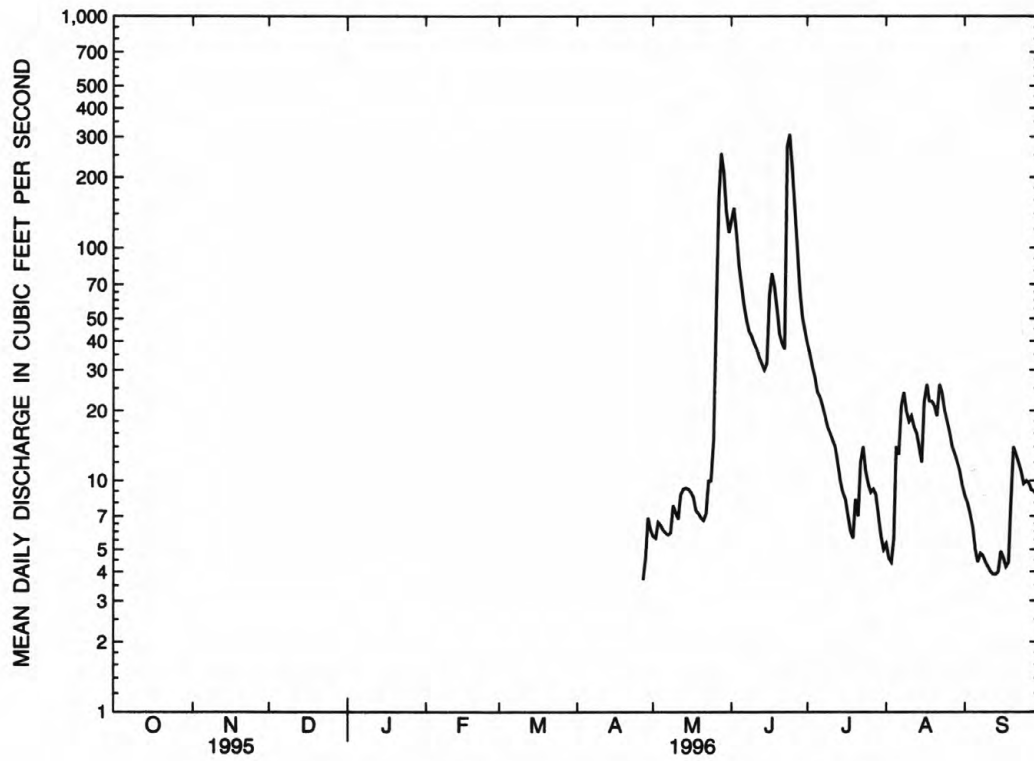
PLATTE RIVER BASIN

06772898 SILVER CREEK AT MILE 4 NEAR SILVER CREEK, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE367 Jun 23
*7.10 Jun 23

*Maximum stage since station established.



SILVER CREEK AT MILE 4 NEAR SILVER CREEK

PLATTE RIVER BASIN

123

06772898 SILVER CREEK AT MILE 4 NEAR SILVER CREEK, NE--Continued

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

REMARKS.-- Records fair 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	8.4	e5.6	e35	e18	e17	23	15	54	46	17	.78	.00
2	7.3	e5.2	e30	e25	e15	22	15	56	40	13	.71	.00
3	7.1	e5.6	e25	e21	e15	23	16	52	37	11	.67	.00
4	7.4	e5.8	e23	e20	e14	21	17	47	36	10	.49	.00
5	7.9	e5.4	e20	e19	e14	20	19	43	34	9.3	.30	.00
6	7.5	e5.4	e23	e15	e14	21	16	39	32	9.2	.23	.00
7	7.1	e5.3	e22	e11	18	22	14	45	30	8.6	.15	.00
8	e6.9	e5.0	e19	e12	19	22	13	41	27	8.8	.08	.00
9	e6.2	e5.2	e20	e10	20	22	13	37	25	7.4	.04	.00
10	e6.8	e5.1	e22	e9.4	20	23	15	35	24	8.2	.03	.00
11	e6.7	e5.2	e19	e7.0	20	24	12	33	23	6.4	.22	.00
12	e6.6	e5.2	e17	e7.4	19	25	12	31	24	5.8	.04	.00
13	e6.5	e8.6	e18	e8.4	21	25	20	29	23	5.1	.03	.00
14	e6.4	e15	e15	e9.4	22	21	28	26	24	4.6	.04	.00
15	e6.6	e27	e17	e10	20	27	39	25	25	3.7	.04	.00
16	e6.3	e45	e15	e8.0	18	22	39	24	22	3.1	.07	.00
17	e6.1	e110	e13	e7.8	23	22	34	23	20	2.4	.10	.00
18	e6.6	e170	e12	e11	27	20	32	22	18	2.1	.10	.01
19	e5.6	e75	e11	e12	27	21	30	20	17	1.9	.08	.02
20	e6.2	e48	e12	e14	27	22	30	19	16	1.8	.03	.02
21	e5.8	e54	e12	e11	25	21	31	19	31	1.6	.03	.03
22	e5.6	e47	e13	e8.0	24	20	35	18	28	1.5	.02	.12
23	e6.0	e35	e10	e8.2	23	19	35	19	26	1.5	.02	.17
24	e6.0	e28	e8.8	e7.4	22	19	34	22	30	1.3	.02	.25
25	e5.5	e30	e10	e8.8	22	18	30	22	27	1.2	.01	.13
26	e6.0	e29	e11	e9.6	23	17	30	36	24	1.2	.01	.56
27	e6.0	e27	e10	e10	23	18	29	48	21	1.1	.00	5.8
28	e5.6	e30	e12	e11	24	17	28	66	19	1.0	.00	5.4
29	e5.6	e38	e11	e10	---	16	27	71	18	1.0	.00	3.6
30	e5.6	e50	e13	e14	---	16	49	63	15	1.0	.00	2.3
31	e5.6	---	e15	e21	---	15	---	52	---	.93	.00	---
TOTAL	199.5	930.6	513.8	374.4	576	644	757	1137	782	152.73	4.34	18.41
MEAN	6.44	31.0	16.6	12.1	20.6	20.8	25.2	36.7	26.1	4.93	.14	.61
MAX	8.4	170	35	25	27	27	49	71	46	17	.78	5.8
MIN	5.5	5.0	8.8	7.0	14	15	12	18	15	.93	.00	.00
AC-FT	396	1850	1020	743	1140	1280	1500	2260	1550	303	8.6	37

e Estimated

PLATTE RIVER BASIN

06772898 SILVER CREEK AT MILE 4 NEAR SILVER CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.44	31.0	16.6	12.1	20.6	20.8	25.2	36.5	55.3	9.66	8.19	3.88
MAX	6.44	31.0	16.6	12.1	20.6	20.8	25.2	36.7	84.5	14.4	16.2	7.15
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996
MIN	6.44	31.0	16.6	12.1	20.6	20.8	25.2	36.3	26.1	4.93	.14	.61
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1997

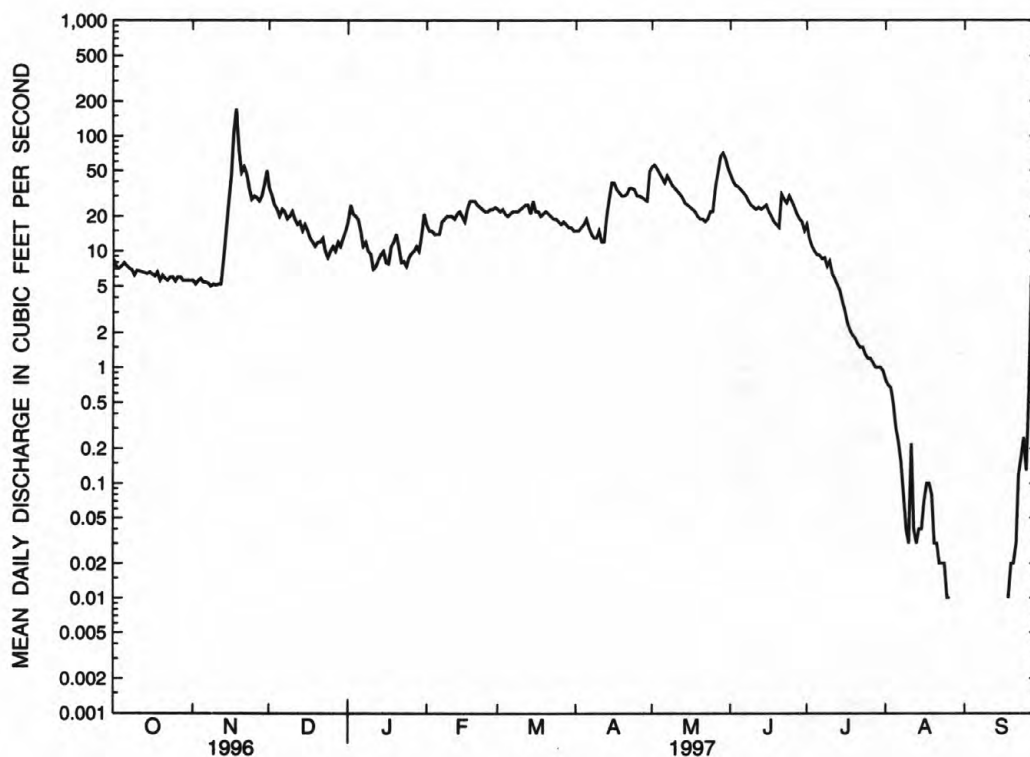
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	6089.78	
ANNUAL MEAN	16.7	16.7
HIGHEST ANNUAL MEAN		16.7 1997
LOWEST ANNUAL MEAN		16.7 1997
HIGHEST DAILY MEAN	170 Nov 18	307 Jun 24 1996
LOWEST DAILY MEAN	.00 Aug 27	.00 Aug 27 1997
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 27	.00 Aug 27 1997
INSTANTANEOUS PEAK FLOW		367 Jun 23 1996
INSTANTANEOUS PEAK STAGE		*7.10 Jun 23 1996
ANNUAL RUNOFF (AC-FT)	12080	12090
10 PERCENT EXCEEDS	34	39
50 PERCENT EXCEEDS	15	14
90 PERCENT EXCEEDS	.04	.36

* Maximum stage since station established April 1996.



SILVER CREEK AT MILE 4 NEAR SILVER CREEK

PLATTE RIVER BASIN

125

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 September 1997.

GAGE.--Water-stage recorder. Datum of gage is 1,873 ft above sea level, from topographic map.

REMARKS.--Records fair, 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	3.8	3.1	3.3	4.3	2.7	5.5	5.0	11	3.5	.68
2	---	---	3.8	3.3	3.1	4.0	2.9	6.8	4.9	7.6	2.8	.62
3	---	---	3.6	4.1	2.9	3.9	2.8	6.1	5.1	4.5	2.1	.49
4	---	---	3.7	4.0	2.8	3.6	3.2	4.9	5.7	3.8	1.2	.38
5	---	---	4.0	6.2	2.8	3.7	3.4	4.6	5.4	5.8	.71	.32
6	---	---	3.6	6.5	2.6	3.4	3.0	4.6	4.9	4.5	.64	.30
7	---	---	4.1	3.5	2.7	3.4	2.7	4.4	5.2	5.1	.51	.34
8	---	---	4.1	3.3	2.7	2.9	2.6	4.3	5.5	5.4	1.5	.31
9	---	---	4.1	e3.2	2.7	3.6	2.5	4.3	5.5	5.0	3.5	.31
10	---	---	4.2	e2.9	2.6	2.9	2.7	4.0	5.7	5.9	1.4	.29
11	---	---	4.2	e2.6	2.7	3.6	10	3.9	6.5	8.5	308	.28
12	---	---	4.3	e2.3	2.6	3.6	9.0	4.1	16	9.0	583	.28
13	---	---	4.4	e2.2	2.8	3.5	4.0	4.1	13	6.1	232	.29
14	---	---	4.3	e2.2	2.8	6.0	6.0	4.2	5.9	6.4	54	.29
15	---	---	5.3	e2.5	2.9	2.9	9.3	4.2	4.6	5.6	53	.30
16	---	---	4.2	e2.7	3.1	3.1	7.4	3.6	4.2	9.0	157	.29
17	---	---	e3.7	e2.3	3.8	3.4	5.2	4.0	4.3	8.2	22	.28
18	---	---	e3.2	2.3	6.6	3.3	3.8	4.2	4.5	7.8	5.2	.28
19	---	---	e2.9	2.7	15	2.6	4.6	3.7	4.4	8.4	2.4	.26
20	---	15	e2.7	2.9	14	2.7	4.3	3.8	4.9	5.3	1.3	.25
21	---	10	e3.0	3.5	11	3.3	4.8	3.7	12	3.1	.93	.22
22	---	6.5	3.3	3.2	6.7	3.1	5.8	3.7	8.8	4.0	1.1	.33
23	---	4.3	4.8	4.5	5.2	3.1	5.4	4.3	5.7	4.7	.79	2.5
24	---	6.5	4.5	4.6	4.4	3.0	4.7	4.8	5.4	5.6	.69	174
25	---	3.0	4.0	e4.1	4.3	2.9	4.4	4.8	4.8	6.3	.63	60
26	---	2.6	4.0	e3.3	3.7	2.6	4.3	7.8	4.8	5.2	.59	10
27	---	2.8	3.4	e2.5	3.6	2.5	4.4	20	5.2	3.3	.54	2.9
28	---	3.0	2.9	e2.2	4.1	2.7	4.4	16	5.3	1.3	.49	1.6
29	---	4.0	3.3	e2.0	---	2.7	4.6	8.0	5.0	.66	1.4	1.3
30	---	4.4	3.2	1.9	---	2.8	7.1	6.3	5.4	1.1	1.0	1.2
31	---	---	3.4	2.8	---	2.6	---	5.4	---	1.3	.65	---
TOTAL	---	---	118.0	99.4	127.5	101.7	142.0	174.1	183.6	169.46	1444.57	260.89
MEAN	---	---	3.81	3.21	4.55	3.28	4.73	5.62	6.12	5.47	46.6	8.70
MAX	---	---	5.3	6.5	15	6.0	10	20	16	11	583	174
MIN	---	---	2.7	1.9	2.6	2.5	2.5	3.6	4.2	.66	.49	.22
AC-FT	---	---	234	197	253	202	282	345	364	336	2870	517

e Estimated

PLATTE RIVER BASIN

06773050 PRAIRIE CREEK NEAR OVINA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991-95, 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.18	4.89	4.21	3.80	4.35	7.57	6.80	18.6	28.0	36.5	17.2	3.08
MAX	6.18	4.89	4.62	4.40	4.55	11.9	9.56	43.6	75.1	109	46.6	8.70
(WY)	1994	1994	1994	1994	1997	1994	1993	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	7.15	.14
(WY)	1994	1994	1997	1997	1994	1997	1997	1994	1997	1997	1991	1991

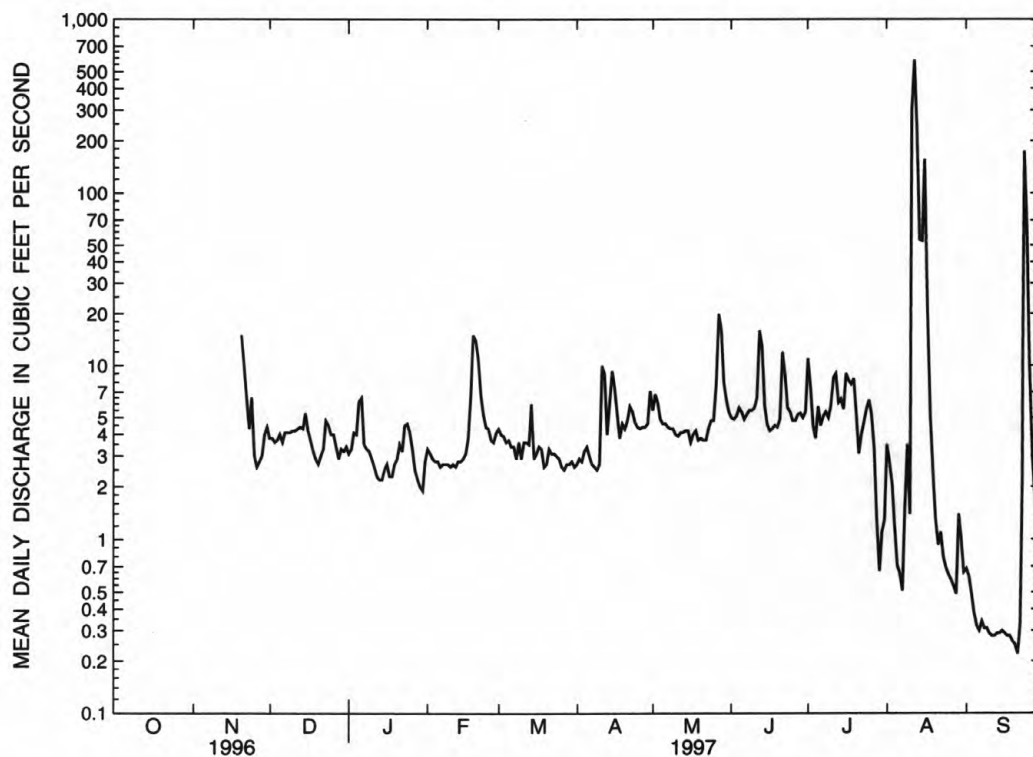
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1991 - 95, 1997

ANNUAL MEAN			6.17	
HIGHEST ANNUAL MEAN			6.17	1994
LOWEST ANNUAL MEAN			6.17	1994
HIGHEST DAILY MEAN			1080	Mar 10 1993
LOWEST DAILY MEAN			.00	Sep 7 1991
ANNUAL SEVEN-DAY MINIMUM			.00	Sep 7 1991
INSTANTANEOUS PEAK FLOW	670	Aug 25	1290	Mar 9 1993
INSTANTANEOUS PEAK STAGE	*8.25	Aug 25	10.77	Jun 2 1991
ANNUAL RUNOFF (AC-FT)			4470	
10 PERCENT EXCEEDS			19	
50 PERCENT EXCEEDS			5.4	
90 PERCENT EXCEEDS			1.1	

* Maximum stage since station re-established.



PRAIRIE CREEK NEAR OVINA

PLATTE RIVER BASIN

127

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE

LOCATION (REVISED).--Lat 41°19'50", long 97°41'40", in NW1/4 SW1/4, sec. 6, T. 15 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 (REVISED).--492 mi².

PERIOD OF RECORD.--August 1949 to September 1953. March 1996 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 1,550 ft (revised) above sea level.

REMARKS.-- Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	12	14	515	97	29	21
2	---	---	---	---	---	---	12	16	359	82	29	21
3	---	---	---	---	---	---	42	18	381	74	34	19
4	---	---	---	---	---	---	42	17	445	69	40	15
5	---	---	---	---	---	---	33	16	303	69	68	13
6	---	---	---	---	---	---	24	15	180	66	63	11
7	---	---	---	---	---	---	20	15	138	66	50	13
8	---	---	---	---	---	---	17	15	114	60	39	13
9	---	---	---	---	---	---	16	18	101	51	34	13
10	---	---	---	---	---	---	12	16	86	90	31	12
11	---	---	---	---	---	---	12	16	75	110	37	11
12	---	---	---	---	---	---	17	22	70	85	33	11
13	---	---	---	---	---	---	14	57	64	63	28	9.6
14	---	---	---	---	---	---	13	39	59	48	25	9.5
15	---	---	---	---	---	---	14	33	57	41	25	10
16	---	---	---	---	---	---	13	34	87	40	32	11
17	---	---	---	---	---	---	10	32	93	39	35	9.7
18	---	---	---	---	---	---	19	29	96	39	32	9.5
19	---	---	---	---	---	---	20	101	185	46	36	15
20	---	---	---	---	---	---	21	126	206	55	40	31
21	---	---	---	---	---	---	18	60	111	59	64	52
22	---	---	---	---	---	---	21	39	89	97	74	50
23	---	---	---	---	---	---	21	31	313	86	66	42
24	---	---	---	---	---	---	13	28	341	68	48	36
25	---	---	---	---	---	---	16	33	368	52	38	28
26	---	---	---	---	---	---	15	57	399	42	32	24
27	---	---	---	---	---	---	13	215	453	38	29	21
28	---	---	---	---	---	16	13	454	274	32	28	19
29	---	---	---	---	---	24	15	584	160	28	26	18
30	---	---	---	---	---	17	14	763	119	23	25	15
31	---	---	---	---	---	14	---	778	---	28	22	---
TOTAL	---	---	---	---	---	---	542	3691	6241	1843	1192	583.3
MEAN	---	---	---	---	---	---	18.1	119	208	59.5	38.5	19.4
MAX	---	---	---	---	---	---	42	778	515	110	74	52
MIN	---	---	---	---	---	---	10	14	57	23	22	9.5
AC-FT	---	---	---	---	---	---	1080	7320	12380	3660	2360	1160

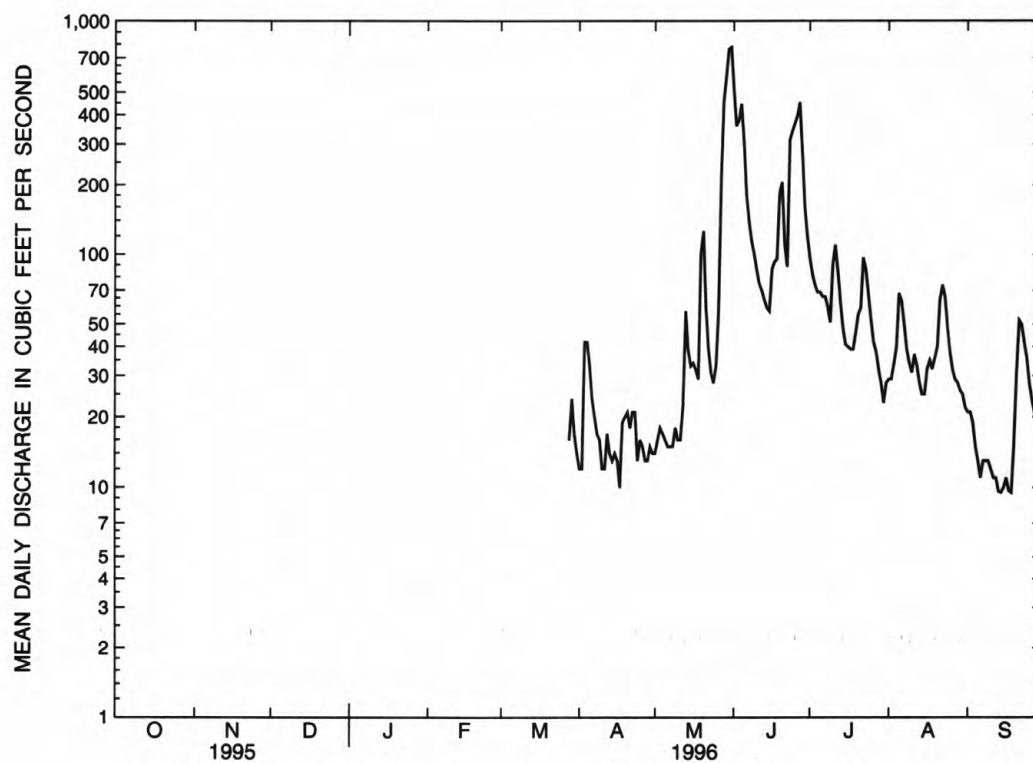
PLATTE RIVER BASIN

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	812	May 31
INSTANTANEOUS PEAK STAGE	*7.77	May 31

* Maximum stage since station re-established.



PRAIRIE CREEK NEAR SILVER CREEK

PLATTE RIVER BASIN

129

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

PERIOD OF RECORD.--August 1949 to September 1953. March 1996 to current year.

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	15	14	e31	e26	e21	40	28	77	73	41	6.3	5.8
2	14	14	e29	e24	e22	37	28	82	61	35	4.7	7.4
3	13	12	e27	e22	e21	41	28	84	53	35	3.7	9.7
4	13	13	e26	e21	e22	43	29	75	50	35	3.6	37
5	13	13	e25	e20	e22	39	29	68	42	34	3.2	34
6	12	14	e25	e18	e23	36	31	57	42	32	3.2	31
7	11	13	e24	e18	e22	33	33	49	40	29	3.2	36
8	14	13	e23	e17	e23	31	29	49	38	28	2.7	31
9	17	13	e23	e17	e22	36	28	44	36	27	3.0	29
10	17	12	e24	e16	e23	31	27	37	34	33	2.8	33
11	15	12	e23	e16	e23	34	16	35	33	27	8.2	41
12	14	12	e24	e17	e24	34	21	34	33	25	12	40
13	15	13	e25	e17	e24	36	43	32	33	22	81	42
14	16	11	e24	e18	e24	31	37	32	39	20	184	40
15	16	18	e23	e19	e25	29	53	31	42	18	225	36
16	15	68	e23	e20	e26	32	64	25	43	15	165	29
17	16	215	e23	e21	e27	38	82	27	36	14	122	24
18	16	210	e22	e22	e28	37	68	27	33	14	107	20
19	14	289	e22	e24	e32	31	65	26	28	16	82	17
20	15	321	e23	e23	e36	29	54	27	28	16	57	15
21	14	243	e23	e22	65	33	50	24	109	17	38	13
22	13	166	e23	e21	72	34	49	23	176	15	32	16
23	14	128	e22	e21	61	32	49	24	100	14	24	21
24	13	e100	e21	e20	51	32	52	26	123	11	27	33
25	14	e84	e22	e20	43	31	51	27	119	7.8	26	128
26	14	e70	e23	e19	39	27	45	38	79	7.4	18	302
27	13	e60	e24	e19	37	27	40	43	60	7.1	17	420
28	13	e50	e25	e20	38	29	35	51	46	7.1	13	479
29	13	e37	e26	e21	---	32	37	74	39	7.7	9.1	388
30	14	e33	e29	e21	---	31	62	94	36	7.8	7.1	246
31	14	---	e27	e22	---	26	---	88	---	7.2	6.5	---
TOTAL	440	2271	754	622	896	1032	1263	1430	1704	625.1	1297.3	2603.9
MEAN	14.2	75.7	24.3	20.1	32.0	33.3	42.1	46.1	56.8	20.2	41.8	86.8
MAX	17	321	31	26	72	43	82	94	176	41	225	479
MIN	11	11	21	16	21	26	16	23	28	7.1	2.7	5.8
AC-FT	873	4500	1500	1230	1780	2050	2510	2840	3380	1240	2570	5160

e Estimated

PLATTE RIVER BASIN

06773500 PRAIRIE CREEK NEAR SILVER CREEK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.2	75.7	24.3	20.1	32.0	33.3	30.1	82.6	132	39.8	40.2	53.1
MAX	14.2	75.7	24.3	20.1	32.0	33.3	42.1	119	208	59.5	41.8	86.8
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1997	1997
MIN	14.2	75.7	24.3	20.1	32.0	33.3	18.1	46.1	56.8	20.2	38.5	19.4
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1996	1996

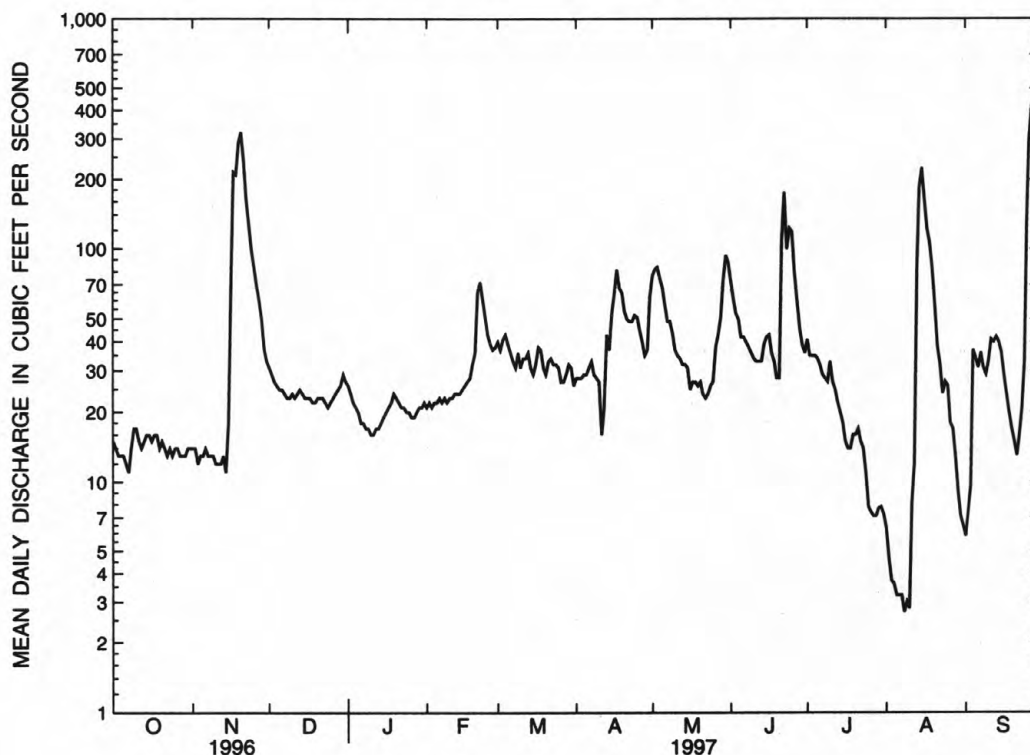
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	14938.3	
ANNUAL MEAN	40.9	40.9
HIGHEST ANNUAL MEAN		40.9 1997
LOWEST ANNUAL MEAN		40.9 1997
HIGHEST DAILY MEAN	479 Sep 28	778 May 31 1996
LOWEST DAILY MEAN	2.7 Aug 8	2.7 Aug 8 1997
ANNUAL SEVEN-DAY MINIMUM	3.1 Aug 4	3.1 Aug 4 1997
INSTANTANEOUS PEAK FLOW	490 Sep 28	812 May 31 1996
INSTANTANEOUS PEAK STAGE	6.24 Sep 28	*7.77 May 31 1996
ANNUAL RUNOFF (AC-FT)	29630	29650
10 PERCENT EXCEEDS	73	95
50 PERCENT EXCEEDS	27	28
90 PERCENT EXCEEDS	13	13

* Maximum stage since station re-established March 1996.



PRAIRIE CREEK NEAR SILVER CREEK

PLATTE RIVER BASIN

131

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.

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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5250	1680	4690	e2200	e2400	3710	3530	3400	2280	6470	284	1330
2	4910	1540	4180	e2100	e2500	2940	3620	3110	1950	5920	336	1470
3	4710	2250	4060	e2200	e2600	2970	3140	3030	1750	5570	325	1640
4	4580	2690	3980	e2200	e2800	2970	2870	2860	1840	4840	315	1890
5	4480	2830	3950	e2300	e3000	2960	2800	2620	1910	3890	363	1940
6	4410	2920	3970	e2400	e3100	2940	2840	2440	2180	3170	445	1960
7	4330	2850	3570	e2500	e3100	2940	2830	2440	2070	2680	471	2000
8	4430	2850	3500	e2500	e3000	3030	2710	2160	2060	2530	494	1930
9	4450	2850	3480	e2500	e3000	3140	2710	2110	1970	2380	606	2430
10	4300	2750	3450	e2400	e3000	3310	2840	2000	1910	1950	1060	2540
11	4210	2710	3300	e2300	e2900	3320	3010	1770	1880	1590	1960	2430
12	3890	2690	3270	e2200	e2900	3200	2810	1760	2230	1290	2670	2300
13	3950	2700	3270	e1500	e3000	3300	3100	1780	2660	1130	2520	2280
14	3970	2700	3240	e900	e3000	3370	3540	1750	2870	962	2890	2290
15	3690	2740	3040	e880	e3000	3390	3690	1720	3260	825	4200	2340
16	3440	3870	3010	e1100	e3100	3400	3650	1730	3850	737	4410	2260
17	3050	5800	2200	e1200	e3500	3470	3530	1730	4720	699	4400	2150
18	2890	5690	e1000	e1400	e4000	3350	3320	1500	5540	663	4350	2130
19	2860	5050	e500	e1500	e5000	3480	2740	1410	6320	649	4200	2150
20	2780	4880	e600	e1600	e6800	3370	2110	1430	6820	632	4120	2220
21	2670	4720	e700	e1800	e7600	3180	2720	1340	8290	602	3840	2370
22	2600	4670	e900	e1900	e7000	3180	3160	1290	8640	536	3830	2670
23	2600	4400	e1100	e2000	6770	3020	3210	1360	8730	485	3600	3110
24	2640	3980	e1200	e2100	5780	3150	3040	1390	9300	419	3090	3910
25	2580	3470	e1500	e2200	5670	3300	2950	1510	9090	350	2810	4210
26	2280	3050	e1700	e2150	5200	3410	2970	1990	8980	397	2610	3990
27	2030	2970	e1900	e2100	5160	3290	2900	2300	8470	398	2530	3860
28	2040	2860	e2300	e2100	4890	3230	2800	2700	7330	337	2390	3760
29	2410	3380	e2800	e2150	---	3400	2730	2540	6300	328	2080	3600
30	2350	4460	e2900	e2200	---	3610	3270	2580	6200	327	1770	3410
31	2170	---	e2800	e2300	---	3510	---	2530	---	282	1520	---
TOTAL	106950	102000	82060	60880	113770	100840	91140	64280	141400	53038	70489	76570
MEAN	3450	3400	2647	1964	4063	3253	3038	2074	4713	1711	2274	2552
MAX	5250	5800	4690	2500	7600	3710	3690	3400	9300	6470	4410	4210
MIN	2030	1540	500	880	2400	2940	2110	1290	1750	282	284	1330
AC-FT	212100	202300	162800	120800	225700	200000	180800	127500	280500	105200	139800	151900

e Estimated

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

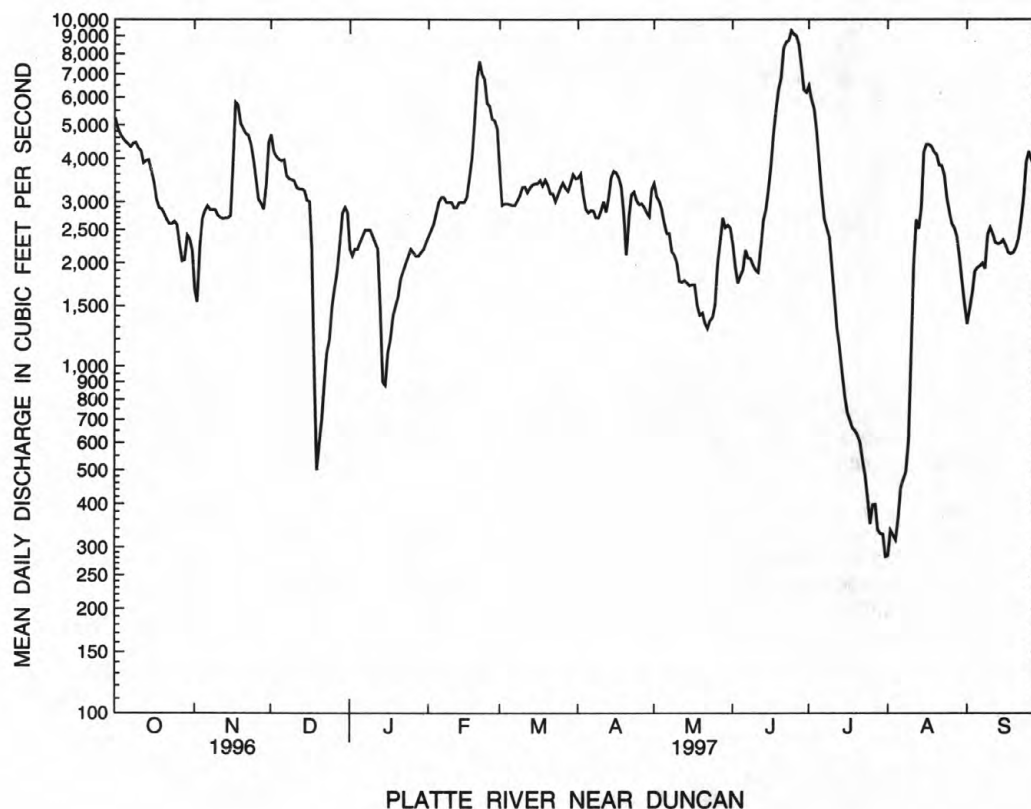
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1318	1459	1429	1505	2271	2947	2465	2602	2907	1442	597	941
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1942 - 1997	
					(SINCE STORAGE IN LAKE McCONAUGHY)	
ANNUAL TOTAL	914140		1063417		1819	
ANNUAL MEAN	2498		2913		1390	
MEDIAN OF ANNUAL MEANS					6653	
HIGHEST ANNUAL MEAN					494	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	6960	May 30	9300	Jun 24	23800	Jul 1 1983
LOWEST DAILY MEAN	500	Dec 19	282	Jul 31	.00	Jan 4 1942
ANNUAL SEVEN-DAY MINIMUM	857	Dec 18	314	Jul 29	.00	Oct 1 1943
INSTANTANEOUS PEAK FLOW (STAGE)			9770	Jun 24	*25400(6.36)	Jun 23 1905
INSTANTANEOUS PEAK STAGE			6.18	Jun 24	**7.86	Mar 11 1993
ANNUAL RUNOFF (AC-FT)	1813000		2109000		1318000	
10 PERCENT EXCEEDS	4390		4700		3800	
50 PERCENT EXCEEDS	2250		2800		1230	
90 PERCENT EXCEEDS	1200		1100		92	

* Maximum for period of record (1912-15, 1928-97) 44,100 ft³/s, 6.50 ft June 23, 1905, site and datum then in use.

** Backwater from ice.



PLATTE RIVER BASIN

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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 fair 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	516	519	465	e490	e490	432	495	515	498	455	497	487
2	507	511	482	e530	e500	447	526	558	534	408	491	552
3	490	524	464	e540	e500	447	492	501	598	413	497	469
4	511	548	463	e540	e490	412	526	502	591	406	502	463
5	521	555	435	e520	e490	419	542	520	567	414	502	460
6	535	537	444	532	e480	419	442	502	574	416	532	476
7	534	519	465	576	e480	423	432	502	569	430	514	539
8	529	505	461	544	e490	447	429	490	544	441	497	504
9	521	511	497	570	e490	460	419	463	516	441	497	503
10	506	507	515	e500	e480	462	425	470	488	446	491	464
11	519	504	511	e480	e490	456	392	468	495	463	544	454
12	528	482	522	e470	e490	469	394	442	482	557	502	462
13	532	478	540	e470	e480	446	461	441	484	514	497	473
14	544	499	559	e470	e480	378	509	444	473	474	497	472
15	525	503	496	e460	e490	370	519	446	501	463	485	475
16	532	512	501	e440	e500	381	517	452	498	457	474	472
17	543	450	439	e430	e500	405	551	458	468	457	474	460
18	501	452	e450	e450	518	429	570	468	462	463	468	454
19	507	460	e470	e470	503	434	562	450	458	452	468	455
20	534	473	e480	e480	512	477	559	442	461	452	457	443
21	514	441	e470	e490	492	504	582	442	509	514	446	446
22	494	476	e460	e500	485	480	542	444	479	491	452	476
23	492	479	e450	e480	429	489	535	458	454	485	446	503
24	502	422	e440	e480	435	490	526	477	448	479	452	495
25	523	444	e440	e480	448	458	515	506	442	508	462	471
26	545	470	e440	e460	431	479	511	563	432	497	458	482
27	508	413	e460	e450	416	508	514	517	427	491	460	477
28	503	466	e480	e450	452	515	528	499	433	468	463	456
29	568	492	e480	e450	---	478	538	494	423	479	466	453
30	499	467	e470	e460	---	464	535	501	433	514	461	439
31	508	---	e480	e470	---	483	---	504	---	491	460	---
TOTAL	16091	14619	14729	15132	13441	13961	15088	14939	14741	14439	14912	14235
MEAN	519	487	475	488	480	450	503	482	491	466	481	475
MAX	568	555	559	576	518	515	582	563	598	557	544	552
MIN	490	413	435	430	416	370	392	441	423	406	446	439
AC-FT	31920	29000	29210	30010	26660	27690	29930	29630	29240	28640	29580	28240

e Estimated

PLATTE RIVER BASIN

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

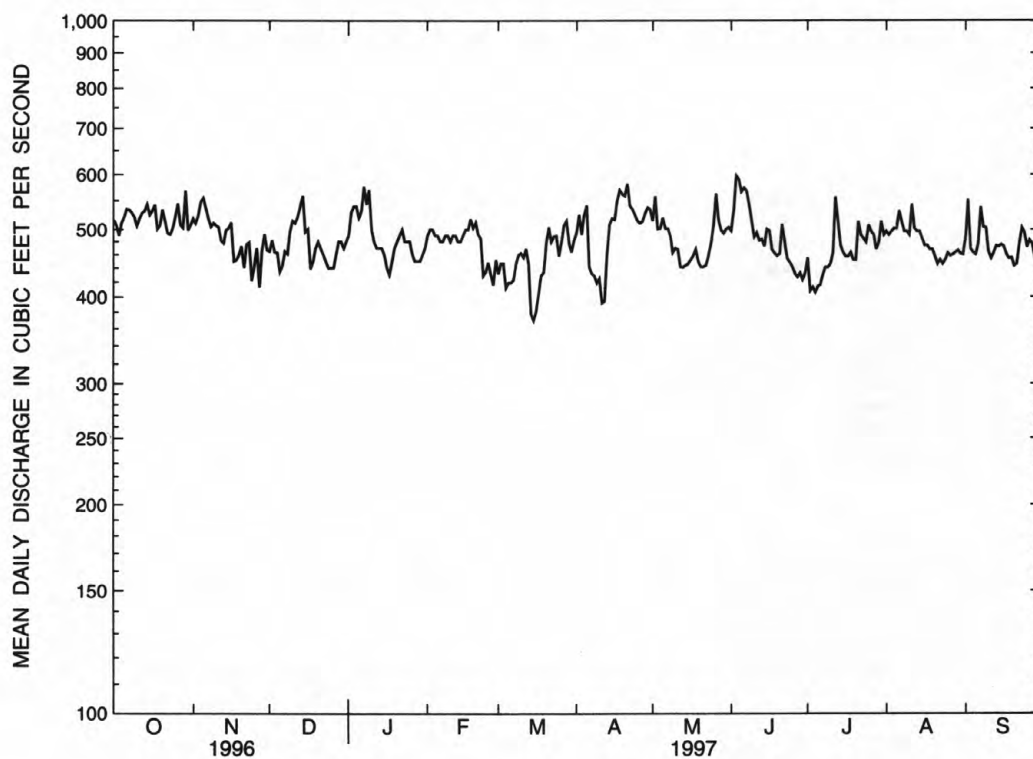
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	406	416	412	407	426	452	451	440	417	392	394	397
MAX	519	517	509	490	499	544	553	590	545	473	481	504
(WY)	1997	1992	1994	1967	1988	1993	1995	1995	1995	1962	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL TOTAL	178934		176327			
ANNUAL MEAN	489		483		418	
HIGHEST ANNUAL MEAN					496	1995
LOWEST ANNUAL MEAN					365	1950
HIGHEST DAILY MEAN	656	May 27	598	Jun 3	778	Apr 20 1971
LOWEST DAILY MEAN	366	Feb 28	370	Mar 15	100	Dec 5 1950
ANNUAL SEVEN-DAY MINIMUM	416	Feb 26	406	Mar 13	231	Jan 1 1949
INSTANTANEOUS PEAK FLOW (STAGE)			678 (3.73)	Sep 2	*2480 (6.15)	Mar 25 1996
INSTANTANEOUS PEAK STAGE			**3.73	Jan 12	**7.02	Mar 31 1949
ANNUAL RUNOFF (AC-FT)	354900		349700		302500	
10 PERCENT EXCEEDS	541		535		494	
50 PERCENT EXCEEDS	482		480		411	
90 PERCENT EXCEEDS	441		437		350	

* Caused by ice jam release upstream.

** Backwater from ice. Jan. 12 maximum stage may have been higher during period of no gage-height record Jan. 25 to Feb. 17.



MIDDLE LOUP RIVER AT DUNNING

PLATTE RIVER BASIN

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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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	239	231	212	246	256	230	239	232	224	230	233
2	213	238	229	231	244	252	231	237	233	216	225	230
3	211	243	218	244	250	262	232	235	266	213	227	231
4	217	242	217	239	239	265	242	239	247	209	229	231
5	223	241	219	223	235	252	219	237	237	213	240	231
6	225	238	226	215	245	250	211	234	240	212	239	231
7	217	235	217	216	242	263	216	236	235	213	232	243
8	224	233	219	233	245	257	226	232	235	212	228	236
9	220	243	224	228	238	256	221	225	228	212	228	237
10	219	243	223	204	252	263	230	227	228	208	229	232
11	223	239	228	e210	250	259	218	225	232	209	245	234
12	226	236	223	e215	244	244	217	224	234	253	239	238
13	228	230	220	e220	249	230	221	224	229	230	231	240
14	231	231	221	223	245	220	236	227	222	216	230	237
15	230	237	219	220	249	216	234	227	233	213	230	238
16	232	239	217	203	253	224	229	225	226	215	226	236
17	225	222	208	199	256	231	243	229	224	215	225	231
18	222	229	179	221	268	231	249	228	224	214	226	235
19	229	240	e200	233	270	224	242	227	224	217	230	237
20	229	249	221	229	270	235	237	221	225	223	229	232
21	226	242	206	235	263	238	250	222	243	228	230	230
22	225	239	205	240	255	221	245	219	234	229	230	247
23	216	242	191	226	265	227	242	233	227	246	230	252
24	233	218	193	224	248	233	243	233	224	234	234	262
25	229	224	188	229	245	219	238	244	221	226	234	245
26	240	233	188	215	259	229	234	252	227	225	229	242
27	234	223	191	211	253	233	241	234	220	220	229	240
28	232	236	208	214	258	229	238	233	221	220	231	236
29	236	230	207	234	---	228	235	229	241	224	231	233
30	234	222	201	249	---	226	238	234	248	231	231	233
31232	---	216	252	---	233	---	235	---	228	228	---	
TOTAL	7003	7056	6553	6947	7036	7406	6988	7166	6960	6848	7155	7113
MEAN	226	235	211	224	251	239	233	231	232	221	231	237
MAX	240	249	231	252	270	265	250	252	266	253	245	262
MIN	211	218	179	199	235	216	211	219	220	208	225	230
AC-FT	13890	14000	13000	13780	13960	14690	13860	14210	13810	13580	14190	14110

e Estimated

PLATTE RIVER BASIN

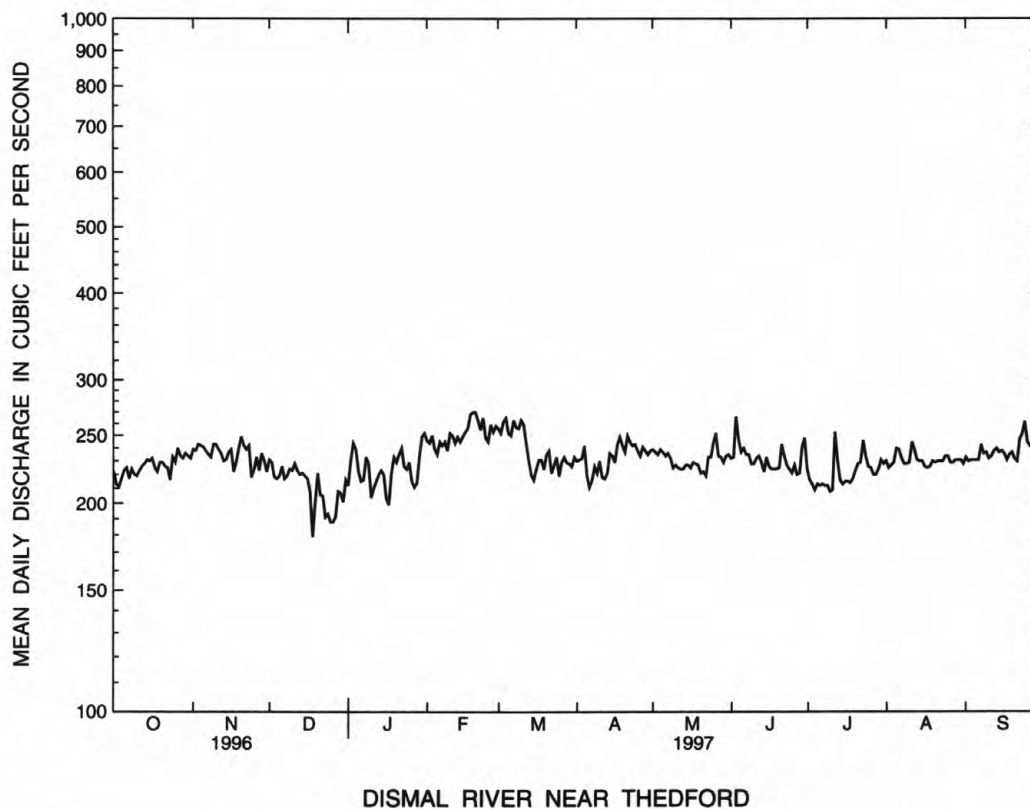
06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued
(Hydrologic bench-mark station and Radiochemical program)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	197	202	200	200	202	207	209	206	199	196	194	196
MAX	230	235	230	230	251	239	254	246	235	224	231	237
(WY)	1996	1997	1995	1985	1997	1997	1995	1995	1995	1994	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1967 - 1997	
ANNUAL TOTAL	79960		84231			
ANNUAL MEAN	218		231		201	
HIGHEST ANNUAL MEAN					231	1997
LOWEST ANNUAL MEAN					188	1970
HIGHEST DAILY MEAN	302	Jan 19	270	Feb 19	463	Aug 23 1983
LOWEST DAILY MEAN	179	Dec 18	179	Dec 18	125	Feb 3 1989
ANNUAL SEVEN-DAY MINIMUM	195	Dec 21	195	Dec 21	153	Dec 29 1982
INSTANTANEOUS PEAK FLOW (STAGE)			293	(1.28) Jun 3	1160	(3.83) Aug 23 1983
INSTANTANEOUS PEAK STAGE			1.36	Jul 23	*5.10	Dec 18 1983
ANNUAL RUNOFF (AC-FT)	158600		167100		145400	
10 PERCENT EXCEEDS	236		249		223	
50 PERCENT EXCEEDS	218		230		198	
90 PERCENT EXCEEDS	200		215		182	

* Backwater from ice.



PLATTE RIVER BASIN

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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 1996 TO SEPTEMBER 1997

DATE	TIME	DISCHARGE, INST. FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (°C) (00010)	BAROMETRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	ALKA- LITY LAB AS CaCO ₃ (90410)	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)
JAN	02	1200	217	177	8.2	9.0	685	10	--	--
MAR	12	1200	236	136	7.8	8.5	691	10	--	--
JUN	09	1300	228	186	7.9	19.0	695	8.6	74	87
JUL	10	1100	208	181	7.9	21.0	690	7.7	68	81
AUG	19	1100	231	175	8.0	18.0	690	8.2	66	81

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)
JAN	02	--	--	--	--	--	--	--	--	--	--
MAR	12	--	--	--	--	--	--	--	--	--	--
JUN	09	157	0.22	101	23	3.8	7.5	4.8	5.9	0.9	0.3
JUL	10	146	0.22	90	22	3.2	6.1	4.8	4.8	0.5	0.3
AUG	19	147	0.21	98	21	3.2	6.2	4.6	5.8	0.7	0.3

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. (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)
JAN	02	<0.01	0.43	0.02	0.30	<0.20	0.24	0.11	0.12	--	--
MAR	12	0.22	1.40	<0.02	0.40	<0.20	0.23	0.03	0.05	--	--
JUN	09	<0.01	0.44	<0.01	0.50	<0.20	0.22	0.12	0.14	<3.0	2.0
JUL	10	<0.01	0.37	<0.01	<0.20	<0.20	0.17	0.12	0.12	<3.0	2.0
AUG	19	<0.01	0.44	<0.01	0.20	<0.20	0.16	0.12	0.12	5.0	<1.0

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257	174	e260	e180	e300	182	261	283	257	85	75	111
2	231	181	e270	e240	e290	217	253	297	234	67	75	156
3	215	185	e250	e300	e280	232	265	305	226	85	80	150
4	207	191	e260	e290	e270	233	277	301	345	181	76	138
5	201	193	e260	e260	e260	242	282	285	285	273	72	129
6	191	194	e260	e230	e250	247	305	267	278	136	75	123
7	184	196	e270	e230	e260	251	279	258	228	99	73	135
8	187	194	e280	e240	e260	258	253	244	199	80	74	142
9	179	195	e280	e240	e260	264	237	221	174	73	80	158
10	171	195	e300	e190	e250	271	244	211	159	68	84	164
11	169	188	303	e170	e270	267	260	198	159	58	336	137
12	166	190	267	e170	e280	287	279	195	171	58	431	130
13	174	196	241	e170	e270	295	258	196	172	53	302	136
14	176	209	211	e180	e280	279	268	198	160	125	1240	130
15	178	237	187	e200	e300	246	275	203	148	329	763	133
16	182	406	154	e190	e330	230	284	203	146	191	592	125
17	178	363	e145	e170	e400	239	272	201	137	124	399	120
18	182	310	e130	e185	e470	242	275	192	122	113	298	117
19	186	307	e115	e220	e540	250	271	180	115	109	251	118
20	179	324	e115	e235	e580	237	289	177	159	96	225	116
21	173	293	e150	e250	595	227	297	175	214	89	282	123
22	173	290	e140	e240	394	239	288	170	177	92	316	154
23	174	292	e120	e220	266	234	294	193	155	84	246	228
24	180	e260	e110	e210	231	240	298	207	153	72	217	499
25	189	e240	e110	e200	200	240	282	213	144	65	196	409
26	191	e250	e115	e180	199	233	276	259	131	65	177	325
27	183	e230	e120	e170	189	231	283	345	120	71	162	298
28	181	e240	e135	e180	176	246	267	340	112	75	144	248
29	179	e260	e160	e190	---	257	264	315	99	71	136	214
30	175	e280	e150	e200	---	273	313	295	85	81	126	193
31	172	---	e190	e250	---	272	---	283	---	80	112	---
TOTAL	5763	7263	6058	6580	8650	7661	8249	7410	5264	3248	7715	5359
MEAN	186	242	195	212	309	247	275	239	175	105	249	179
MAX	257	406	303	300	595	295	313	345	345	329	1240	499
MIN	166	174	110	170	176	182	237	170	85	53	72	111
AC-FT	11430	14410	12020	13050	17160	15200	16360	14700	10440	6440	15300	10630

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 - 1997, BY WATER YEAR (WY)

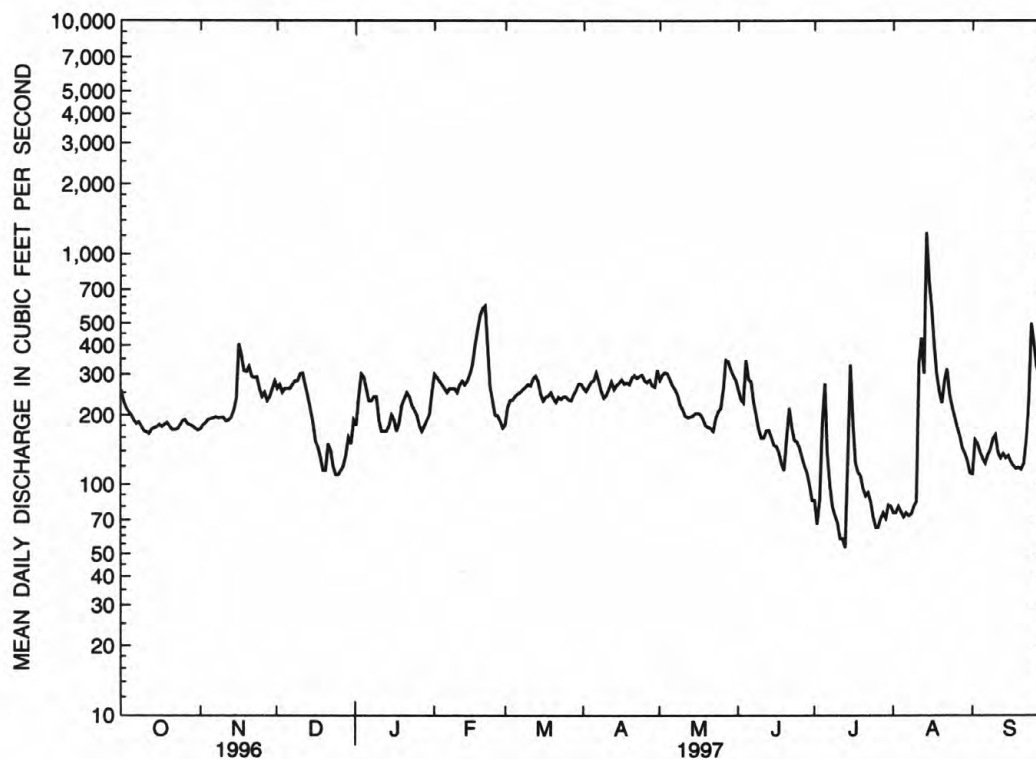
MEAN	173	190	179	182	261	356	276	304	422	222	152	152
MAX	619	272	275	281	543	1747	549	562	2741	1121	482	370
(WY)	1947	1947	1994	1973	1966	1978	1984	1951	1947	1993	1962	1949
MIN	87.5	129	116	96.5	138	201	171	176	126	26.5	21.3	51.0
(WY)	1957	1957	1956	1972	1989	1981	1992	1975	1981	1980	1955	1956

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1944 - 1997	
ANNUAL TOTAL	88514		79220			
ANNUAL MEAN	242		217		239	
HIGHEST ANNUAL MEAN					483	
LOWEST ANNUAL MEAN					161	
HIGHEST DAILY MEAN	955	May 27	1240	Aug 14	28000	Jun 23 1947
LOWEST DAILY MEAN	110	Dec 24	53	Jul 13	.00	Aug 5 1980
ANNUAL SEVEN-DAY MINIMUM	121	Dec 22	70	Jul 7	.65	Aug 4 1980
INSTANTANEOUS PEAK FLOW (STAGE)			1750(4.94)Aug 14		e500000 (12.00)	Jun 22 1947
INSTANTANEOUS PEAK STAGE			**5.26 Feb 20		*27500 (11.00)	Jun 24 1968
ANNUAL RUNOFF (AC-FT)	175600		157100		e12.00	Jun 22 1947
10 PERCENT EXCEEDS	350		300		338	
50 PERCENT EXCEEDS	215		207		191	
90 PERCENT EXCEEDS	151		110		103	

e Maximum discharge, estimated.

* Maximum discharge, computed.

** Backwater from ice.



SOUTH LOUP RIVER AT ST. MICHAEL

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997

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)	ALKA-LINITY LAB (MG/L AS CaCO ₃) (90410)
OCT	08... 1050	202	433	8.6	17.5	12.0	--	--	--
NOV	13... 1100	201	461	8.5	-0.5	1.0	--	--	--
DEC	20... 1030	115	761	8.0	-1.0	0.5	--	--	--
JAN	28... 1040	180	509	7.8	-6.5	0.5	--	--	--
MAR	12... 0950	277	452	8.6	7.5	7.5	23	210	216
APR	29... 1320	254	435	8.7	23.5	17.0	--	--	--
JUN	06... 1050	281	445	8.6	25.5	23.5	--	--	--
JUL	28... 0740	76	372	8.6	21.5	24.0	41	140	174
SEP	02... 1055	172	352	8.5	18.5	22.0	--	--	--

[illegible]

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[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 June 4, elevation, 2,162.5 ft; minimum observed, 39,910 acre-ft Aug. 11, elevation, 2150.3 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,157.4	55,920	--
Oct. 31.....	2,156.6	53,940	-1,980
Nov. 30.....	2,156.3	53,210	-730
Dec. 31.....	2,155.9	52,240	-970
CAL YR 1996	--	--	+710
Jan. 31.....	2,155.5	51,290	-950
Feb. 28.....	2,155.3	50,820	-470
Mar. 31.....	2,154.8	49,650	-1,170
Apr. 30.....	2,156.1	52,720	+3,070
May 31.....	2,162.3	69,080	+16,360
June 30.....	2,162.3	69,080	0
July 31.....	2,153.4	46,480	-22,600
Aug. 31.....	2,153.4	46,480	0
Sept. 30.....	2,157.3	55,670	+9,190
WTR YR 1997	--	--	-250

* Elevations read on or near last day of month.

PLATTE RIVER BASIN

143

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION.--Lat 41°12'13", long 98°26'46", in SE1/4 NW1/4NE1/4 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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1540	1480	2600	e1400	e1500	2420	2160	1170	1160	716	406	327
2	1510	1340	2440	e1800	e1400	2630	2130	1160	1080	1010	480	960
3	1390	1240	2320	e1650	e1350	2580	2370	1210	1040	1220	443	752
4	1150	1190	2100	e1500	e1250	2380	2380	1140	1330	747	384	923
5	1240	1170	2120	e1350	e1180	2320	2400	965	1640	819	404	683
6	1300	1130	2140	e1350	e1200	2250	2130	844	1450	589	379	537
7	1460	1210	2050	e1400	e1200	2070	2120	935	1260	443	375	695
8	1380	1370	1860	e1450	e1200	2170	1570	1070	1000	389	378	837
9	1450	1390	1980	e1350	e1240	2210	1510	975	892	279	444	980
10	1440	1360	2030	e1100	e1160	2140	1620	1050	912	232	437	1040
11	1500	1510	1960	e980	e1220	2170	1540	928	955	256	1500	987
12	1670	1530	2010	e940	e1180	2210	1530	903	1920	275	1910	875
13	1660	1560	2070	e1000	e1240	2260	1610	973	1570	2040	1270	877
14	1780	1740	1960	e1100	e1250	2020	1360	972	1030	1860	2290	956
15	1820	1860	2010	e1200	e1300	1720	1560	937	873	1250	2110	1050
16	1850	2620	1670	e1100	e1500	1600	1470	933	934	1020	1260	1020
17	1770	2060	e1250	e1060	e1900	1540	1200	955	896	652	980	979
18	1500	1690	e1180	e1350	e2800	1430	1280	945	1020	463	790	975
19	935	2170	e1180	e1600	e4000	1680	1360	922	1030	369	733	994
20	861	2190	e1300	e1750	e6000	1560	1530	895	901	300	656	927
21	939	2240	e1350	e1750	8520	1670	1660	881	1050	350	613	886
22	1050	2060	e1200	e1550	4380	1710	1560	828	1160	332	909	1030
23	1190	2110	e1040	e1350	3520	1620	1470	1040	903	354	994	2040
24	1450	2190	e1000	e1200	3230	1590	1350	1240	823	320	829	4060
25	1850	1300	e1000	e1000	2940	1650	1360	1130	806	293	779	1880
26	2040	1450	e960	e1020	2730	1670	1030	1370	709	283	693	1310
27	2130	1540	e1040	e1020	2540	1530	1230	1610	625	329	599	1500
28	2020	1980	e1160	e1060	2320	1760	1310	1070	583	367	516	1840
29	1710	2210	e1080	e1140	---	1950	1110	1030	545	435	436	1840
30	1710	2840	e1140	e1250	---	2260	1340	1050	439	367	377	1840
31	1640	---	e1160	e1450	---	2150	---	1110	---	400	326	---
TOTAL	46935	51730	50360	40220	65250	60920	48250	32241	30536	18759	24700	35600
MEAN	1514	1724	1625	1297	2330	1965	1608	1040	1018	605	797	1187
MAX	2130	2840	2600	1800	8520	2630	2400	1610	1920	2040	2290	4060
MIN	861	1130	960	940	1160	1430	1030	828	439	232	326	327
AC-FT	93100	102600	99890	79780	129400	120800	95700	63950	60570	37210	48990	70610

e Estimated

PLATTE RIVER BASIN

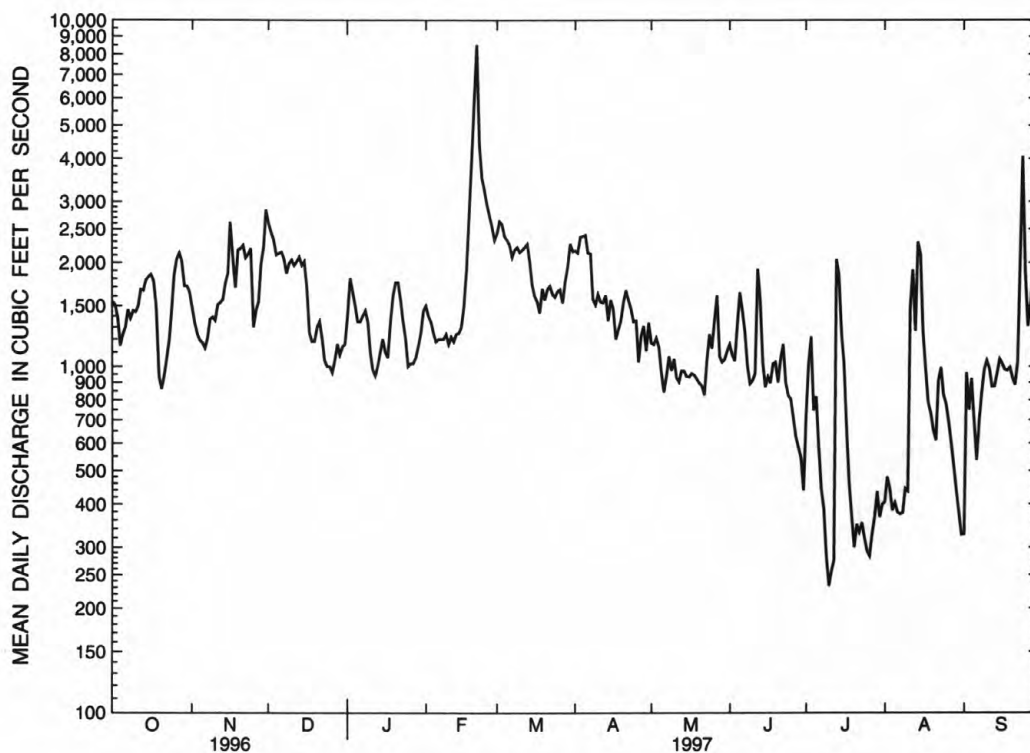
06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1124	1267	1140	1159	1525	1769	1338	1152	1165	646	562	764
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1963 - 1997	
ANNUAL TOTAL	489091		505501			
ANNUAL MEAN	1336		1385		1131	
HIGHEST ANNUAL MEAN					1832	1993
LOWEST ANNUAL MEAN					831	1970
HIGHEST DAILY MEAN	4710	Jun 16	8520	Feb 21	21800	Jun 12 1984
LOWEST DAILY MEAN	319	Jul 6	232	Jul 10	23	Aug 9 1980
ANNUAL SEVEN-DAY MINIMUM	377	Jul 13	319	Jul 20	31	Aug 4 1980
INSTANTANEOUS PEAK FLOW			15600	Feb 21	72000	Jun 23 1947
INSTANTANEOUS PEAK STAGE			*5.58	Feb 20	12.69	Jun 23 1947
ANNUAL RUNOFF (AC-FT)	970100		1003000		819700	
10 PERCENT EXCEEDS	2270		2170		1820	
50 PERCENT EXCEEDS	1180		1250		1070	
90 PERCENT EXCEEDS	531		529		353	

* Backwater from ice.



MIDDLE LOUP RIVER AT ST. PAUL

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WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

			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)	ALKA- LINITY LAB (MG/L AS CaCO ₃) (90410)
DATE	TIME									
OCT	07	1200	1470	292	8.3	12.5	13.5	--	--	--
NOV	12	1040	1460	300	8.2	-1.0	0.5	--	--	--
DEC	16	1415	1510	326	8.3	-1.5	0.5	--	--	--
MAR	20	1010	1550	288	8.4	21.0	9.5	22	110	135
APR	29	0955	1020	340	8.6	19.0	14.5	--	--	--
JUN	05	1020	1570	307	8.5	25.0	22.5	--	--	--
JUL	29	0850	455	322	8.5	24.0	21.0	30	130	152
SEP	04	1010	1040	314	8.4	19.0	19.0	--	--	--

[illegible]

PLATTE RIVER BASIN

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE--Continued

WATER-QUALITY RECORDS

[illegible]

PLATTE RIVER BASIN

147

06786000 NORTH LOUP RIVER AT TAYLOR, NE

LOCATION.--Lat 41°46'37", long 99°22'45", in NE1/4 SE1/4 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 1996 TO SEPTEMBER 1997 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	521	584	760	e560	e600	626	592	693	667	819	401	295
2	516	628	742	e640	e580	551	661	735	654	590	370	398
3	507	657	709	e620	e580	628	628	751	686	446	342	366
4	500	695	696	e600	e560	620	648	693	885	400	312	402
5	536	709	629	e580	e540	625	652	663	954	377	297	353
6	557	704	710	e580	e540	562	558	658	841	381	290	340
7	542	645	713	e600	e540	560	482	680	793	367	320	520
8	541	652	725	e620	e540	609	530	631	750	333	324	512
9	518	660	758	e580	e560	658	565	605	693	274	258	450
10	523	643	772	e520	e540	696	539	572	647	230	259	438
11	531	613	787	e480	e580	651	454	577	656	218	418	447
12	518	592	808	e480	e560	620	504	521	651	727	508	532
13	527	598	848	e490	e580	623	535	524	619	712	483	597
14	540	689	842	e500	e620	e560	582	513	582	520	609	557
15	554	662	677	e520	e680	e580	647	510	568	498	543	554
16	575	693	607	e500	e780	e600	722	547	626	435	443	533
17	616	622	e560	e490	e900	616	767	571	608	314	407	510
18	580	610	e490	e540	1060	525	797	630	561	239	392	504
19	569	724	e500	e580	850	537	744	522	538	192	402	490
20	580	838	e560	e600	838	580	710	397	549	180	402	489
21	598	904	e580	e600	800	584	657	537	583	191	506	496
22	580	756	e520	e580	786	568	660	543	624	197	482	598
23	558	707	e470	e540	773	545	711	577	564	234	435	593
24	582	629	e450	e540	737	515	715	595	516	209	413	635
25	614	600	e450	e490	650	505	662	612	476	182	390	590
26	646	637	e450	e490	616	519	656	763	457	218	335	532
27	628	707	e470	e490	600	579	646	949	430	205	326	520
28	637	830	e500	e500	534	588	634	869	419	285	336	489
29	671	871	e470	e540	---	607	631	752	383	241	315	506
30	650	800	e490	e548	---	540	669	743	384	263	321	533
31	606	---	e500	e560	---	550	---	691	---	346	296	---
TOTAL	17621	20659	19243	16958	18524	18127	18958	19624	18364	10823	11935	14779
MEAN	568	689	621	547	662	585	632	633	612	349	385	493
MAX	671	904	848	640	1060	696	797	949	954	819	609	635
MIN	500	584	450	480	534	505	454	397	383	180	258	295
AC-FT	34950	40980	38170	33640	36740	35950	37600	38920	36420	21470	23670	29310

e Estimated

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	482	511	481	487	559	620	598	544	483	318	303	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 1996 CALENDAR YEAR

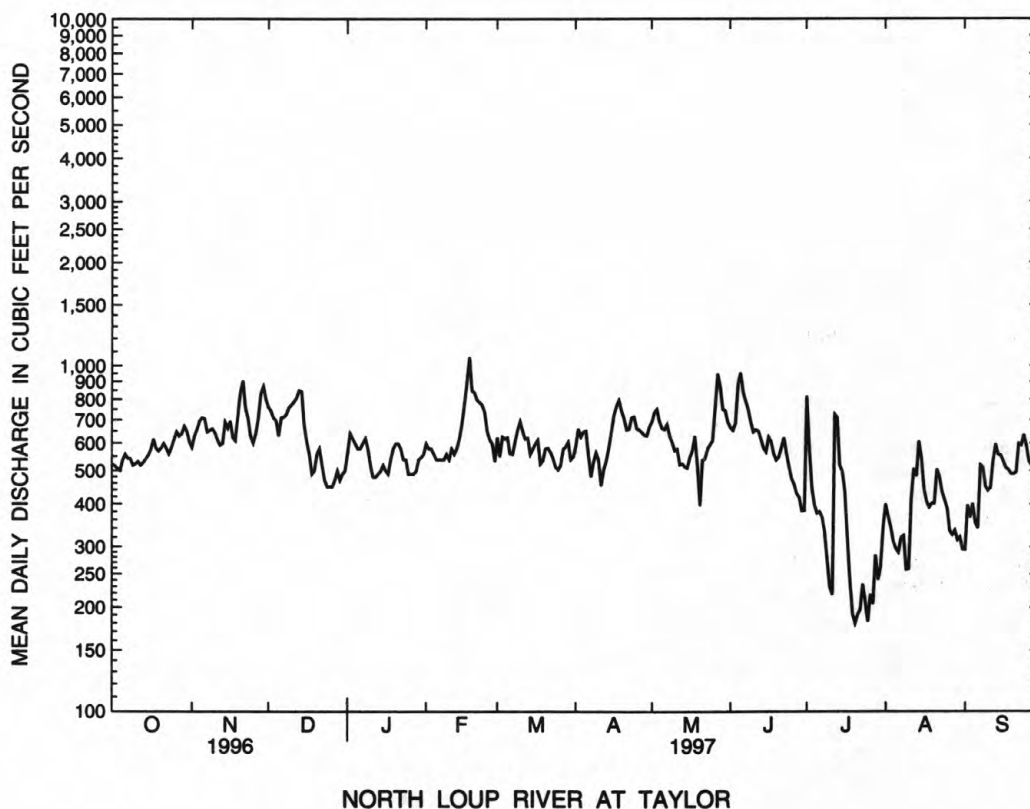
FOR 1997 WATER YEAR

WATER YEARS 1937 - 1997

ANNUAL TOTAL	206743	205615	
ANNUAL MEAN	565	563	481
HIGHEST ANNUAL MEAN			644
LOWEST ANNUAL MEAN			354
HIGHEST DAILY MEAN	1450	May 28	1060
LOWEST DAILY MEAN	236	Sep 6	180
ANNUAL SEVEN-DAY MINIMUM	266	Jul 1	198
INSTANTANEOUS PEAK FLOW (STAGE)			1330 (4.56)
INSTANTANEOUS PEAK STAGE			*5.90
ANNUAL RUNOFF (AC-FT)	410100	407800	348700
10 PERCENT EXCEEDS	760	742	680
50 PERCENT EXCEEDS	560	569	475
90 PERCENT EXCEEDS	346	361	267

* Backwater from ice.

** From floodmark; ice jam.



PLATTE RIVER BASIN

149

06787000 CALAMUS RIVER NEAR HARROP, NE

LOCATION.--Lat 41°56'48", long 99°23'10" in NW1/4 SE1/4 sec.22, T.23 N., R.18 W., Loup County, Hydrologic Unit 10210008, on right bank 44 ft upstream from bridge on U.S. Highway 183, 12.2 mi north of Taylor, and at mile 20.4.

DRAINAGE AREA.--693 mi², most of which does not contribute directly to surface runoff.

PERIOD OF RECORD.--March to July 1932. August 1931 to February 1932, July 1932 to June 1939, 1955-64 and 1977, gage heights or discharge measurements only. June 1978 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,260 ft above sea level, from topographic map. Prior to June 5, 1978, staff gage or reference point at same site at datum 1.0 ft higher.

REMARKS.--Records good except for periods estimated records, which are poor. Diversions for irrigation above station.

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	301	272	302	308	321	277	270	314	394	413	301	256
2	284	278	302	365	306	273	294	337	323	354	297	254
3	278	285	301	397	277	279	318	329	313	310	274	251
4	278	299	301	372	269	277	329	322	333	315	266	244
5	286	296	295	329	249	264	351	321	352	319	259	245
6	289	289	298	278	241	266	339	310	390	291	268	244
7	287	278	308	278	239	277	289	308	409	282	266	281
8	282	273	305	288	235	284	291	292	344	272	260	290
9	278	275	308	278	232	288	298	271	300	261	251	303
10	273	271	312	e250	227	301	296	262	285	253	253	265
11	275	266	321	e230	231	308	286	256	294	246	303	257
12	280	268	325	e230	222	309	277	250	297	315	309	281
13	282	268	331	e240	223	302	286	245	279	447	372	345
14	284	273	338	e250	231	251	316	239	270	409	468	291
15	281	279	324	e270	230	251	373	236	271	344	358	282
16	276	301	311	e260	246	269	438	237	273	331	311	273
17	304	264	e280	269	274	280	526	235	263	311	288	261
18	307	285	e250	244	315	283	480	234	255	283	270	255
19	290	298	e221	258	362	287	402	224	248	269	270	243
20	286	301	e240	298	393	291	360	222	247	258	265	240
21	278	308	e260	327	376	296	358	217	249	256	364	241
22	269	305	272	327	339	292	378	218	278	259	374	281
23	270	298	247	275	313	282	385	234	279	284	366	297
24	275	e280	e230	252	291	279	406	243	275	271	383	297
25	282	e300	241	192	289	271	387	251	257	264	381	286
26	292	e310	255	e215	284	275	357	310	243	262	331	277
27	280	380	261	e220	274	282	332	392	233	258	294	268
28	275	269	272	e210	281	281	316	501	226	298	275	255
29	293	292	275	e240	---	274	312	555	219	283	261	248
30	282	302	275	255	---	268	332	600	231	276	277	245
31	272	---	278	274	---	268	---	508	---	284	278	---
TOTAL	8769	8663	8839	8479	7770	8685	10382	9473	8630	9278	9493	8056
MEAN	283	289	285	274	278	280	346	306	288	299	306	269
MAX	307	380	338	397	393	309	526	600	409	447	468	345
MIN	269	264	221	192	222	251	270	217	219	246	251	240
AC-FT	17390	17180	17530	16820	15410	17230	20590	18790	17120	18400	18830	15980

e Estimated

PLATTE RIVER BASIN

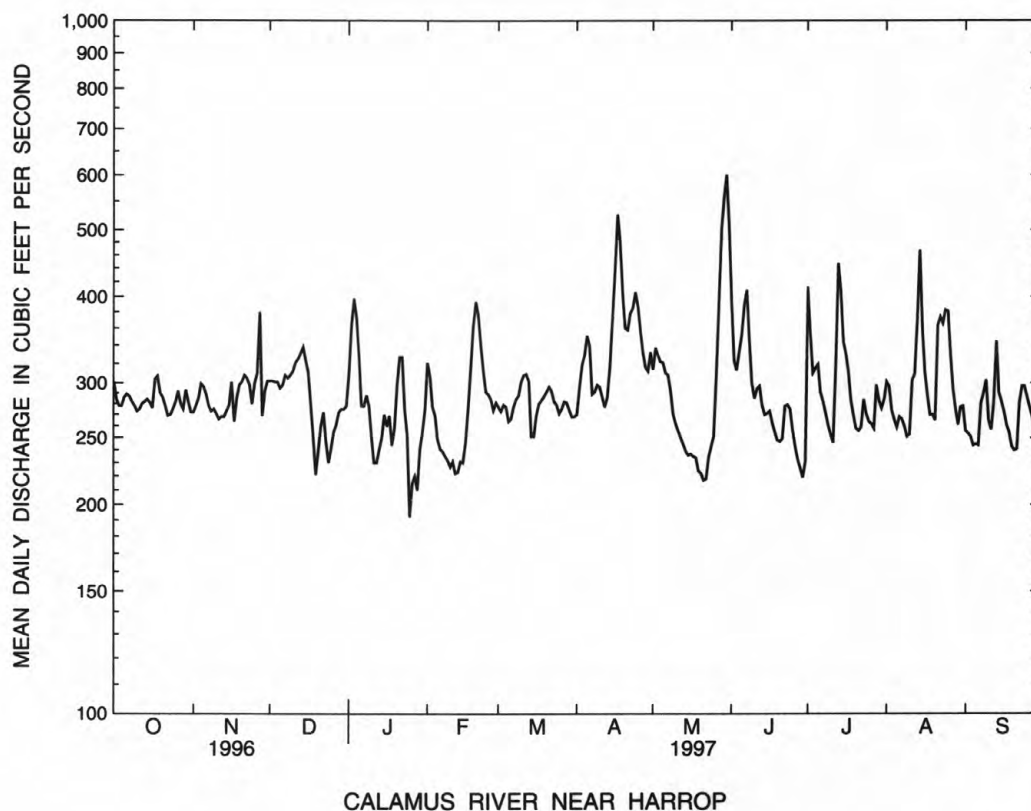
06787000 CALAMUS RIVER NEAR HARROP, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	245	244	239	236	261	291	289	289	267	237	231	233
MAX	286	289	285	274	330	405	397	517	439	372	306	317
(WY)	1985	1997	1997	1997	1996	1987	1984	1995	1995	1993	1997	1996
MIN	218	217	199	188	219	230	212	216	200	186	194	193
(WY)	1995	1986	1981	1982	1981	1981	1981	1992	1981	1980	1991	1980

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1979 - 1997	
ANNUAL TOTAL	109165		106517			
ANNUAL MEAN	298		292		255	
HIGHEST ANNUAL MEAN					293	
LOWEST ANNUAL MEAN					214	
HIGHEST DAILY MEAN	794 May 29		600 May 30		1210 May 29 1995	
LOWEST DAILY MEAN	195 Jan 31		192 Jan 25		90 Jan 7 1980	
ANNUAL SEVEN-DAY MINIMUM	206 Jan 29		226 Jan 24		169 Jan 10 1982	
INSTANTANEOUS PEAK FLOW (STAGE)			631 (3.74) May 30		1380 (4.68) May 28 1995	
INSTANTANEOUS PEAK STAGE			*5.05 Dec 18		*5.34 Mar 29 1987	
ANNUAL RUNOFF (AC-FT)	216500		211300		184900	
10 PERCENT EXCEEDS	376		358		316	
50 PERCENT EXCEEDS	282		281		243	
90 PERCENT EXCEEDS	229		241		204	

* Backwater from ice.



PLATTE RIVER BASIN

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06787300 CALAMUS RESERVOIR NEAR BURWELL, NE

LOCATION.--Lat 41°49'38", long 99°13'11", in SW1/4SW1/4 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, 128,320 acre-ft May 28, elevation, 2244.18 ft; minimum observed, 82,090 acre-ft Oct. 1, elevation, 2233.85 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	*Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,233.90	82,290	--
Oct. 31.....	2,236.91	94,380	+12,090
Nov. 30.....	2,240.83	111,820	+17,440
Dec. 31.....	2,241.57	115,340	+3,520
CAL YR 1996	--	--	+6,770
Jan. 31.....	2,241.47	114,860	-480
Feb. 28.....	2,241.52	115,100	+240
Mar. 31.....	2,242.25	118,640	+3,540
Apr. 30.....	2,244.10	127,910	+9,270
May 31.....	2,244.16	128,220	+310
June 30.....	2,244.11	127,960	-260
July 31.....	2,239.38	105,140	-22,820
Aug. 31.....	2,236.32	91,920	-13,220
Sept. 30.....	2,234.49	84,570	-7,350
WTR YR 1997	--	--	+2,280

* 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	822	1250	e1100	e1500	1760	994	1360	1150	714	729	790
2	1210	829	1190	e1400	e1400	1630	1020	1420	1060	2130	827	905
3	891	832	1170	e1250	e1350	1660	1150	1480	1030	1080	856	881
4	859	831	1140	e1140	e1200	1680	1270	1490	909	889	862	980
5	770	817	1300	e1040	e1080	1550	1320	1350	1060	896	802	1040
6	710	844	1230	e1040	e1100	1470	1520	1240	1300	926	772	1110
7	721	858	1260	e1080	e1100	1400	1380	1270	1000	883	799	1370
8	746	870	1330	e1100	e1080	1320	1240	1360	954	862	791	1530
9	769	854	1400	e1040	e1120	1370	1220	1280	875	749	779	1510
10	720	831	1370	e900	e1060	1390	1280	1220	844	697	812	1450
11	701	842	1340	e820	e1160	1400	1310	1110	745	664	1250	1320
12	715	809	1320	e760	e1120	1400	1300	1030	796	1770	1380	1250
13	985	797	1350	e800	e1200	1490	1200	994	811	3340	1360	1280
14	1150	792	1440	e860	e1250	1300	1290	963	691	2100	2020	1330
15	1160	840	1470	e920	e1350	1070	1380	883	661	1580	1990	1340
16	1170	1340	1380	e880	e1700	985	1380	867	648	1390	1550	1430
17	1140	1170	e1250	e820	e2200	1150	1400	816	653	1170	1260	1260
18	911	782	e1100	e920	e2900	1160	1410	780	665	1050	1210	1160
19	811	803	e1040	e1000	e3800	1160	1350	790	650	948	1170	1200
20	757	937	e1160	e1040	5210	1160	1400	789	608	801	1120	1110
21	751	1130	e1200	e1040	3140	1200	1490	690	937	781	1180	1090
22	753	1200	e1060	e960	2230	1110	1720	536	916	748	1620	1080
23	754	1180	e980	e880	2210	1210	1590	641	710	683	1470	1420
24	755	876	e900	e880	1980	1210	1410	673	674	639	1300	2470
25	748	752	e920	e800	1780	1160	1380	702	704	673	1220	1940
26	748	654	e860	e800	1870	1090	1370	840	679	676	1170	1690
27	788	635	e900	e800	1840	1050	1370	1050	672	662	1060	1460
28	817	847	e980	e780	1780	1050	1340	1090	671	688	981	1370
29	823	1140	e900	e843	---	1090	1290	1420	594	652	914	1290
30	819	1420	e940	e940	---	1140	1440	1330	576	687	892	1240
31	824	---	e960	e1300	---	1070	---	1290	---	676	831	---
TOTAL	26746	27334	36090	29933	50710	39885	40214	32754	24243	32204	34977	39296
MEAN	863	911	1164	966	1811	1287	1340	1057	808	1039	1128	1310
MAX	1270	1420	1470	1400	5210	1760	1720	1490	1300	3340	2020	2470
MIN	701	635	860	760	1060	985	994	536	576	639	729	790
AC-FT	53050	54220	71580	59370	100600	79110	79760	64970	48090	63880	69380	77940

e Estimated

PLATTE RIVER BASIN

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06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

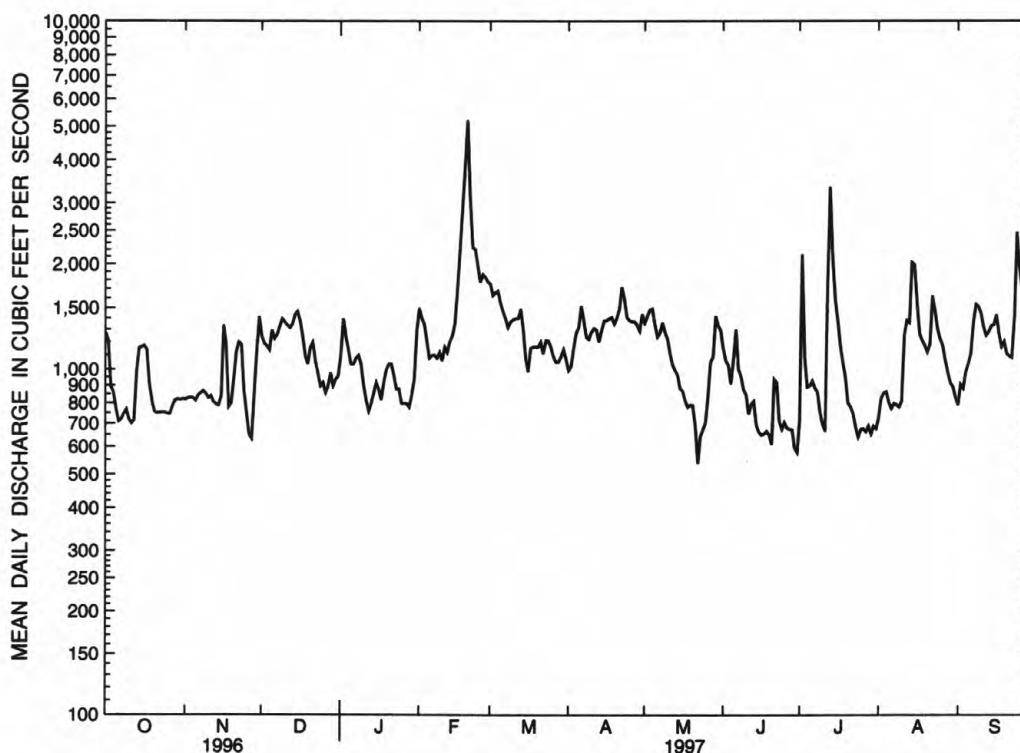
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	889	919	864	873	1114	1264	1104	1060	1043	703	673	817
MAX	1224	1198	1306	1308	1811	2589	1843	1743	2516	2471	1812	1384
(WY)	1996	1980	1980	1990	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1928 - 1997	
ANNUAL TOTAL	420596		414386			
ANNUAL MEAN	1149		1135		942	
HIGHEST ANNUAL MEAN					1223	1993
LOWEST ANNUAL MEAN					668	1940
HIGHEST DAILY MEAN	4380	Feb 22	5210	Feb 20	21300	Jun 22 1947
LOWEST DAILY MEAN	507	Mar 9	536	May 22	85	Aug 8 1941
ANNUAL SEVEN-DAY MINIMUM	652	Jul 16	653	Jun 24	98	Aug 6 1941
INSTANTANEOUS PEAK FLOW (STAGE)			7340 (5.04) Feb 20		90000	Jun 6 1896
INSTANTANEOUS PEAK STAGE			*6.14 Feb 19		**14.90	Jun 6 1896
ANNUAL RUNOFF (AC-FT)	834300		821900		682500	
10 PERCENT EXCEEDS	1760		1490		1350	
50 PERCENT EXCEEDS	973		1080		890	
90 PERCENT EXCEEDS	719		715		500	

* Backwater from ice.

** From floodmark, datum then in use.



NORTH LOUP RIVER NEAR ST. PAUL

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 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. FT ³ /S (00061)	SPECIFIC CONDUCT- ANCE (μS/CM) (00095)	PH	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)	ALKA- LITY LAB (MG/L AS CaCO ₃) (90410)
				WATER WHOLE FIELD (STAND- ARD UNITS) (00400)					
OCT	09 1200	764	277	8.2	18.0	15.0	--	--	--
NOV	12 1410	831	285	8.1	1.0	1.0	--	--	--
DEC	16 1030	1340	279	8.2	3.0	0.5	--	--	--
JAN	29 1055	843	269	7.8	-4.0	0.5	--	--	--
MAR	21 1005	1200	249	8.4	15.0	11.0	16	96	113
APR	28 1000	1360	243	8.5	20.5	14.5	--	--	--
JUN	05 1320	1070	254	8.8	29.5	25.0	--	--	--
JUL	29 1305	642	245	9.1	24.5	24.5	22	99	124
SEP	04 1340	973	225	8.8	25.0	23.0	--	--	--

[illegible]

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2530	2670	314	1040	2110	2040	2140	2680	2740	1360	1080	1480
2	2470	2520	163	1480	2070	2010	2120	2670	2710	2110	1110	1760
3	2400	2330	108	1770	2030	2050	2230	2800	2540	2600	1180	2210
4	2490	2210	83	1680	1380	2110	2280	2620	2540	2470	1210	2140
5	2350	2280	58	1310	2120	1520	2150	2410	2630	2080	1130	2160
6	2140	2350	510	1430	2070	2590	2300	2300	2920	2030	1120	2140
7	2160	2750	589	1660	2050	2570	2350	2280	2910	1980	1080	2170
8	2420	2680	538	1730	2030	2490	2240	2290	2540	1890	1100	2430
9	2370	2570	736	1910	2070	2460	2190	2300	2280	1710	1110	2470
10	2270	2580	972	1390	2070	2460	2230	2240	2220	1590	1200	2600
11	2280	2550	1250	436	2070	2130	1750	2210	2100	1440	1720	2700
12	2180	1410	1210	486	2080	1880	992	2210	2140	1360	2400	2700
13	2270	2270	1810	990	2040	2560	2240	2180	2850	2250	2460	2660
14	2460	215	1780	1270	2040	1410	2220	2130	2680	2900	2690	2570
15	2510	1250	511	1300	2090	251	2100	2080	2170	2930	2600	2710
16	2610	2380	117	1190	2100	1320	2180	2000	1960	2390	2590	2720
17	2840	230	60	1830	2100	2350	2130	1960	1890	2170	2450	2750
18	2900	402	2.9	2100	2110	2450	2180	1900	1880	1100	2260	2610
19	2730	2010	101	2200	2010	2510	2270	1900	1900	1180	2070	2520
20	2370	2590	330	2200	1480	2340	2340	1880	1800	1080	1950	2580
21	2350	2630	576	2200	952	2190	2520	1910	2730	577	1940	2500
22	2570	2660	780	2180	2050	2280	2630	1770	2870	588	2200	2690
23	2580	1890	1030	2160	1100	2310	2490	1670	2440	612	2590	2730
24	2270	118	1200	2150	833	2310	2410	2310	2070	555	2380	2590
25	2130	51	1260	2140	974	2300	2330	2240	1860	517	2130	2530
26	2160	34	1410	1680	2140	2360	2270	2500	1820	979	2000	2670
27	2140	78	1580	1260	1220	2240	2270	2840	1680	949	1930	2720
28	2490	222	1710	1280	1990	2200	2170	2810	1450	608	1870	2870
29	2450	180	1540	1770	---	2360	2240	2880	1420	496	1740	2840
30	2410	433	874	1770	---	2380	2440	2920	1360	559	1610	2820
31	2820	---	1050	2030	---	2260	---	2960	---	1060	1570	---
TOTAL	75120	48543	24252.9	50022	51379	66691	66402	71850	67100	46120	56470	75040
MEAN	2423	1618	782	1614	1835	2151	2213	2318	2237	1488	1822	2501
MAX	2900	2750	1810	2200	2140	2590	2630	2960	2920	2930	2690	2870
MIN	2130	34	2.9	436	833	251	992	1670	1360	496	1080	1480
AC-FT	149000	96290	48110	99220	101900	132300	131700	142500	133100	91480	112000	148800

PLATTE RIVER BASIN

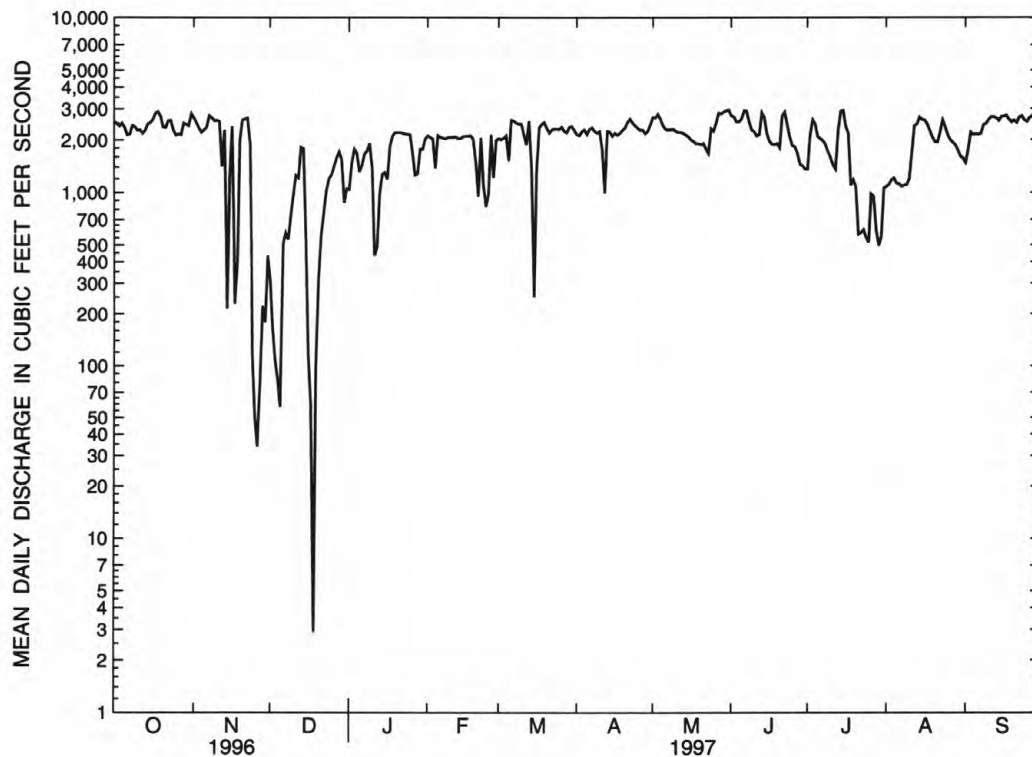
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06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1936	1814	977	1178	1533	1854	2140	1999	1931	1353	1226	1574
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	660
(WY)	1938	1939	1975	1985	1958	1939	1939	1984	1938	1980	1971	1938

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1938 - 1997	
ANNUAL TOTAL	651148.9		698989.9			
ANNUAL MEAN	1779		1915		1624	
HIGHEST ANNUAL MEAN					1986	
LOWEST ANNUAL MEAN					585	
HIGHEST DAILY MEAN	3100 Jun 24		2960 May 31		3560 Nov 3 1994	
LOWEST DAILY MEAN	2.9 Dec 18		2.9 Dec 18		.00 Aug 16 1966	
ANNUAL SEVEN-DAY MINIMUM	37 Jan 2		159 Nov 24		11 Dec 3 1978	
ANNUAL RUNOFF (AC-FT)	1292000		1386000		1177000	
10 PERCENT EXCEEDS	2800		2670		2570	
50 PERCENT EXCEEDS	2020		2140		1730	
90 PERCENT EXCEEDS	271		686		524	



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 SW1/4NE1/4 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	27	e2800	e3000	e1400	e4500	343	706	87	83	100	114
2	124	62	e3000	e2300	e1600	e3500	311	538	59	130	85	106
3	317	51	e3250	e2000	e1200	3050	785	569	60	407	91	121
4	124	28	e3500	e1700	e1300	1960	1090	490	58	182	77	122
5	35	31	e3600	e1900	e1200	2120	794	419	170	98	65	224
6	31	49	e3700	e1950	e1150	674	1010	223	215	88	61	70
7	29	40	e3600	e2000	e1100	641	835	256	137	80	54	64
8	28	51	e3600	e1950	e1100	617	681	245	54	85	52	77
9	26	59	e3500	e1500	e1100	715	490	334	95	80	52	415
10	23	43	e3400	e1700	e1100	822	612	179	48	82	56	475
11	33	55	e3200	e2200	e1060	910	821	120	53	112	137	259
12	25	1130	e3000	e3000	e1040	1040	1900	70	52	86	464	203
13	28	122	e2000	e2900	e1040	665	623	51	255	454	598	288
14	27	2810	e1200	e2700	e1040	1820	601	43	181	812	122	250
15	26	2090	e1250	e1900	e1020	2270	681	31	53	270	1070	203
16	26	2680	e1300	e2000	e1000	1620	920	22	44	85	633	211
17	26	5790	e900	e2000	e1000	251	1010	19	86	88	251	246
18	152	3540	e700	e2200	e1000	313	646	21	48	72	110	186
19	105	993	e450	e2400	e1500	389	906	18	46	75	118	147
20	28	482	e250	e2500	e9400	378	1030	41	50	65	126	153
21	23	778	e220	e2000	e25000	223	1110	24	1320	638	108	159
22	22	672	e300	e1700	e17000	497	1240	20	622	763	135	200
23	44	1130	e250	e1600	e14000	499	1110	29	166	652	162	497
24	26	3130	e240	e1500	e12000	506	950	43	108	640	113	4680
25	25	3440	e260	e1400	e9000	546	906	37	102	594	98	3690
26	57	2660	e270	e1700	e8000	506	807	43	79	135	103	1730
27	25	2250	e280	e2400	e10000	341	693	393	62	104	114	1170
28	29	2220	e300	e2100	e7000	252	548	1600	68	462	108	446
29	27	3840	e700	e1800	---	643	363	1450	68	644	102	353
30	21	e2700	e1400	e1500	---	791	580	843	53	629	109	104
31	29	---	e1800	e1300	---	592	---	166	---	111	106	---
TOTAL	1620	42953	54220	62800	133350	33651	24396	9043	4499	8806	5580	16963
MEAN	52.3	1432	1749	2026	4763	1086	813	292	150	284	180	565
MAX	317	5790	3700	3000	25000	4500	1900	1600	1320	812	1070	4680
MIN	21	27	220	1300	1000	223	311	18	44	65	52	64
AC-FT	3210	85200	107500	124600	264500	66750	48390	17940	8920	17470	11070	33650

e Estimated

PLATTE RIVER BASIN

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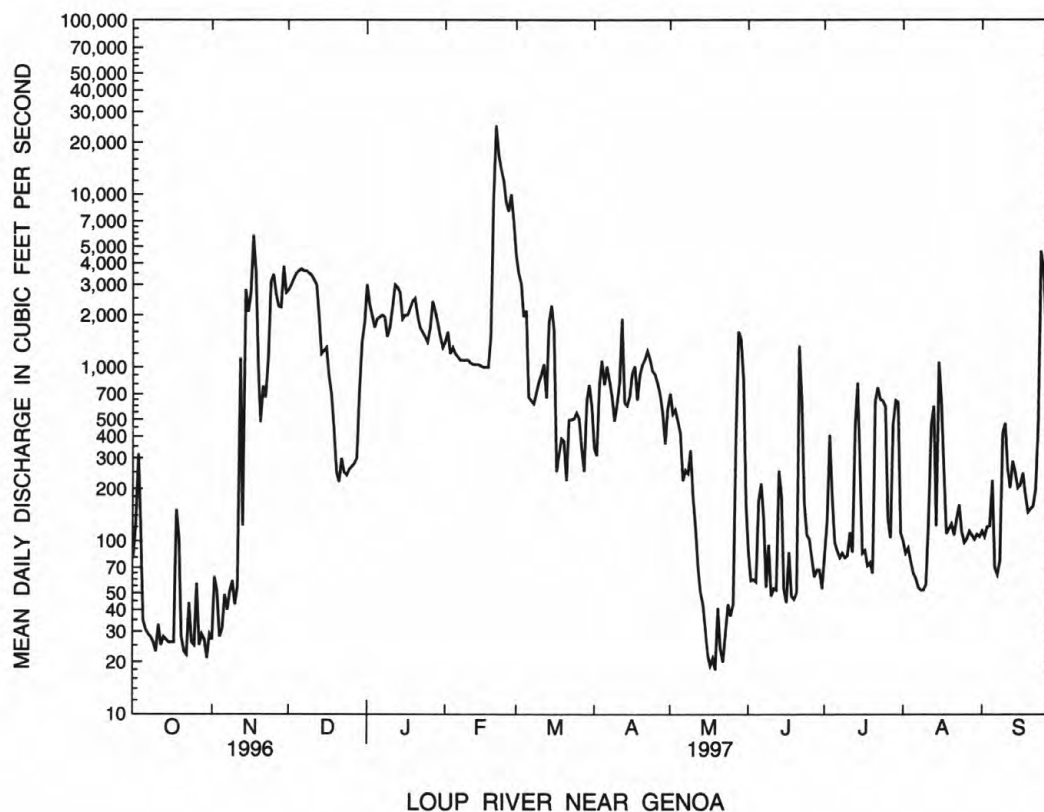
06793000 LOUP RIVER NEAR GENOA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1997, BY WATER YEARS (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	430	1042	925	1350	1646	632	620	884	374	264	205
MAX	934	1650	2521	2632	4763	5650	3745	4777	7365	6214	4253	1328
(WY)	1947	1992	1987	1990	1997	1978	1984	1984	1947	1993	1966	1986
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1944 - 1997	
ANNUAL TOTAL	382646		397881			
ANNUAL MEAN	1045		1090		705	
HIGHEST ANNUAL MEAN					1993	1993
LOWEST ANNUAL MEAN					182	1963
HIGHEST DAILY MEAN	7400	May 28	25000	Feb 21	70800	Aug 13 1966
LOWEST DAILY MEAN	20	Sep 17	18	May 19	.00	Aug 20 1956
ANNUAL SEVEN-DAY MINIMUM	23	Sep 12	24	May 16	.00	Aug 20 1956
INSTANTANEOUS PEAK FLOW			39700	Feb 21	129000	Aug 13 1966
INSTANTANEOUS PEAK STAGE			*13.44	Feb 21	13.93	Aug 13 1966
ANNUAL RUNOFF (AC-FT)	759000		789200		511000	
10 PERCENT EXCEEDS	2980		2700		2010	
50 PERCENT EXCEEDS	451		407		111	
90 PERCENT EXCEEDS	30		41		12	

* Backwater from ice.



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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	90	e110	e102	e125	164	155	165	177	149	17	64
2	94	90	e108	e106	e130	150	155	172	153	130	13	80
3	87	89	e100	e108	e120	149	153	169	137	132	14	76
4	86	90	e102	e104	e114	156	157	174	134	125	23	52
5	89	92	e102	e90	e108	152	161	181	129	114	24	51
6	88	96	e104	e88	e110	146	165	171	138	114	10	54
7	84	94	e104	e86	e110	143	167	160	129	114	7.0	61
8	79	92	e102	e84	e112	147	173	152	121	129	8.4	65
9	83	88	e100	e82	e112	155	169	139	112	107	4.8	77
10	76	88	e100	e80	e114	156	167	131	109	355	6.0	132
11	77	89	e100	e86	e118	161	166	126	110	218	47	180
12	84	87	e100	e74	e120	160	164	115	113	98	64	113
13	86	85	e96	e76	e124	156	160	109	118	85	58	109
14	86	86	e90	e84	e130	142	161	112	124	79	61	105
15	89	95	e84	e92	e140	128	173	105	120	97	65	95
16	86	232	e88	e88	e180	126	294	102	116	109	70	89
17	80	363	e90	e84	347	147	363	105	110	92	60	83
18	78	247	e86	e80	552	145	332	105	110	81	47	80
19	86	180	e80	e86	903	146	285	98	108	77	53	76
20	85	163	e76	e92	564	152	227	91	104	70	50	73
21	84	156	e78	e100	323	155	191	93	224	57	39	73
22	82	153	e76	e110	258	155	189	86	166	47	34	84
23	84	e150	e74	e120	254	155	207	90	137	54	34	101
24	84	e145	e72	e110	212	157	237	126	149	34	35	120
25	86	e130	e76	e100	188	154	221	116	118	30	36	126
26	84	e120	e78	e94	177	155	192	135	110	28	38	113
27	80	e100	e80	e90	165	159	177	156	107	36	18	107
28	83	e110	e86	e84	163	159	171	201	106	31	20	97
29	88	e114	e90	e74	---	157	167	248	103	22	18	88
30	89	e118	e94	e88	---	155	168	246	100	23	37	82
31	88	---	e100	e98	---	155	---	209	---	16	38	---
TOTAL	2635	3832	2826	2840	6073	4697	5867	4388	3792	2853	1049.2	2706
MEAN	85.0	128	91.2	91.6	217	152	196	142	126	92.0	33.8	90.2
MAX	100	363	110	120	903	164	363	248	224	355	70	180
MIN	76	85	72	74	108	126	153	86	100	16	4.8	51
AC-FT	5230	7600	5610	5630	12050	9320	11640	8700	7520	5660	2080	5370

e Estimated

PLATTE RIVER BASIN

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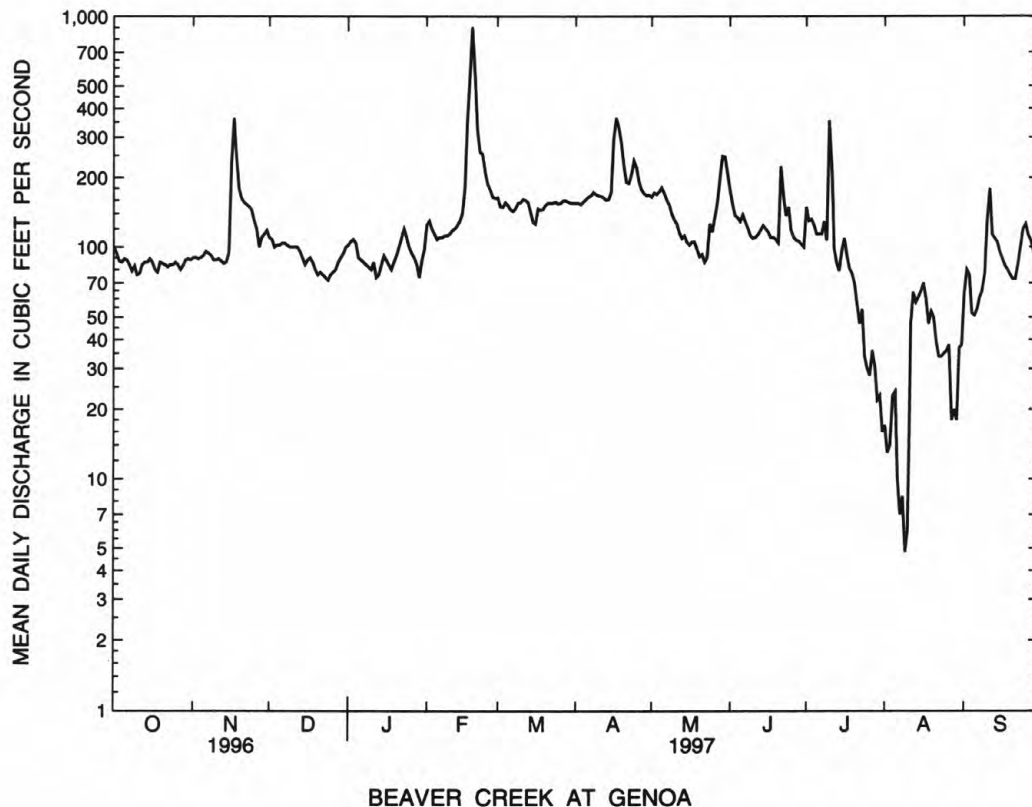
06794000 BEAVER CREEK AT GENOA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.9	86.7	84.6	83.3	136	200	164	177	230	140	96.5	82.4
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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1941 - 1997
ANNUAL TOTAL	50099	43558.2	
ANNUAL MEAN	137	119	130
HIGHEST ANNUAL MEAN		268	1993
LOWEST ANNUAL MEAN		70.9	1981
HIGHEST DAILY MEAN	537 Feb 10	903 Feb 19	10000 Jul 19 1950
LOWEST DAILY MEAN	19 Aug 3	4.8 Aug 9	.41 Jul 25 1974
ANNUAL SEVEN-DAY MINIMUM	44 Jul 29	12 Aug 4	.90 Jul 24 1974
INSTANTANEOUS PEAK FLOW		1010 Feb 19	21200 Jul 19 1950
INSTANTANEOUS PEAK STAGE		8.33 Feb 19	*18.70 Jul 19 1950
ANNUAL RUNOFF (AC-FT)	99370	86400	94140
10 PERCENT EXCEEDS	237	177	207
50 PERCENT EXCEEDS	110	105	89
90 PERCENT EXCEEDS	72	54	49

* Site and datum then in use.



PLATTE RIVER BASIN

06794650 CLEAR CREEK 1.75 MI 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..

PERIOD OF RECORD.--March 1996 to September 1996.

GAGE.--Water-stage recorder.

REMARKS.-- Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	17	20	166	25	12	20
2	---	---	---	---	---	---	14	20	168	28	12	18
3	---	---	---	---	---	---	21	21	136	25	12	17
4	---	---	---	---	---	---	20	20	100	24	18	16
5	---	---	---	---	---	---	18	20	76	23	47	15
6	---	---	---	---	---	---	17	20	68	22	34	15
7	---	---	---	---	---	---	15	19	60	21	26	16
8	---	---	---	---	---	---	17	19	53	20	22	15
9	---	---	---	---	---	---	16	22	48	18	20	15
10	---	---	---	---	---	---	14	23	43	18	19	14
11	---	---	---	---	---	---	15	22	40	17	19	14
12	---	---	---	---	---	---	19	23	39	17	17	14
13	---	---	---	---	---	---	17	24	36	16	16	14
14	---	---	---	---	---	---	18	25	35	14	15	13
15	---	---	---	---	---	---	20	23	34	13	15	14
16	---	---	---	---	---	---	19	22	35	17	16	13
17	---	---	---	---	---	---	16	21	33	18	17	13
18	---	---	---	---	---	---	17	21	30	14	23	13
19	---	---	---	---	---	---	19	19	29	15	26	16
20	---	---	---	---	---	---	20	19	28	15	42	17
21	---	---	---	---	---	---	20	19	27	14	59	17
22	---	---	---	---	---	---	21	18	27	18	51	16
23	---	---	---	---	---	---	19	20	57	18	44	17
24	---	---	---	---	---	---	16	24	57	16	39	16
25	---	---	---	---	---	---	19	36	50	15	33	15
26	---	---	---	---	---	---	19	48	41	15	30	16
27	---	---	---	---	---	---	18	123	36	15	26	15
28	---	---	---	---	---	18	20	243	32	14	25	15
29	---	---	---	---	---	17	25	241	29	14	23	14
30	---	---	---	---	---	18	21	190	27	13	22	13
31	---	---	---	---	---	19	---	145	---	12	21	---
TOTAL	---	---	---	---	---	---	547	1530	1640	544	801	456
MEAN	---	---	---	---	---	---	18.2	49.4	54.7	17.5	25.8	15.2
MAX	---	---	---	---	---	---	25	243	168	28	59	20
MIN	---	---	---	---	---	---	14	18	27	12	12	13
AC-FT	---	---	---	---	---	---	1080	3030	3250	1080	1590	904

PLATTE RIVER BASIN

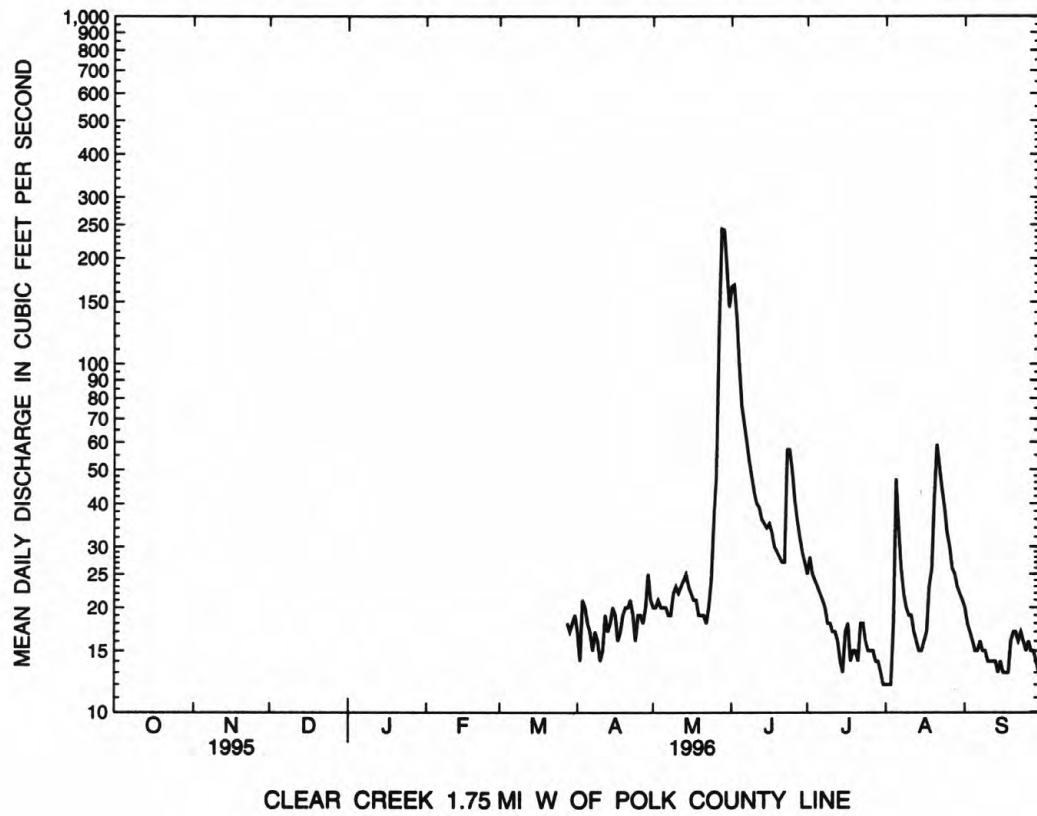
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06794650 CLEAR CREEK 1.75 MI WEST OF POLK COUNTY LINE, NE--Continued

FOR 1996 WATER YEAR

INSTANTANEOUS PEAK FLOW	249	May 28
INSTANTANEOUS PEAK STAGE	*6.83	May 28

* Maximum stage since station established.



PLATTE RIVER BASIN

06794650 CLEAR CREEK 1.75 MI WEST OF POLK COUNTY LINE, NE--Continued

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

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	13	15	29	18	18	25	24	59	45	24	3.2	3.0
2	14	15	30	17	18	23	24	61	41	22	2.8	3.4
3	14	12	29	22	18	24	24	57	40	19	2.9	3.3
4	13	14	28	23	20	25	25	50	39	17	2.9	3.5
5	13	13	29	24	19	25	26	44	36	15	2.8	3.1
6	13	14	27	23	18	24	29	38	34	16	2.9	3.1
7	13	14	29	22	20	22	27	34	34	14	2.9	3.1
8	13	14	29	e19	20	21	26	33	33	13	2.8	3.2
9	14	14	28	e17	18	25	25	31	32	15	2.8	3.5
10	14	14	29	e16	19	22	25	28	32	19	3.0	3.6
11	12	15	29	e16	19	27	27	28	31	19	4.5	3.5
12	11	14	29	e16	19	26	23	27	31	17	3.6	3.6
13	12	14	29	e16	18	29	25	24	31	15	3.3	3.4
14	13	14	30	e16	18	29	28	23	31	12	3.2	3.9
15	13	15	31	e17	19	26	39	22	29	10	2.9	4.0
16	13	26	31	e18	19	24	47	20	27	8.3	3.2	4.2
17	14	47	29	e15	15	26	40	21	26	7.7	3.2	4.4
18	14	72	28	13	20	27	32	23	24	7.3	3.3	4.3
19	13	61	26	16	24	23	36	22	21	7.0	3.2	5.1
20	13	47	22	16	25	23	34	23	20	6.7	3.0	5.4
21	13	42	e20	19	26	27	33	22	34	6.0	2.7	5.6
22	13	37	e21	21	25	28	35	22	27	5.7	2.6	6.7
23	13	36	e20	20	25	26	36	25	24	5.0	2.5	9.0
24	13	32	18	20	24	26	35	30	29	4.3	2.7	7.4
25	13	30	17	20	23	26	33	31	34	3.9	2.6	5.8
26	13	29	17	18	25	23	30	38	38	3.8	2.6	6.6
27	13	27	e17	e15	24	23	27	55	31	3.7	2.9	6.7
28	13	24	e18	e14	24	26	28	72	25	3.6	2.8	6.7
29	13	29	e18	e12	---	25	27	68	21	3.5	2.7	6.8
30	15	31	e18	13	---	25	40	59	19	3.4	2.7	7.4
31	14	---	20	15	---	23	---	49	---	3.3	2.9	---
TOTAL	408	781	775	547	580	774	910	1139	919	330.2	92.1	143.3
MEAN	13.2	26.0	25.0	17.6	20.7	25.0	30.3	36.7	30.6	10.7	2.97	4.78
MAX	15	72	31	24	26	29	47	72	45	24	4.5	9.0
MIN	11	12	17	12	15	21	23	20	19	3.3	2.5	3.0
AC-FT	809	1550	1540	1080	1150	1540	1800	2260	1820	655	183	284

e Estimated

PLATTE RIVER BASIN

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06794650 CLEAR CREEK 1.75 MI WEST OF POLK COUNTY LINE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.2	26.0	25.0	17.6	20.7	25.0	24.3	43.0	42.7	14.1	14.4	9.99
MAX	13.2	26.0	25.0	17.6	20.7	25.0	30.3	49.4	54.7	17.5	25.8	15.2
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996
MIN	13.2	26.0	25.0	17.6	20.7	25.0	18.2	36.7	30.6	10.7	2.97	4.78
(WY)	1997	1997	1997	1997	1997	1997	1996	1997	1997	1997	1997	1997

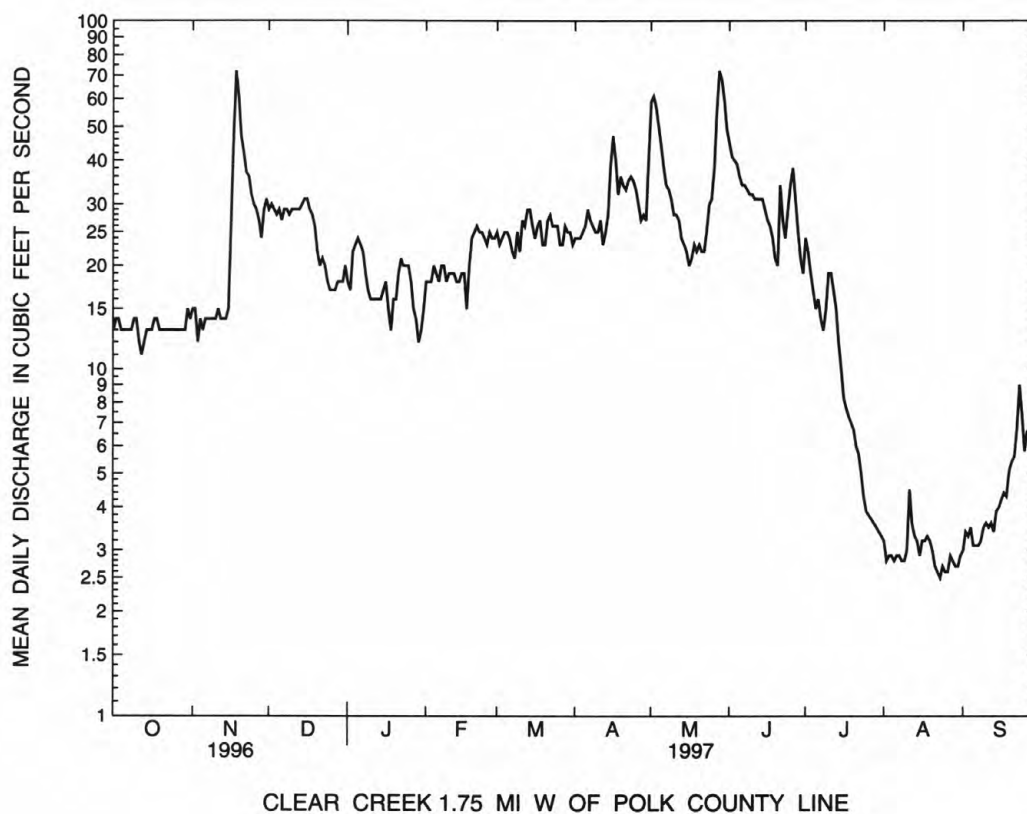
SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	7398.6	
ANNUAL MEAN	20.3	20.3
HIGHEST ANNUAL MEAN		20.3 1997
LOWEST ANNUAL MEAN		20.3 1997
HIGHEST DAILY MEAN	72 Nov 18	243 May 28 1996
LOWEST DAILY MEAN	2.5 Aug 23	2.5 Aug 23 1997
ANNUAL SEVEN-DAY MINIMUM	2.7 Aug 21	2.7 Aug 21 1997
INSTANTANEOUS PEAK FLOW	74 Nov 18	249 May 28 1996
INSTANTANEOUS PEAK STAGE	5.33 Nov 18	*6.83 May 28 1996
ANNUAL RUNOFF (AC-FT)	14680	14680
10 PERCENT EXCEEDS	34	37
50 PERCENT EXCEEDS	20	20
90 PERCENT EXCEEDS	3.4	4.3

* Maximum stage since station established March 1996.



PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	29	e27	e26	e44	e70	54	77	49	99	18	8.4
2	26	30	e26	e28	e40	e60	56	66	45	64	17	10
3	26	30	e25	e32	e36	e50	50	72	44	37	15	14
4	28	30	e24	e70	e36	49	47	60	45	34	15	21
5	27	31	e25	e300	e34	40	59	54	46	32	17	9.6
6	26	31	e24	e110	e33	45	62	49	45	45	15	8.1
7	26	31	e25	e50	e33	42	56	45	41	44	15	9.5
8	29	30	e26	e28	e32	45	51	44	39	41	15	10
9	26	30	e26	e32	e32	54	47	43	38	39	14	11
10	26	30	e27	e24	e31	57	46	39	37	381	15	13
11	26	29	e28	e17	e32	50	48	39	37	415	23	18
12	26	28	e28	e16	e24	48	57	39	37	112	41	12
13	29	28	e26	e17	e24	50	55	38	37	73	24	13
14	29	29	e24	e19	e35	e40	60	39	38	55	15	32
15	25	34	e22	e20	e36	e25	99	38	36	41	13	20
16	27	74	e20	e24	e40	e30	97	36	35	35	12	12
17	26	422	e19	e20	e45	e36	80	36	34	32	12	11
18	26	147	e17	e19	e50	44	71	37	32	29	12	12
19	27	82	e20	e28	e250	43	65	34	30	29	13	11
20	27	74	e18	e40	e1000	42	62	32	28	26	13	12
21	26	69	e18	e42	e540	43	60	30	209	27	13	11
22	27	62	e16	e43	e400	43	70	28	96	28	11	14
23	26	56	e16	e44	e240	39	76	26	46	27	10	24
24	27	e46	e16	e38	e220	39	69	36	87	25	9.4	45
25	27	e28	e17	e28	e180	41	61	45	101	23	8.7	28
26	29	e29	e17	e24	e150	40	59	66	45	23	8.9	20
27	28	e30	e18	e20	e120	38	59	105	38	22	8.7	19
28	28	e31	e19	e20	e90	40	56	93	35	21	8.2	16
29	30	e29	e20	e24	---	41	53	76	46	18	8.8	14
30	30	e28	e21	e30	---	42	74	61	51	18	10	14
31	34	---	e24	e46	---	39	---	53	---	17	10	---
TOTAL	846	1657	679	1279	3827	1365	1859	1536	1527	1912	440.7	472.6
MEAN	27.3	55.2	21.9	41.3	137	44.0	62.0	49.5	50.9	61.7	14.2	15.8
MAX	34	422	28	300	1000	70	99	105	209	415	41	45
MIN	25	28	16	16	24	25	46	26	28	17	8.2	8.1
AC-FT	1680	3290	1350	2540	7590	2710	3690	3050	3030	3790	874	937

e Estimated

PLATTE RIVER BASIN

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06795500 SHELL CREEK NEAR COLUMBUS, NE--Continued

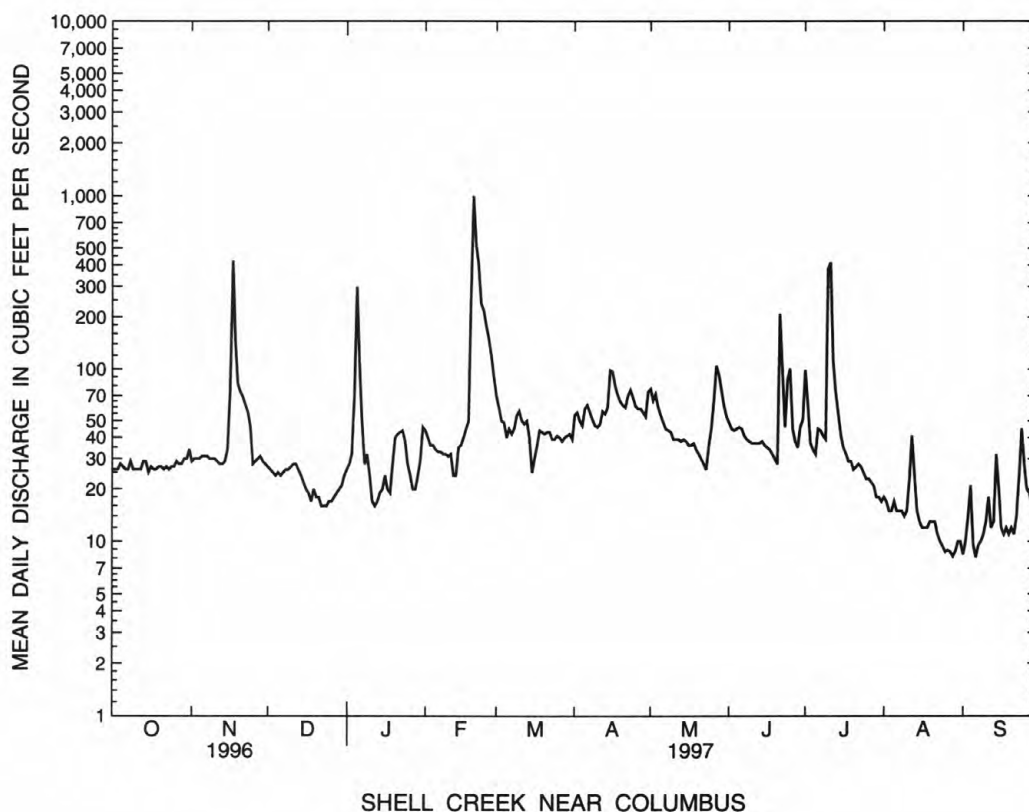
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.6	16.4	14.9	18.4	53.1	97.9	40.8	69.4	116	64.4	38.5	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1948 - 1997	
ANNUAL TOTAL	22742		17400.3			
ANNUAL MEAN	62.1		47.7		47.6	
HIGHEST ANNUAL MEAN					136	1993
LOWEST ANNUAL MEAN					13.6	1980
HIGHEST DAILY MEAN	1250	May 25	1000	Feb 20	4900	Jun 17 1990
LOWEST DAILY MEAN	16	Jan 31	8.1	Sep 6	.40	Jul 27 1954
ANNUAL SEVEN-DAY MINIMUM	17	Dec 20	9.0	Aug 23	.86	Jul 22 1954
INSTANTANEOUS PEAK FLOW			e1300	Feb 20	8000	Jun 17 1990
INSTANTANEOUS PEAK STAGE			*13.69	Feb 20	22.76	Jun 17 1990
ANNUAL RUNOFF (AC-FT)	45110		34510		34500	
10 PERCENT EXCEEDS	90		71		66	
50 PERCENT EXCEEDS	33		32		16	
90 PERCENT EXCEEDS	22		14		5.8	

e Estimated

* Backwater from ice.



PLATTE RIVER BASIN

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 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9280	4580	8060	e3500	e5200	e9000	5940	6370	6550	e8000	1990	2920
2	8660	3080	8640	e3500	e5400	e7600	5530	6880	5200	e7800	1220	3270
3	7960	3390	8080	e3500	e5600	e7400	5670	5910	4870	e7600	1560	3490
4	7620	3620	7680	e3800	e5800	e7400	6370	5840	4590	e7800	1200	3900
5	6960	6120	7840	e4100	e6000	e7200	6020	5800	4680	e6600	1380	4410
6	7000	2520	7930	e4300	e6200	7230	6430	5650	4380	e5800	1520	2850
7	6860	4810	7930	e4500	e6000	6320	7550	5090	4990	4730	1460	3970
8	6500	4730	7330	e4600	e6000	6020	7220	4690	4580	4600	1480	3440
9	6600	5560	8170	e4500	e6000	6170	6770	5160	4080	3470	1320	3610
10	6670	5110	8190	e4400	e5800	6350	6540	5680	3940	3550	1550	3990
11	6550	5590	8280	e4100	e5800	6410	6680	5500	4090	3990	2330	4390
12	6230	4700	8230	e3800	e5800	6300	6080	4680	3720	4030	3850	4290
13	6030	5200	8260	e3600	e6000	6350	6620	4890	5710	2400	4760	4150
14	5950	4800	7330	e3400	e6200	6230	6990	4590	4530	2590	5470	4130
15	6130	4850	6800	e3400	e6200	6590	7270	4800	5640	4220	5030	4160
16	6470	8060	6670	e3400	e6400	5630	7290	3920	5320	3610	7040	4100
17	5940	10600	5840	e3600	e7400	7170	7290	4100	6110	2610	6700	4100
18	6380	9480	1470	e3900	e11000	5670	6850	4300	6590	2640	6310	3930
19	6100	7790	723	e4200	e15000	5960	6630	3740	7590	1860	5710	3890
20	5030	7640	e800	e4500	e20000	6140	6440	3560	8560	1790	5600	4000
21	4890	7140	e900	e4700	e22000	5880	6280	3660	10500	1860	5660	4250
22	4950	7280	e1100	e4800	e15000	4280	7560	3330	14000	536	5370	4430
23	4710	7380	e1300	e4900	e13000	6740	8230	3330	14600	1390	5790	5000
24	4260	5000	e1700	e5000	e10500	6460	7960	3950	16300	1350	5730	5410
25	3840	5570	e2100	e5000	e10000	6270	7170	4460	e12000	1380	5820	12000
26	4270	4420	e2700	e4900	e11000	6370	7460	4850	e11000	1070	4860	8380
27	4120	4000	e3000	e4800	e12000	6460	6780	6030	e10000	773	4720	6800
28	3410	3860	e3400	e4600	e11000	4820	6000	6760	e10000	1660	4060	5560
29	4130	4300	e3900	e2900	---	5870	5530	7080	e8400	783	3960	5480
30	4300	6090	e3800	e4800	---	7040	6240	6930	e8000	533	3850	4390
31	4240	---	e3600	e5000	---	7130	---	6720	---	1240	3120	---
TOTAL	182040	167270	161753	130000	252300	200460	201390	158250	220520	102265	120420	138690
MEAN	5872	5576	5218	4194	9011	6466	6713	5105	7351	3299	3885	4623
MAX	9280	10600	8640	5000	22000	9000	8230	7080	16300	8000	7040	12000
MIN	3410	2520	723	2900	5200	4280	5530	3330	3720	533	1200	2850
AC-FT	361100	331800	320800	257900	500400	397600	399500	313900	437400	202800	238900	275100

e Estimated

PLATTE RIVER BASIN

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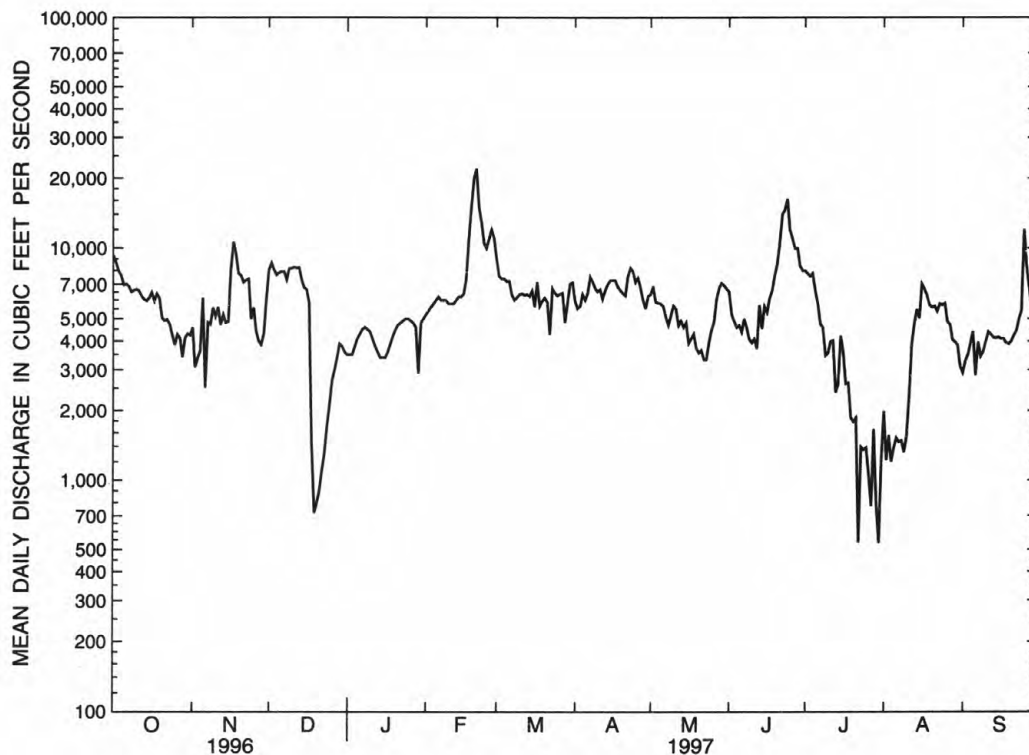
06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3749	4057	3525	3383	5342	7551	6004	5955	6613	3731	2485	3076
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 1996 CALENDAR	FOR 1997 WATER YEAR	WATER YEARS 1949 - 1997
ANNUAL TOTAL	1985713	2035358	
ANNUAL MEAN	5425	5576	4604
HIGHEST ANNUAL MEAN			10070
LOWEST ANNUAL MEAN			2168
HIGHEST DAILY MEAN	19000 Jun 2	22000 Feb 21	82300 Mar 10 1993
LOWEST DAILY MEAN	723 Dec 19	533 Jul 30	36 Jul 29 1974
ANNUAL SEVEN-DAY MINIMUM	1140 Dec 18	1060 Jul 25	146 Jul 24 1974
INSTANTANEOUS PEAK FLOW (STAGE)		e31500 Feb 21	112000 (10.04) Mar 29 1960
INSTANTANEOUS PEAK STAGE		*9.78 Feb 21	**15.55 Mar 19 1978
ANNUAL RUNOFF (AC-FT)	3939000	4037000	3335000
10 PERCENT EXCEEDS	8400	8070	8400
50 PERCENT EXCEEDS	4890	5500	3720
90 PERCENT EXCEEDS	2500	2630	1400

e Estimated.
 * Ice jam.
 ** Backwater from ice.



PLATTE RIVER AT NORTH BEND

PLATTE RIVER BASIN

06796500 PLATTE RIVER AT 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 fair except for periods of estimated record, which are poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9440	4660	6260	e3800	e5600	14600	8210	7180	6500	8740	1560	2910
2	8700	4910	7370	e3700	e5000	9010	8020	7440	6000	8960	1670	4240
3	8670	4220	8500	e3900	e6000	7530	7510	7270	5390	8370	1470	3540
4	8580	4590	8100	e4200	e6200	7340	7520	6910	5260	8500	1670	3300
5	8270	5630	8040	e4500	e6200	7640	7490	7280	5110	7470	1490	4060
6	7660	5430	8040	e4700	e6400	7620	7370	6910	4660	6630	1730	4310
7	7490	5180	8200	e4800	e6200	7350	7630	6310	5300	5490	1610	3550
8	7310	5230	8040	e5000	e6200	7910	7730	6340	5410	5350	1850	4390
9	7190	5620	8440	e5000	e6200	7630	7630	5740	5430	4140	1490	4260
10	6620	5210	8500	e5000	e6200	7500	7060	5900	5140	4330	1570	4790
11	6700	5320	8620	e4500	e6200	7300	7410	5480	5380	4150	2130	5040
12	6700	5470	8380	e4300	e6400	7440	7320	5010	5120	4500	3080	5170
13	6200	4890	8380	e4000	e6400	7350	7400	4930	5740	3010	4460	4970
14	6650	5560	7760	e3700	e6600	8690	7370	4560	6110	2730	5320	4870
15	6200	5000	7810	e3600	e6800	7620	7660	5200	7050	3050	5670	4820
16	6600	6800	7200	e3700	e7000	8400	7680	4580	6970	4130	6150	4810
17	6200	10200	6800	e4000	e8000	6850	7650	4610	7490	2670	7780	4670
18	5520	10500	e4000	e4300	e11000	6540	7770	4810	7620	3010	6790	4660
19	6300	7490	e900	e4500	e16000	6330	7310	4820	8700	2160	6450	4510
20	5640	7390	e980	e4600	e21000	6180	7530	4300	9360	2150	6150	4600
21	5130	6750	e1100	e5000	e22500	5820	6770	4740	11300	2050	5710	4810
22	5420	7900	e1300	e5200	e22800	6220	7640	4570	13700	1660	5850	5140
23	5130	7390	e1600	e5200	15700	5900	8110	4330	13300	1230	5980	5750
24	4710	5600	e2000	e5400	11600	6340	7890	4700	13300	1420	5720	5760
25	3830	5810	e2500	e5400	11800	6490	7940	5170	13400	1300	5590	10100
26	5020	5200	e3000	e5400	13100	6990	7930	5340	12100	1280	4730	10000
27	4610	4440	e3500	e5200	e13000	7270	7900	5790	11300	1200	4590	8550
28	4740	4140	e3800	e5200	15000	7080	7100	6440	11200	1670	3980	7710
29	4370	4480	e4200	e5000	---	7310	6870	7080	9840	1380	4270	7410
30	5190	5430	e4000	e5200	---	8220	6990	7980	9140	1090	3680	6880
31	4790	---	e3900	e5400	---	8880	---	7090	---	1060	3730	---
TOTAL	195580	176440	171220	143400	281100	233350	226410	178810	242320	114880	123920	159580
MEAN	6309	5881	5523	4626	10040	7527	7547	5768	8077	3706	3997	5319
MAX	9440	10500	8620	5400	22800	14600	8210	7980	13700	8960	7780	10100
MIN	3830	4140	900	3600	5000	5820	6770	4300	4660	1060	1470	2910
AC-FT	387900	350000	339600	284400	557600	462800	449100	354700	480600	227900	245800	316500

e Estimated

PLATTE RIVER BASIN

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06796500 PLATTE RIVER AT LESHARA, NE--Continued

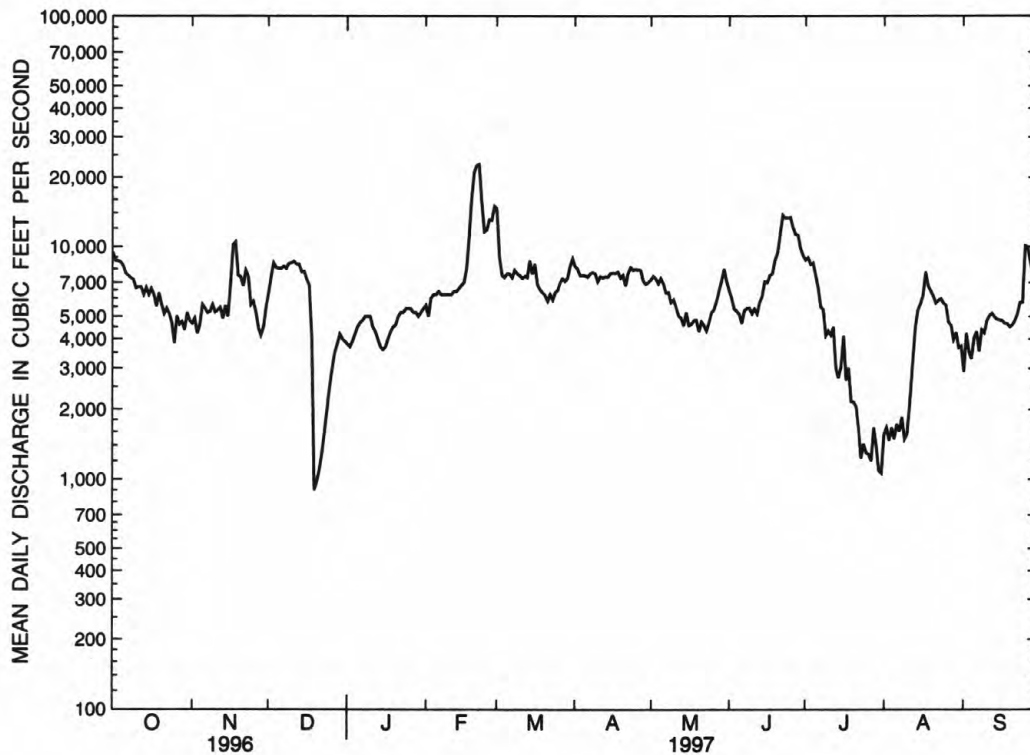
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5438	5548	5332	4464	7486	6468	6930	8027	11740	5989	4526	4775
MAX	6309	6150	5986	5352	10040	7527	7547	10650	17460	10540	7163	6793
(WY)	1997	1996	1995	1995	1997	1997	1997	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1994 - 1997	
ANNUAL TOTAL	2271710		2247010			
ANNUAL MEAN	6207		6156		6468	
HIGHEST ANNUAL MEAN					7135	
LOWEST ANNUAL MEAN					6113	
HIGHEST DAILY MEAN	19300	May 28	22800	Feb 22	24300	May 29 1995
LOWEST DAILY MEAN	900	Dec 19	900	Dec 19	900	Dec 19 1996
ANNUAL SEVEN-DAY MINIMUM	1480	Dec 19	1280	Jul 25	1280	Jul 25 1997
INSTANTANEOUS PEAK FLOW (STAGE)			e32500	Feb 22	e32500(*8.30)	Feb 22 1997
INSTANTANEOUS PEAK STAGE			*8.30	Feb 22	*11.84	Feb 9 1996
ANNUAL RUNOFF (AC-FT)	4506000		4457000		4686000	
10 PERCENT EXCEEDS	10000		8640		10000	
50 PERCENT EXCEEDS	5710		5790		5600	
90 PERCENT EXCEEDS	3000		3010		2800	

e Estimated.

* Backwater from ice.



PLATTE RIVER AT LESHARA

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	109	e88	e92	e136	538	216	484	797	113	75	40
2	163	113	e88	e90	e134	504	215	595	683	114	76	40
3	149	109	e92	e87	e132	510	229	690	542	119	77	41
4	139	116	e84	e80	e130	413	240	738	472	110	71	43
5	131	116	e84	e74	e130	416	268	767	468	117	66	43
6	124	116	e90	e74	e130	397	350	686	471	127	64	43
7	120	116	e88	e78	e126	398	452	577	431	116	62	48
8	116	116	e84	e84	e128	413	405	445	356	107	58	48
9	112	115	e94	e72	e132	492	459	339	285	98	56	55
10	109	114	e88	e62	e129	506	527	275	236	93	54	56
11	107	117	e96	e64	e130	524	462	227	238	86	60	54
12	106	115	e94	e64	e128	496	338	190	295	98	64	49
13	105	119	e92	e66	e150	469	314	168	306	97	67	54
14	103	e110	e88	e70	e150	376	427	153	268	101	70	61
15	100	e110	e88	e70	e160	242	725	139	230	97	81	59
16	99	e96	e84	e68	e180	266	1010	131	196	87	67	57
17	101	e86	e70	e74	e280	350	1170	121	172	80	61	53
18	105	e81	e64	e86	e320	336	1230	111	154	73	58	52
19	111	e86	e64	e98	e360	323	1110	98	143	69	59	49
20	112	e88	e74	e104	e420	312	903	92	139	65	57	46
21	110	e86	e70	e100	e420	297	769	88	181	63	54	45
22	109	e88	e66	e92	e450	288	763	84	269	62	52	60
23	104	e80	e62	e94	e450	276	715	83	397	64	49	69
24	106	e76	e62	e90	e480	268	679	86	348	62	48	75
25	107	e78	e60	e86	e520	254	648	86	244	61	46	75
26	105	e82	e64	e88	e520	245	603	107	213	71	44	70
27	104	e88	e70	e84	e540	243	533	233	184	84	45	68
28	103	e98	e72	e90	542	238	446	458	158	77	48	64
29	106	e92	e68	e102	---	232	385	649	133	76	47	62
30	108	e88	e72	e120	---	231	426	743	114	71	45	59
31	108	---	e78	e140	---	222	---	807	---	69	41	---
TOTAL	3564	3004	2438	2643	7507	11075	17017	10450	9123	2727	1822	1638
MEAN	115	100	78.6	85.3	268	357	567	337	304	88.0	58.8	54.6
MAX	182	119	96	140	542	538	1230	807	797	127	81	75
MIN	99	76	60	62	126	222	215	83	114	61	41	40
AC-FT	7070	5960	4840	5240	14890	21970	33750	20730	18100	5410	3610	3250

e Estimated

PLATTE RIVER BASIN

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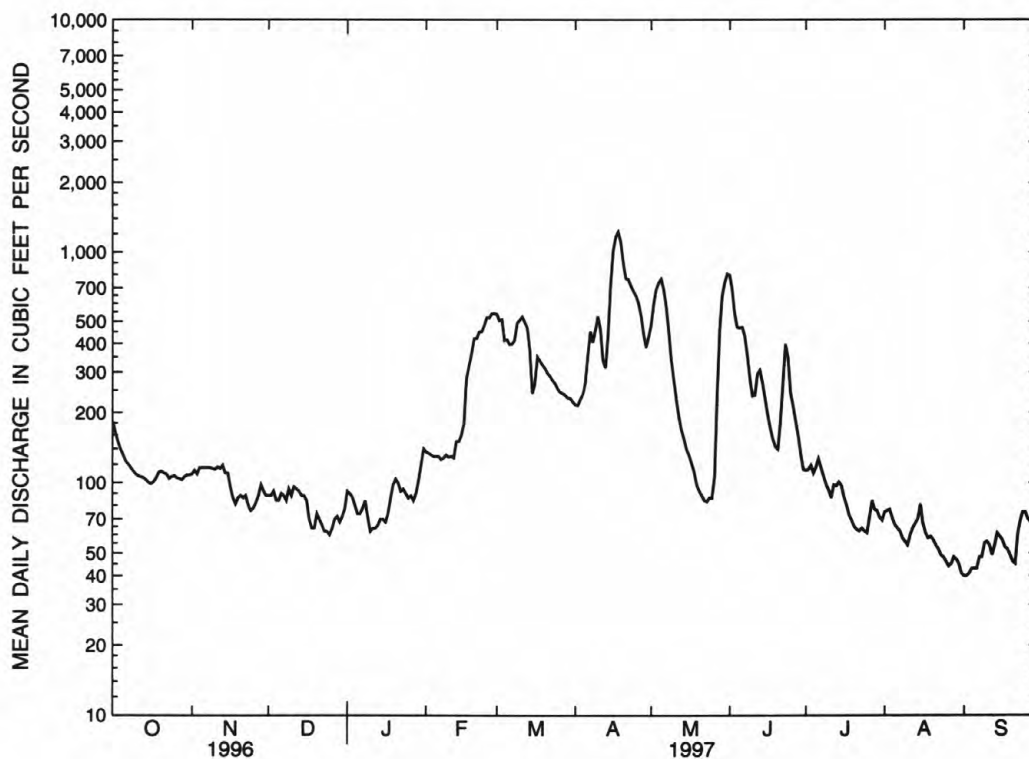
06797500 ELKHORN RIVER AT EWING, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.3	88.7	79.1	68.5	140	360	485	409	318	168	78.7	80.5
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1947 - 1997	
ANNUAL TOTAL	97313		73008			
ANNUAL MEAN	266		200		197	
MEDIAN OF ANNUAL MEANS					135	
HIGHEST ANNUAL MEAN					543	
LOWEST ANNUAL MEAN					42.8	
HIGHEST DAILY MEAN	4210	Jun 1	1230	Apr 18	8480	May 30 1995
LOWEST DAILY MEAN	32	Sep 6	40	Sep 1	5.2	Sep 6 1976
ANNUAL SEVEN-DAY MINIMUM	37	Sep 1	42	Aug 31	6.5	Aug 24 1976
INSTANTANEOUS PEAK FLOW (STAGE)			1270(5.80)		9050	May 29 1995
INSTANTANEOUS PEAK STAGE			*8.37		11.09	May 29 1995
ANNUAL RUNOFF (AC-FT)	193000		144800		142800	
10 PERCENT EXCEEDS	364		494		412	
50 PERCENT EXCEEDS	127		107		77	
90 PERCENT EXCEEDS	66		59		31	

* Backwater from ice.



ELKHORN RIVER AT EWING

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	587	344	e420	e360	e700	1330	801	1000	1280	438	215	158
2	550	341	e420	e420	e660	1230	780	1070	1290	426	216	157
3	521	350	e430	e410	e640	1140	778	1110	1190	383	229	152
4	498	362	e440	e390	e600	1120	779	1050	1100	359	227	155
5	484	382	e430	e360	e580	980	817	1180	1020	385	213	156
6	474	381	e450	e360	e580	976	875	1210	938	398	214	156
7	458	375	e450	e370	e560	930	947	1130	938	417	215	166
8	446	361	e440	e380	e520	952	1060	1090	921	436	213	172
9	438	359	e450	e340	e560	1090	913	935	853	395	209	191
10	415	353	e450	e280	e560	1200	953	853	740	363	196	186
11	401	351	e460	e290	e600	1180	873	766	686	344	208	204
12	391	346	e470	e290	e580	1210	793	709	681	329	222	189
13	393	340	e470	e310	e620	1120	715	666	783	388	238	195
14	388	308	e450	e330	e660	1010	780	616	780	532	253	193
15	381	362	e440	e330	e720	821	984	601	710	457	268	193
16	382	728	e440	e310	e760	796	1320	581	645	398	283	191
17	378	548	e350	e300	e1000	783	1570	543	591	384	271	191
18	392	372	e270	e330	e1500	858	1530	520	546	351	223	197
19	374	343	e290	e370	e2000	860	1320	485	516	325	210	190
20	376	399	e340	e390	2780	890	1150	452	525	307	206	173
21	385	416	e350	e402	2010	966	1050	434	751	295	197	180
22	377	398	e310	e380	1700	959	1010	416	809	277	191	226
23	375	398	e280	e380	1890	935	1010	438	645	273	181	295
24	371	304	e260	e370	2320	954	971	497	707	280	175	341
25	371	219	e270	e340	2020	928	986	475	796	268	162	310
26	367	256	e250	e350	1720	920	1070	592	701	244	149	283
27	339	e300	e280	e330	1420	897	1070	736	594	227	153	267
28	336	e400	e300	e380	1300	878	999	905	527	202	163	229
29	347	e450	e280	e440	---	847	963	1240	518	239	173	211
30	348	e430	e290	e600	---	829	1030	1070	469	243	170	207
31	348	---	e310	e740	---	820	---	1140	---	222	156	---
TOTAL	12691	11276	11540	11632	31560	30409	29897	24510	23250	10585	6399	6114
MEAN	409	376	372	375	1127	981	997	791	775	341	206	204
MAX	587	728	470	740	2780	1330	1570	1240	1290	532	283	341
MIN	336	219	250	280	520	783	715	416	469	202	149	152
AC-FT	25170	22370	22890	23070	62600	60320	59300	48620	46120	21000	12690	12130

e Estimated

PLATTE RIVER BASIN

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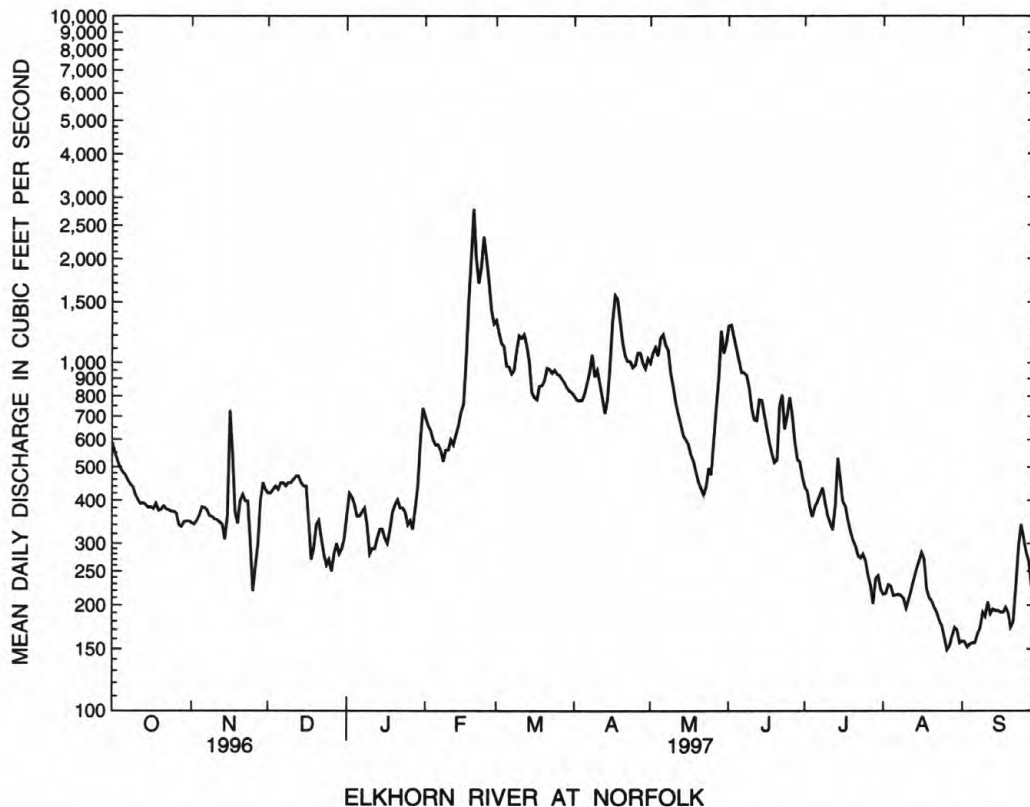
06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	323	326	299	286	498	910	1031	879	926	482	319	281
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL TOTAL	254641		209863			
ANNUAL MEAN	696		575		546	
MEDIAN OF ANNUAL MEANS					448	
HIGHEST ANNUAL MEAN					1355	
LOWEST ANNUAL MEAN					224	
HIGHEST DAILY MEAN	7130	Jun 2	2780	Feb 20	17500	May 31 1995
LOWEST DAILY MEAN	203	Sep 6	149	Aug 26	33	Aug 3 1980
ANNUAL SEVEN-DAY MINIMUM	221	Sep 12	156	Aug 31	40	Aug 24 1976
INSTANTANEOUS PEAK FLOW (STAGE)			3550(6.75)	Feb 20	16900(13.05)	Jun 14 1967
INSTANTANEOUS PEAK STAGE			*10.18	Feb 19	*15.63	Mar 11 1949
ANNUAL RUNOFF (AC-FT)	505100		416300		395400	
10 PERCENT EXCEEDS	1170		1080		1060	
50 PERCENT EXCEEDS	450		430		310	
90 PERCENT EXCEEDS	260		208		162	

* * Backwater from ice.



PLATTE RIVER BASIN

06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

LOCATION.--Lat 42°10'44", long 97°29'04", in SW1/4 sec.31, T.26 N., R.1 W., Pierce County, Hydrologic Unit 10220002, on left downstream wingwall of county road bridge, 2.5 mi southeast of Pierce, and at mile 22.8.

DRAINAGE AREA.--701 mi², of which about 30 mi² is noncontributing.

PERIOD OF RECORD.--August 1960 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft above sea level (U.S. Weather Bureau levels).

REMARKS.--Record 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	65	81	184	165	877	436	172	299	313	210	55	35
2	62	90	182	167	1100	437	167	289	263	200	53	33
3	59	84	169	90	893	506	180	370	230	170	51	33
4	58	90	162	94	521	478	194	338	232	140	48	33
5	58	97	156	90	260	406	225	265	242	120	44	33
6	57	93	150	e90	223	352	272	220	209	110	42	32
7	55	88	148	e92	199	286	191	207	178	100	43	35
8	56	86	139	87	154	282	229	201	159	160	42	34
9	55	84	136	e72	158	434	229	183	145	140	41	34
10	54	78	138	e50	139	562	198	169	137	120	41	33
11	55	77	137	e52	131	508	190	159	135	106	42	33
12	55	77	139	e52	121	424	150	148	190	110	43	33
13	54	78	137	e58	123	341	187	145	290	145	43	38
14	54	74	139	e66	120	296	265	139	207	229	45	38
15	54	94	111	e70	114	221	552	131	163	248	94	37
16	59	835	121	e62	109	226	485	126	141	134	67	35
17	326	753	e82	e58	110	254	365	120	130	122	53	35
18	135	484	e66	e60	161	248	317	116	125	109	48	34
19	105	390	e70	e64	1160	218	278	110	118	98	46	34
20	95	333	e74	e70	2060	238	286	106	120	89	45	33
21	88	303	e74	e74	2300	256	357	103	341	83	43	34
22	85	273	e66	e68	2180	235	405	99	277	77	42	45
23	84	256	e58	e64	1080	213	446	105	220	77	40	93
24	83	e120	e52	e60	939	207	369	157	200	71	38	111
25	83	e135	e52	e56	716	199	303	160	220	66	36	80
26	82	e150	e50	e60	667	191	265	355	190	61	35	56
27	81	165	e68	e54	572	190	245	692	160	60	35	49
28	78	167	e78	e80	500	193	227	730	140	65	37	45
29	81	171	e70	e140	---	191	211	611	120	62	37	43
30	87	198	e86	e300	---	185	258	475	140	60	37	41
31	84	---	160	e600	---	178	---	378	---	57	36	---
TOTAL	2487	6004	3454	3165	17687	9391	8218	7706	5735	3599	1402	1282
MEAN	80.2	200	111	102	632	303	274	249	191	116	45.2	42.7
MAX	326	835	184	600	2300	562	552	730	341	248	94	111
MIN	54	74	50	50	109	178	150	99	118	57	35	32
AC-FT	4930	11910	6850	6280	35080	18630	16300	15280	11380	7140	2780	2540

e Estimated

PLATTE RIVER BASIN

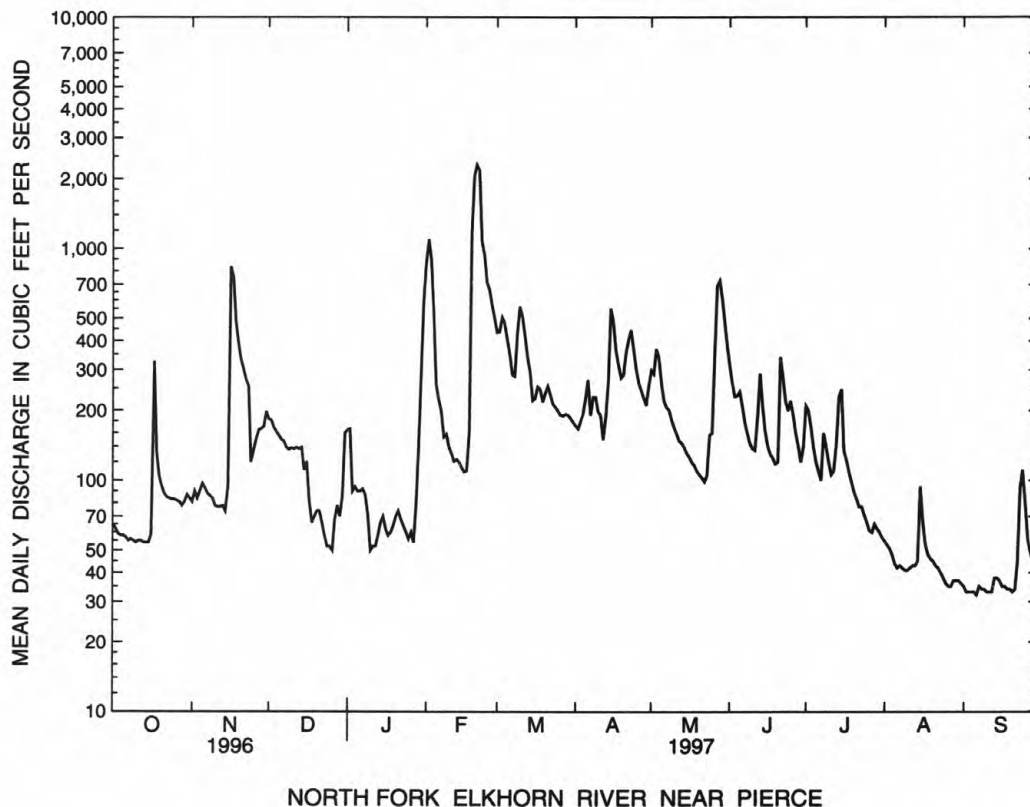
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06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.3	56.2	49.9	46.7	119	209	183	162	181	96.9	56.0	48.7
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1960 - 1997	
ANNUAL TOTAL	75021		70130		105	
ANNUAL MEAN	205		192		75.6	
MEDIAN OF ANNUAL MEANS					287	
HIGHEST ANNUAL MEAN					1993	
LOWEST ANNUAL MEAN					21.5	
HIGHEST DAILY MEAN	1540	Aug 6	2300	Feb 21	10400	Mar 28 1962
LOWEST DAILY MEAN	41	Sep 6	32	Sep 6	2.7	Jul 29 1989
ANNUAL SEVEN-DAY MINIMUM	43	Sep 12	33	Sep 2	3.7	Aug 15 1990
INSTANTANEOUS PEAK FLOW			2320	Feb 21	15200	Feb 19 1971
INSTANTANEOUS PEAK STAGE			12.86	Feb 21	15.10	Feb 19 1971
ANNUAL RUNOFF (AC-FT)	148800		139100		75740	
10 PERCENT EXCEEDS	383		383		197	
50 PERCENT EXCEEDS	135		121		46	
90 PERCENT EXCEEDS	58		42		21	



PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	909	742	e620	e600	e960	e5000	1340	1300	2200	2810	417	286
2	853	726	e580	e620	e1300	e4500	1310	1410	2450	2130	411	365
3	798	727	e620	e640	e1400	4160	1280	1370	2250	1680	375	387
4	773	756	e660	e620	e1300	3480	1320	1410	1940	1440	352	499
5	758	782	e700	e580	e1100	2970	1420	1510	2050	1200	336	336
6	738	848	e680	e540	e1000	2330	1620	1430	2150	1270	315	303
7	706	849	e720	e560	e960	1920	1520	1400	2080	1190	287	300
8	664	830	e700	e580	e920	1700	1470	1480	1970	1380	264	318
9	654	799	e700	e600	e880	2990	1560	1640	1850	1910	252	330
10	633	756	e700	e540	e900	2190	1480	1710	1740	1520	257	330
11	644	723	e700	e500	e960	2110	1590	1590	1600	1300	352	323
12	644	719	e700	e520	e960	1760	1400	1500	1530	1240	364	315
13	644	711	e700	e540	e980	1780	1240	1340	1470	1350	364	383
14	654	710	e720	e580	e1000	1760	1340	1220	1620	1230	393	379
15	654	757	e660	e600	e1060	1410	1850	1140	1690	1330	467	377
16	654	1270	e660	e600	e1100	1200	2080	1090	1460	1360	436	382
17	654	2960	e640	e560	e1300	1220	2220	1010	1290	1220	456	383
18	674	1830	e600	e560	e1500	1260	2420	1010	1140	999	416	375
19	1030	1370	e560	e640	e2300	1220	2720	909	1040	924	417	343
20	828	1310	e580	e700	e3500	1190	2540	879	1120	840	454	317
21	729	1420	e600	e700	e5000	1200	2210	870	2570	805	366	318
22	695	1440	e560	e680	e4500	1400	2120	850	2440	738	332	401
23	695	1370	e520	e720	e3500	1360	2170	829	2730	706	302	629
24	693	1340	e500	e700	e9000	1410	2180	1520	3150	653	297	823
25	704	1080	e520	e660	e8200	1340	2070	1640	2520	590	274	867
26	729	e900	e500	e600	e7600	1440	2160	2350	2280	537	255	801
27	727	e800	e540	e620	e6800	1500	1910	2840	2080	478	243	693
28	701	e600	e600	e580	e6000	1500	1650	2420	1810	441	250	592
29	731	e620	e560	e680	---	1520	1470	2010	1920	405	242	542
30	752	e640	e520	e760	---	1440	1380	1730	3260	393	293	491
31	754	---	e560	e900	---	1370	---	2000	---	434	303	---
TOTAL	22476	30385	19180	19280	75980	61630	53040	45407	59400	34503	10542	13188
MEAN	725	1013	619	622	2714	1988	1768	1465	1980	1113	340	440
MAX	1030	2960	720	900	9000	5000	2720	2840	3260	2810	467	867
MIN	633	600	500	500	880	1190	1240	829	1040	393	242	286
AC-FT	44580	60270	38040	38240	150700	122200	105200	90060	117800	68440	20910	26160

e Estimated

PLATTE RIVER BASIN

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06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

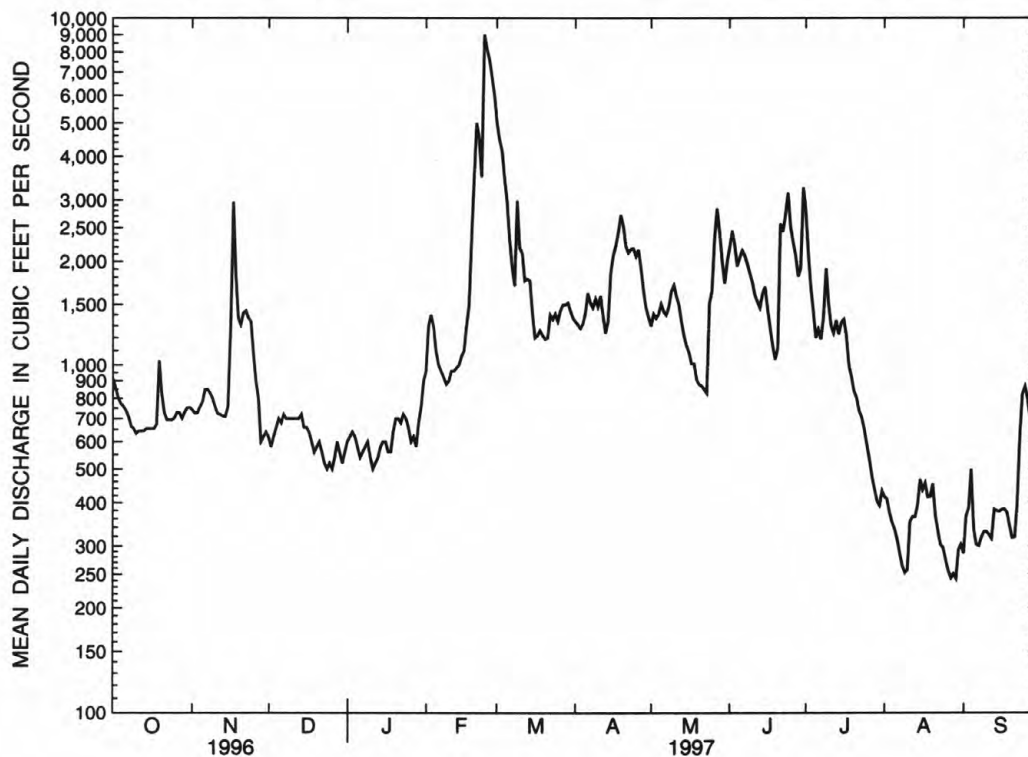
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	549	599	560	516	1077	1893	1792	1611	1529	978	593	504
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1973 - 1997	
ANNUAL TOTAL	442919		445011			
ANNUAL MEAN	1210		1219		1015	
HIGHEST ANNUAL MEAN					2253	
LOWEST ANNUAL MEAN					332	
HIGHEST DAILY MEAN	15300	Aug 5	e9000	Feb 24	26000	Mar 9 1993
LOWEST DAILY MEAN	229	Sep 7	242	Aug 29	41	Aug 31 1976
ANNUAL SEVEN-DAY MINIMUM	276	Sep 13	265	Aug 24	45	Aug 27 1976
INSTANTANEOUS PEAK FLOW (STAGE)					33000 (13.21)Jun 25 1969	
INSTANTANEOUS PEAK STAGE			*16.50	Feb 24	*18.60	Mar 9 1993
ANNUAL RUNOFF (AC-FT)	878500		882700		735600	
10 PERCENT EXCEEDS	1860		2200		2010	
50 PERCENT EXCEEDS	900		853		580	
90 PERCENT EXCEEDS	519		376		225	

e Estimated.

* From floodmark; ice jam.



ELKHORN RIVER AT WEST POINT

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	232	e260	e300	e1000	418	280	400	609	650	242	161
2	248	231	e240	e400	e2600	433	272	422	555	427	235	341
3	241	229	e220	e500	e1500	434	277	462	512	388	226	163
4	240	228	e210	e700	e800	453	284	507	485	377	218	152
5	237	228	e230	e820	e500	408	353	436	487	374	214	150
6	232	229	e250	e350	e370	354	461	387	464	396	209	152
7	219	227	e280	e267	e350	348	440	379	434	370	203	146
8	210	227	e280	e270	e330	341	333	380	409	346	197	151
9	210	229	e266	e220	e310	978	334	379	392	367	189	163
10	210	e220	e280	e170	e290	891	328	357	377	376	183	160
11	210	e225	e270	e150	e270	598	318	347	375	481	180	153
12	210	e225	e270	e170	e260	463	297	343	375	790	183	150
13	200	225	e290	e190	e250	418	273	337	459	665	175	160
14	189	225	e290	e210	e245	372	338	326	827	435	172	155
15	e195	236	e270	e205	e240	315	491	308	560	438	197	153
16	e200	334	e240	e200	e235	335	615	306	387	375	213	155
17	e210	1210	e220	e180	e260	334	460	296	341	349	232	156
18	1630	899	e200	e200	e800	345	383	295	326	330	185	152
19	383	518	e210	e220	e2500	330	356	285	329	324	177	151
20	283	436	e230	e260	7670	309	362	278	340	317	178	148
21	264	402	e260	e300	3210	328	436	274	3160	323	183	159
22	252	379	e250	e450	1140	332	485	275	896	333	177	166
23	247	359	e240	e1330	730	319	464	275	586	385	166	212
24	243	e300	e220	e800	609	316	469	322	1500	410	168	285
25	240	e250	e210	e450	529	318	404	581	1150	358	162	252
26	236	e230	e220	e300	480	309	364	495	580	353	158	203
27	226	e230	e240	e280	492	300	355	938	493	348	154	187
28	218	e240	e260	e265	423	294	349	1380	454	367	153	177
29	228	e285	e280	e240	---	300	336	1120	650	341	153	172
30	233	e280	e260	e235	---	293	385	825	926	293	154	167
31	233	---	e250	e260	---	285	---	688	---	261	150	---
TOTAL	8639	9768	7696	10892	28393	12271	11302	14403	19438	12347	5786	5252
MEAN	279	326	248	351	1014	396	377	465	648	398	187	175
MAX	1630	1210	290	1330	7670	978	615	1380	3160	790	242	341
MIN	189	220	200	150	235	285	272	274	326	261	150	146
AC-FT	17140	19370	15270	21600	56320	24340	22420	28570	38560	24490	11480	10420

e Estimated

PLATTE RIVER BASIN

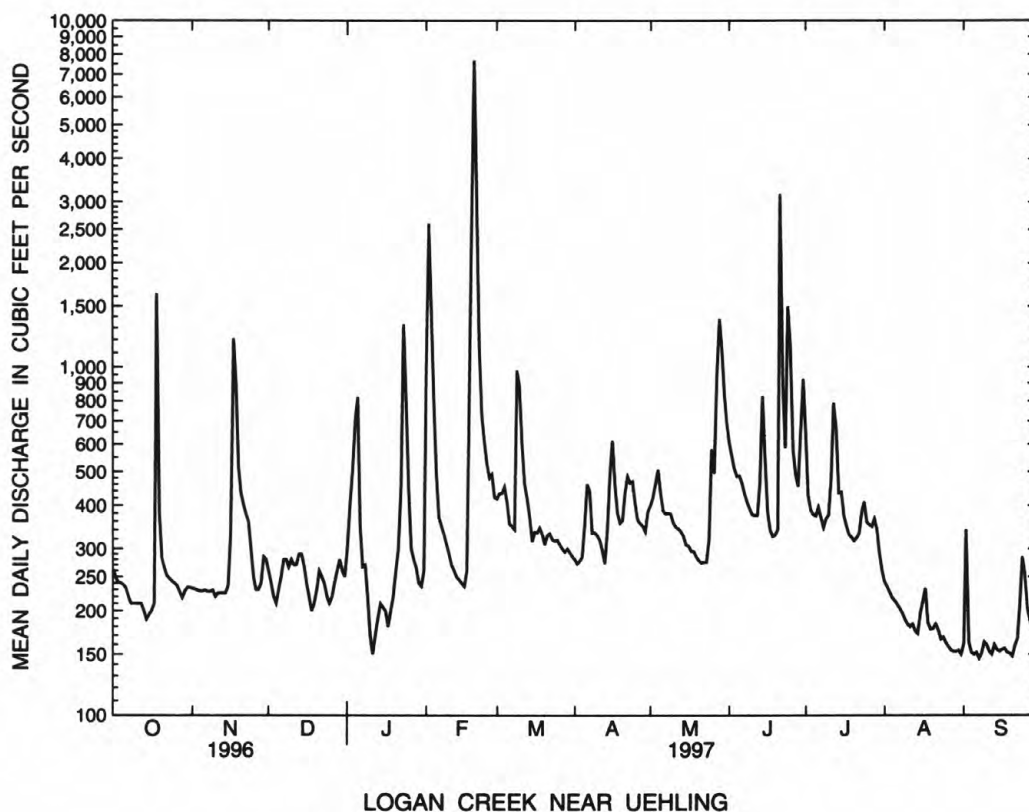
181

06799500 LOGAN CREEK NEAR UEHLING, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	106	92.8	103	267	416	273	311	484	246	160	126
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1942-1997	
ANNUAL TOTAL	144171		146187			
ANNUAL MEAN	394		401		225	
MEDIAN OF ANNUAL MEANS					184	
HIGHEST ANNUAL MEAN					710	
LOWEST ANNUAL MEAN					66.4	
HIGHEST DAILY MEAN	6180	Aug 5	7670	Feb 20	20100	Feb 20 1971
LOWEST DAILY MEAN	130	Jan 5	146	Sep 7	6.1	Jul 26 1976
ANNUAL SEVEN-DAY MINIMUM	149	Jan 1	153	Sep 14	8.8	Jul 12 1976
INSTANTANEOUS PEAK FLOW (STAGE)			9150	Feb 20	25200 (20.15)	Feb 20 1971
INSTANTANEOUS PEAK STAGE			20.86	Feb 20	20.86	Feb 20 1997
ANNUAL RUNOFF (AC-FT)	286000		290000		162700	
10 PERCENT EXCEEDS	675		609		396	
50 PERCENT EXCEEDS	272		294		94	
90 PERCENT EXCEEDS	200		174		44	



PLATTE RIVER BASIN

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.--450 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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	56	e82	e130	68	88	55	163	96	202	47	66
2	56	56	e79	93	106	85	54	104	76	140	47	3800
3	56	56	77	74	118	80	56	112	65	77	47	596
4	57	56	75	e72	99	77	64	103	56	66	46	83
5	58	56	67	e70	78	58	81	83	68	65	44	46
6	59	56	67	e66	71	59	97	75	104	71	44	39
7	54	55	72	e70	67	64	90	71	89	79	44	36
8	53	54	71	e78	64	70	66	71	77	1480	43	37
9	52	54	73	e82	e56	93	62	67	67	403	42	34
10	51	54	70	e44	e58	205	59	61	60	123	43	32
11	52	53	70	e45	e60	92	65	58	60	119	52	29
12	54	46	72	e44	e56	78	54	55	62	111	85	28
13	56	46	74	e46	e54	72	57	53	67	94	83	34
14	56	47	76	e50	e55	48	84	59	66	89	72	107
15	55	55	e70	e54	e58	38	166	41	62	84	65	48
16	53	81	e64	e52	65	67	198	40	59	79	57	40
17	52	313	61	e49	65	76	141	39	55	79	57	37
18	51	162	e58	e60	402	74	114	38	53	77	51	37
19	50	115	e54	e68	1470	64	102	38	53	75	49	35
20	50	108	e56	e74	397	63	92	34	51	71	49	32
21	52	101	e60	e78	279	64	96	31	1740	67	60	30
22	53	95	e68	81	149	65	106	30	205	66	53	32
23	55	89	e50	e72	105	61	116	30	54	64	45	117
24	56	42	e44	e68	89	60	104	49	164	60	40	293
25	56	40	e53	e74	76	61	87	112	546	58	39	113
26	57	73	e50	e70	84	62	83	117	84	55	37	82
27	57	88	e53	e60	73	61	72	350	69	54	36	73
28	57	81	e57	e68	67	62	70	213	63	55	37	66
29	56	79	e58	e70	---	62	68	147	61	53	38	62
30	56	80	e56	e76	---	61	83	143	446	51	45	57
31	56	---	e86	84	---	58	---	117	---	48	69	---
TOTAL	1690	2347	2023	2122	4389	2228	2642	2704	4778	4215	1566	6121
MEAN	54.5	78.2	65.3	68.5	157	71.9	88.1	87.2	159	136	50.5	204
MAX	59	313	86	130	1470	205	198	350	1740	1480	85	3800
MIN	50	40	44	44	54	38	54	30	51	48	36	28
AC-FT	3350	4660	4010	4210	8710	4420	5240	5360	9480	8360	3110	12140

e Estimated

PLATTE RIVER BASIN

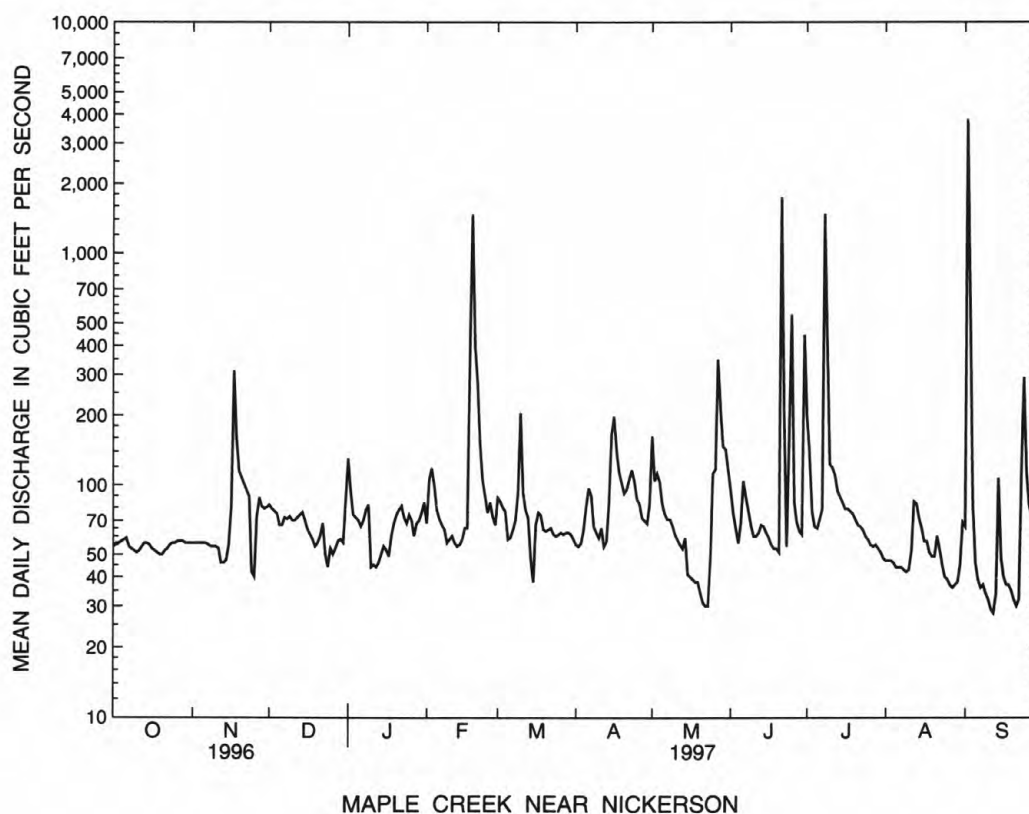
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06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.1	24.9	20.2	21.1	71.3	136	88.2	116	213	93.5	62.8	46.2
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1952 - 1997	
ANNUAL TOTAL	70433		36825			
ANNUAL MEAN	192		101		77.2	
MEDIAN OF ANNUAL MEANS					59.9	
HIGHEST ANNUAL MEAN					264	
LOWEST ANNUAL MEAN					5.19	
HIGHEST DAILY MEAN	10400	Aug 6	3800	Sep 2	10400	Aug 6 1996
LOWEST DAILY MEAN	22	Mar 27	28	Sep 12	.10	Jan 15 1956
ANNUAL SEVEN-DAY MINIMUM	31	Jan 1	33	Sep 7	.19	Sep 17 1981
INSTANTANEOUS PEAK FLOW (STAGE)			7480	Sep 2	13700 (17.33)	Aug 6 1996
INSTANTANEOUS PEAK STAGE			14.53	Sep 2	17.65	Jun 17 1984
ANNUAL RUNOFF (AC-FT)	139700		73040		55920	
10 PERCENT EXCEEDS	215		115		120	
50 PERCENT EXCEEDS	71		64		20	
90 PERCENT EXCEEDS	49		44		1.3	



PLATTE RIVER BASIN

06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1993 to 1995, October 1996 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DISCHARGE INST. FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BAROMETRIC			HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CaCO ₃ (MG/L) (00904)	
					TEMPER- ATURE WATER (°C) (00010)	PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)			
APR 30	1100	65	735	8.4	9.5	724	12	340	310	
MAY 13	1130	54	737	8.1	12.0	730	11	--	--	
MAY 29	1300	188	798	8.1	14.5	737	10	350	10	
JUN 10	1000	60	789	8.1	19.0	736	9.6	--	--	
JUN 25	1030	392	424	7.2	24.0	750	6.6	--	--	
JUL 08	1200	2820	220	7.4	19.5	738	4.0	--	--	
JUL 23	1000	65	674	8.4	25.5	732	10	270	7	
AUG 06	0900	44	628	8.1	19.5	734	10	--	--	
AUG 20	1030	48	683	8.2	21.0	737	10	300	5	
SEP 04	1230	74	367	7.5	20.0	737	9.2	--	--	
SEP 17	1100	32	684	8.0	19.5	733	10	310	12	
DATE		ALKALINITY WAT DIS TOT IT FIELD MG/L AS CaCO3 (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
APR 30		324	451	270	0.61	99	91	28	29	7.2
MAY 13		--	--	--	--	--	--	--	--	--
MAY 29		341	494	490	0.67	247	96	27	29	21
JUN 10		--	--	--	--	--	--	--	--	--
JUN 25		155	--	--	--	--	--	--	--	--
JUL 08		76	--	--	--	--	--	--	--	--
JUL 23		267	409	387	0.56	--	67	26	27	8.5
AUG 06		246	--	--	--	--	--	--	--	--
AUG 20		295	450	420	0.61	26	77	26	28	8.7
SEP 04		--	131	--	--	--	--	--	--	--
SEP 17		297	437	427	0.59	--	84	24	26	14

PLATTE RIVER BASIN

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06800000 MAPLE CREEK NEAR NICKERSON, NE--Continued
(National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO ₃ (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO ₃ (00452)	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, 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)
APR 30	40	0	53	9.8	0.3	14	0.04	4.2	<0.01	1.2
MAY 13	--	--	--	--	--	--	--	--	--	--
MAY 29	417	0	55	13	0.4	16	0.13	5.8	0.99	2.8
JUN 10	--	--	--	--	--	--	--	--	--	--
JUN 25	189	0	--	--	--	--	0.31	4.2	0.55	2.7
JUL 08	--	--	--	--	--	--	--	--	--	--
JUL 23	--	0	53	9.6	0.4	13	0.03	4.0	<0.01	1
AUG 06	--	--	--	--	--	--	--	--	--	--
AUG 20-	--	--	53	10	0.4	16	0.03	3.9	<0.01	0.5
SEP 04	--	--	--	--	--	--	--	--	--	--
SEP 17	--	0	48	10	0.4	17	0.03	3.8	<0.01	0.8
DATE	NITRO- GEN,AM MONIA + ORGANIC DIS. (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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 30	0.4	0.50	0.18	0.21	<3	34	--	536	117	85
MAY 13	--	--	--	--	--	--	--	--	--	--
MAY 29	2.3	0.51	0.32	0.29	10	16	--	2780	1390	100
JUN 10	--	--	--	--	--	--	--	517	--	94
JUN 25	1.8	0.57	0.20	0.18	--	--	12	9000	--	100
JUL 08	--	--	--	--	--	--	--	--	--	--
JUL 23	0.2	0.20	0.07	0.07	<3	14	--	171	--	95
AUG 06	--	--	--	--	--	--	--	--	--	--
AUG 20	0.4	0.19	0.13	0.14	<3	38	--	109	6.2	75
SEP 04	--	--	--	--	--	--	--	--	--	--
SEP 17	0.3	0.42	0.31	0.32	4	43	--	195	--	94

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1080	e900	e1080	e1300	4280	1710	3360	4120	4070	848	683
2	1420	1080	e940	e1100	e2000	4160	1700	3110	3810	3390	839	5540
3	1390	1080	e960	e1200	e5400	4040	1790	3100	3670	2710	824	4880
4	1340	1090	e980	e1200	e5200	3540	1850	3260	3540	2320	798	1930
5	1310	1110	e1000	e1100	e3000	3220	1980	3130	3280	2040	772	1340
6	1290	1120	e980	e1000	e2200	2870	2800	2960	2990	1900	736	1080
7	1270	1130	e1000	e1000	e1700	2740	3070	2950	2780	1980	715	967
8	1250	1150	e1000	e1100	e1500	2760	2550	2840	2520	2450	687	915
9	1220	1130	e980	e1000	e1400	3060	2300	2650	2390	3250	657	911
10	1200	1110	e980	e980	e1400	4650	2600	e2450	2270	2230	637	941
11	1180	1090	e960	e1060	e1300	3360	2460	e2150	2210	2070	704	911
12	1170	1070	e980	e1100	e1300	3120	2450	2050	2120	2140	784	893
13	1160	1070	e1000	e1100	e1300	3050	2220	2000	2070	1960	820	905
14	1150	1070	e960	e1140	e1300	2860	2100	1840	2100	1940	772	951
15	1150	1080	e940	e1200	e1300	2470	2760	1690	2500	1830	746	1010
16	1150	1250	e1000	e1100	e1350	2270	4060	1590	2280	1650	778	926
17	1140	3720	e980	e1000	e1400	2320	4320	1550	2010	1530	804	912
18	1260	5090	e960	e1100	e1500	2300	4100	1490	1880	1450	801	891
19	1710	3020	e920	e1200	e2500	2360	3960	1450	1720	1370	777	866
20	1400	2250	e840	e1240	e6000	2420	3740	1410	1600	1290	731	850
21	1280	1930	e800	e1300	e14000	2310	3790	1360	11600	1220	738	834
22	1180	1840	e840	e1250	10300	2310	3790	1340	8330	1160	726	869
23	1170	1740	e860	e1200	8690	2310	3960	1310	3980	1100	665	1020
24	1150	e1500	e880	e1200	7420	2260	3930	1340	4820	1060	629	1460
25	1130	e1300	e940	e1100	7090	2270	3740	1750	7310	1020	632	1680
26	1130	e1100	e960	e1000	6430	2140	3360	2720	3720	998	622	1390
27	1100	e1000	e980	e980	5310	1930	3190	4340	2950	970	596	1250
28	1070	e840	e1000	e960	5800	1820	2920	5610	2640	853	597	1140
29	1070	e780	e1000	e980	---	1920	2610	4880	2430	771	604	1040
30	1090	e840	e1040	e1000	---	1930	2680	4750	5750	875	642	970
31	1100	---	e1060	e1200	---	1830	---	4390	---	868	641	---
TOTAL	38090	44660	29620	34170	109390	84880	88490	80820	105390	54465	22322	39955
MEAN	1229	1489	955	1102	3907	2738	2950	2607	3513	1757	720	1332
MAX	1710	5090	1060	1300	14000	4650	4320	5610	11600	4070	848	5540
MIN	1070	780	800	960	1300	1820	1700	1310	1600	771	596	683
AC-FT	75550	88580	58750	67780	217000	168400	175500	160300	209000	108000	44280	79250

e Estimated

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

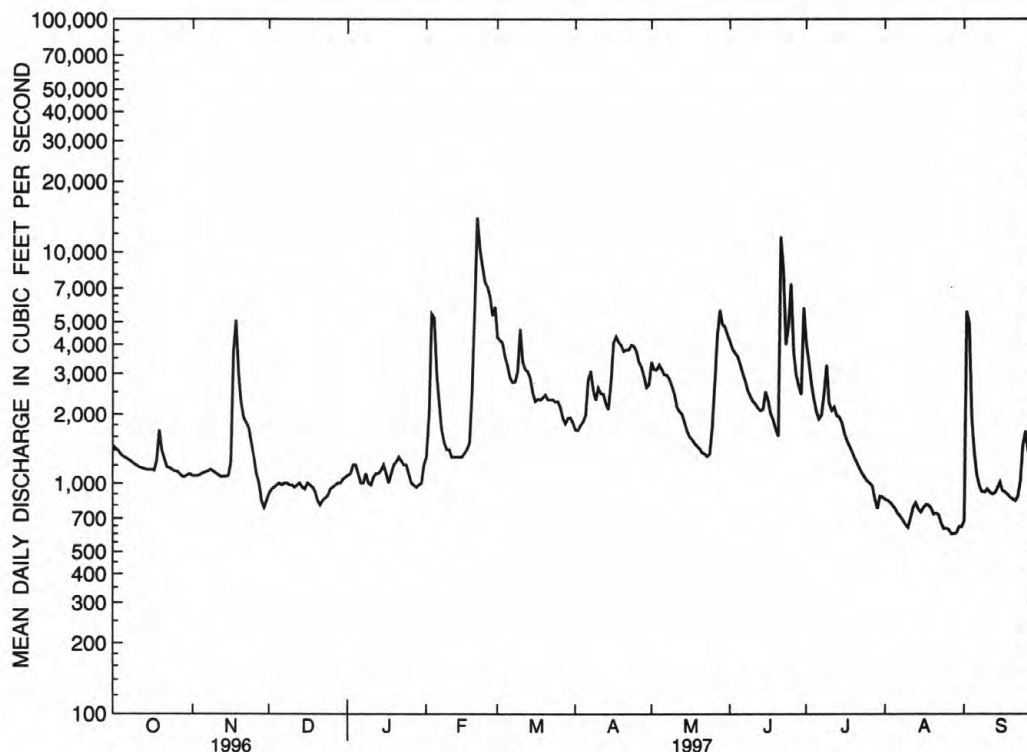
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	708	710	622	586	1180	2283	1983	1986	2756	1342	909	724
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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1929 - 1997
ANNUAL TOTAL	863020	732252	
ANNUAL MEAN	2358	2006	1314
MEDIAN OF ANNUAL MEANS			1070
HIGHEST ANNUAL MEAN			3870
LOWEST ANNUAL MEAN			417
HIGHEST DAILY MEAN	31500 Aug 7	14000 Feb 21	93800 Jun 12 1944
LOWEST DAILY MEAN	780 Nov 29	596 Aug 27	64 Sep 16 1939
ANNUAL SEVEN-DAY MINIMUM	869 Dec 19	617 Aug 24	66 Sep 15 1939
INSTANTANEOUS PEAK FLOW		20200 Jun 21	100000 Jun 12 1944
INSTANTANEOUS PEAK STAGE		*12.60 Feb 21	**16.60 Jun 12 1944
ANNUAL RUNOFF (AC-FT)	1712000	1452000	952200
10 PERCENT EXCEEDS	3730	3940	2600
50 PERCENT EXCEEDS	1630	1340	700
90 PERCENT EXCEEDS	1000	840	299

* From floodmark.

** From floodmark, site and datum then in use.



ELKHORN RIVER AT WATERLOO

PLATTE RIVER BASIN

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 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10200	6450	7600	e4500	e6400	e11500	8760	11000	10200	12100	2200	4310
2	9710	6730	8960	e4400	e6600	e10000	7840	11600	9560	11500	2840	8800
3	9190	5850	9650	e4500	e6800	e9800	7660	11700	8440	10100	2240	12400
4	9030	5980	8970	e4800	e7200	12300	7780	10800	8010	9780	2480	6190
5	8920	6170	8780	e5200	e7400	11800	8470	10700	7690	9510	2300	5610
6	8440	8410	8830	e5400	e7600	11200	8330	9770	7500	8150	2380	5820
7	8320	5580	9060	e5600	e7600	11000	8840	9350	7150	7590	2410	4570
8	8160	6760	9030	e5800	e7400	10400	9350	8510	7450	7000	2220	5270
9	7750	6520	8810	e6000	e7200	10500	8820	7510	7180	7880	2300	4980
10	7830	7030	9080	e5800	e7000	13400	8870	7490	6570	6480	2210	5200
11	7860	6670	8930	e5600	e7000	11800	8720	7490	6420	6260	2700	5580
12	7660	6880	8770	e5000	e7200	11300	8790	7130	6360	6960	3270	5870
13	7630	6170	8790	e4500	e7200	10800	9340	6660	6150	5860	4460	5890
14	7400	6800	9240	e4000	e7200	11100	8730	6580	7370	5000	5460	5760
15	7500	6470	8790	e4000	e7400	10300	9230	6400	7130	4840	6180	5890
16	7330	7350	8270	e4100	e7800	10800	10300	6410	7760	5870	5980	5830
17	7780	15000	8080	e4400	e8000	9550	11700	5970	7740	5130	8010	5750
18	7160	17900	e3500	e5000	e11000	10600	12400	6010	7860	4530	7500	5670
19	8210	13400	e1000	e5800	e20000	8850	11700	6080	8670	4360	7320	5470
20	7850	11400	e1100	e6600	e31000	9140	11400	5670	9080	3730	6800	5310
21	6980	9960	e1200	e7000	e27000	9200	10500	5610	18900	3920	6540	5390
22	7000	10000	e1500	e7200	e21000	8470	11000	5650	23400	3570	6630	5850
23	6490	9340	e2200	e7400	e17000	7270	12100	5250	17500	2630	6200	6520
24	6400	8450	e3000	e7600	e15000	9210	12600	5280	15500	2860	6400	6930
25	6050	6580	e3500	e7400	e13000	8890	11700	5760	24200	2900	6370	9510
26	5870	5980	e3800	e7200	e15000	8570	10500	6850	15500	2790	6340	15000
27	6200	5680	e4200	e6800	e14000	8590	10400	7730	13000	2720	5530	10100
28	6220	5800	e4500	e6600	e12000	8480	10100	11200	13200	2420	5390	8690
29	5750	6100	e4900	e6400	---	7310	9820	12100	10700	2860	4910	7580
30	6270	6640	e4800	e6200	---	7710	9560	11800	13500	2310	5060	7160
31	6560	---	e4600	e6200	---	8780	---	11300	---	2030	4690	---
TOTAL	233720	238050	193440	177000	319000	308620	295310	251360	319690	173640	145320	202900
MEAN	7539	7935	6240	5710	11390	9955	9844	8108	10660	5601	4688	6763
MAX	10200	17900	9650	7600	31000	13400	12600	12100	24200	12100	8010	15000
MIN	5750	5580	1000	4000	6400	7270	7660	5250	6150	2030	2200	4310
AC-FT	463600	472200	383700	351100	632700	612100	585700	498600	634100	344400	288200	402500

e Estimated

PLATTE RIVER BASIN

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06801000 PLATTE RIVER NEAR ASHLAND, NE --Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

MEAN	5214	5476	5172	4878	6815	9882	7899	8688	11410	8538	5385	5300
MAX	8115	7935	7335	7310	11390	23190	14830	19330	23270	31980	10730	9825
(WY)	1994	1997	1994	1995	1997	1993	1993	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 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1989 - 1997 (SINCE STORAGE IN LAKE McCONAUGHY)

ANNUAL TOTAL	3002240	2858050	
ANNUAL MEAN	8203	7830	a7052
HIGHEST ANNUAL MEAN			11820 1993
LOWEST ANNUAL MEAN			4612 1989
HIGHEST DAILY MEAN	41700 Aug 7	31000 Feb 20	110000 Mar 10 1993
LOWEST DAILY MEAN	1000 Dec 19	1000 Dec 19	662 Sep 2 1991
ANNUAL SEVEN-DAY MINIMUM	1930 Dec 18	1930 Dec 18	701 Aug 29 1991
INSTANTANEOUS PEAK FLOW (STAGE)		e38000 (20.86) Feb 21	*130000 (**19.23) Mar 10 1993
INSTANTANEOUS PEAK STAGE		***23.05 Feb 20	***23.05 Feb 20 1997
ANNUAL RUNOFF (AC-FT)	5955000	5669000	5109000
10 PERCENT EXCEEDS	12000	11700	11500
50 PERCENT EXCEEDS	7070	7320	5800
90 PERCENT EXCEEDS	3510	4160	2540

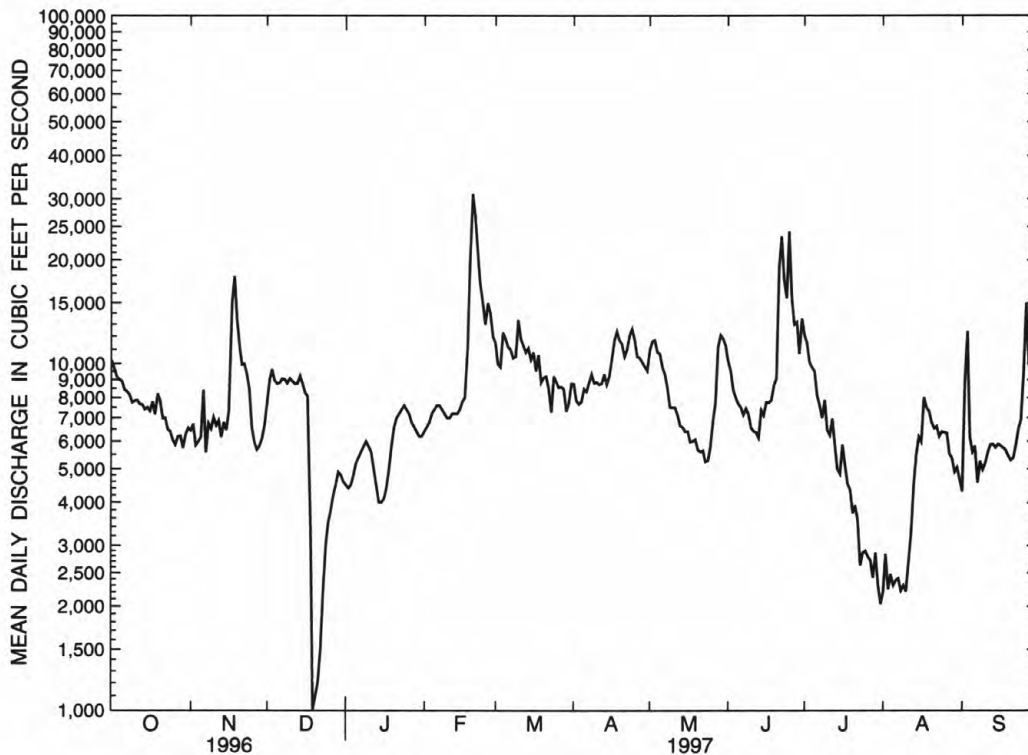
a Average discharge for water years 1942-52, 5961 ft³/s

e Estimated.

* Estimated; discharge includes overbank flow.

** Backwater from ice.

*** Ice jam.



PLATTE RIVER NEAR ASHLAND

PLATTE RIVER BASIN

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.

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	7.6	29	e3.2	e1.3
2	---	---	---	---	---	---	---	---	5.9	7.7	e3.5	e1.4
3	---	---	---	---	---	---	---	---	4.9	5.3	e4.5	e1.4
4	---	---	---	---	---	---	---	---	4.5	3.9	e5.4	e1.5
5	---	---	---	---	---	---	---	---	3.9	3.5	e4.7	e1.5
6	---	---	---	---	---	---	---	---	3.4	3.3	e3.2	e1.6
7	---	---	---	---	---	---	---	---	2.7	3.1	e2.7	e1.6
8	---	---	---	---	---	---	---	---	2.4	3.1	e2.6	e1.7
9	---	---	---	---	---	---	---	---	2.3	3.0	e2.9	e1.8
10	---	---	---	---	---	---	---	---	2.3	37	e3.5	e1.6
11	---	---	---	---	---	---	---	---	2.2	14	e3.3	e1.6
12	---	---	---	---	---	---	---	---	2.4	7.9	e3.2	e1.5
13	---	---	---	---	---	---	---	4.5	2.1	4.6	e1.4	e1.5
14	---	---	---	---	---	---	---	4.1	1.8	2.8	e1.4	e1.5
15	---	---	---	---	---	---	---	3.8	1.7	2.3	e1.3	e1.5
16	---	---	---	---	---	---	---	3.9	1.8	1.8	e1.3	e1.5
17	---	---	---	---	---	---	---	3.7	1.8	1.6	e1.4	e1.6
18	---	---	---	---	---	---	---	3.6	1.8	1.9	e1.5	e1.7
19	---	---	---	---	---	---	---	3.2	1.7	1.9	e1.5	e1.8
20	---	---	---	---	---	---	---	3.2	2.0	1.4	e1.6	e1.9
21	---	---	---	---	---	---	---	3.2	5.5	46	e1.7	e2.2
22	---	---	---	---	---	---	---	3.6	2.0	4.2	e1.7	e3.0
23	---	---	---	---	---	---	---	4.6	1.4	2.3	e1.7	e4.0
24	---	---	---	---	---	---	---	14	21	2.0	e1.3	e5.1
25	---	---	---	---	---	---	---	5.0	91	e1.5	e1.5	e3.5
26	---	---	---	---	---	---	---	43	18	e1.4	e1.4	e1.9
27	---	---	---	---	---	---	---	28	9.7	e1.5	e1.2	e1.5
28	---	---	---	---	---	---	---	20	6.7	e1.7	e1.2	e1.8
29	---	---	---	---	---	---	---	15	4.7	e2.1	e1.2	e1.7
30	---	---	---	---	---	---	---	12	3.7	e2.5	e1.2	e1.6
31	---	---	---	---	---	---	---	9.6	---	e2.7	e1.3	---
TOTAL	---	---	---	---	---	---	---	---	222.9	207.0	69.5	57.8
MEAN	---	---	---	---	---	---	---	---	7.43	6.68	2.24	1.93
MAX	---	---	---	---	---	---	---	---	91	46	5.4	5.1
MIN	---	---	---	---	---	---	---	---	1.4	1.4	1.2	1.3
AC-FT	---	---	---	---	---	---	---	---	442	411	138	115

e Estimated

PLATTE RIVER BASIN

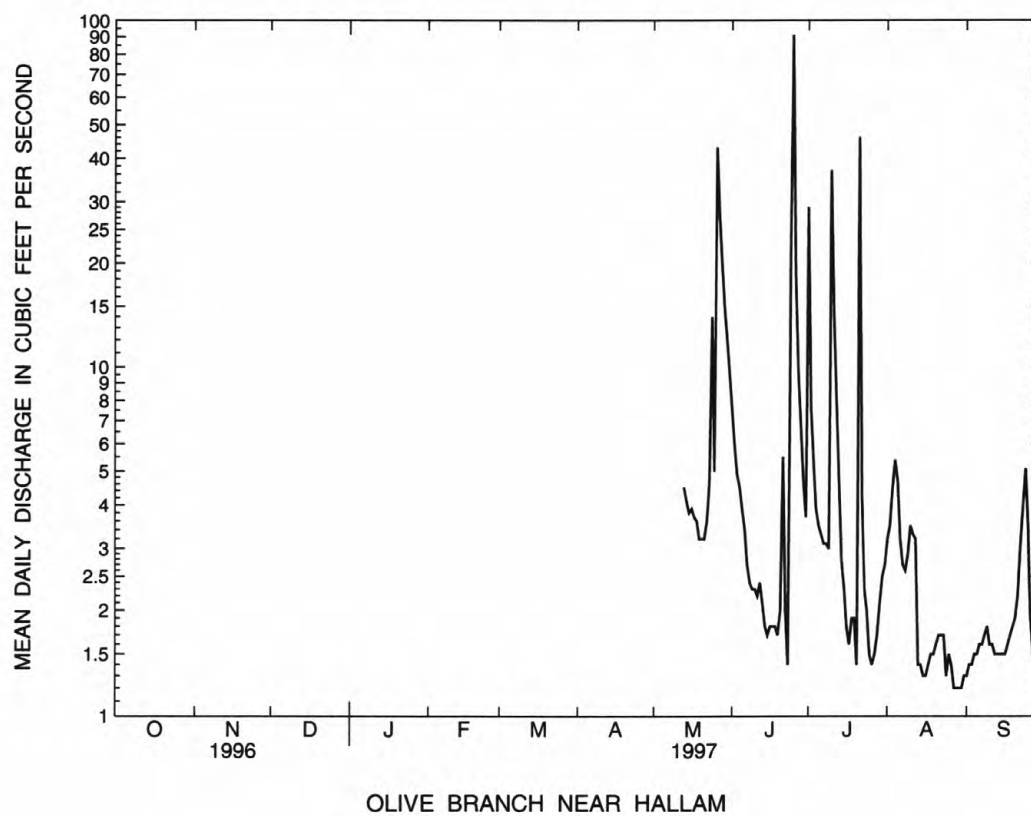
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06801180 OLIVE BRANCH NEAR HALLAM, NE--Continued

FOR 1997 WATER YEAR

INSTANTANEOUS PEAK FLOW	265	Jun 25
INSTANTANEOUS PEAK STAGE	*5.35	Jun 25

*Maximum stage since station established.



PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	e66	e25	27	69	22	204	46	149	19	12
2	16	17	e60	e28	28	52	22	119	41	78	19	21
3	16	18	e55	e33	28	48	22	121	38	52	26	55
4	16	19	e50	e29	27	44	24	83	37	44	46	54
5	16	22	e45	e26	26	34	32	70	34	37	19	54
6	15	21	41	e24	24	35	32	61	32	34	17	67
7	15	21	38	e23	22	34	24	415	30	31	16	59
8	15	21	35	24	20	33	23	253	28	29	16	52
9	15	21	34	21	27	48	22	114	27	28	15	46
10	15	21	34	e16	22	54	24	87	25	66	14	39
11	14	21	34	e15	18	50	32	73	24	97	15	33
12	14	20	33	e17	17	48	33	63	24	39	17	26
13	14	21	32	e18	20	46	42	58	23	31	15	22
14	14	21	31	e19	19	34	71	54	23	26	15	19
15	13	23	33	e20	24	34	171	50	22	24	15	18
16	14	1160	30	e21	26	35	96	47	22	22	15	17
17	13	1060	28	e19	87	35	69	45	20	21	15	17
18	13	374	e18	21	347	37	60	43	19	20	16	18
19	13	230	e17	23	110	34	51	39	18	19	17	16
20	13	163	e16	22	70	31	46	37	18	19	17	16
21	13	130	e17	25	60	30	44	35	22	359	16	16
22	15	95	e19	26	50	30	44	34	22	164	16	17
23	22	90	e20	23	42	29	41	37	18	77	16	20
24	22	73	e17	20	38	29	39	138	130	45	15	27
25	20	69	e15	e19	39	30	36	59	1240	35	15	22
26	17	66	e16	e18	42	26	34	161	376	30	15	20
27	15	e58	e18	e17	40	24	34	127	182	27	13	19
28	16	e52	e21	e16	44	24	34	104	106	31	12	19
29	20	e54	e24	e15	---	24	33	73	73	26	12	19
30	21	e76	e23	23	---	23	282	60	57	23	12	19
31	19	---	e24	25	---	23	---	51	---	20	12	---
TOTAL	491	4054	944	671	1344	1127	1539	2915	2777	1703	518	859
MEAN	15.8	135	30.5	21.6	48.0	36.4	51.3	94.0	92.6	54.9	16.7	28.6
MAX	22	1160	66	33	347	69	282	415	1240	359	46	67
MIN	13	17	15	15	17	23	22	34	18	19	12	12
AC-FT	974	8040	1870	1330	2670	2240	3050	5780	5510	3380	1030	1700

e Estimated

PLATTE RIVER BASIN

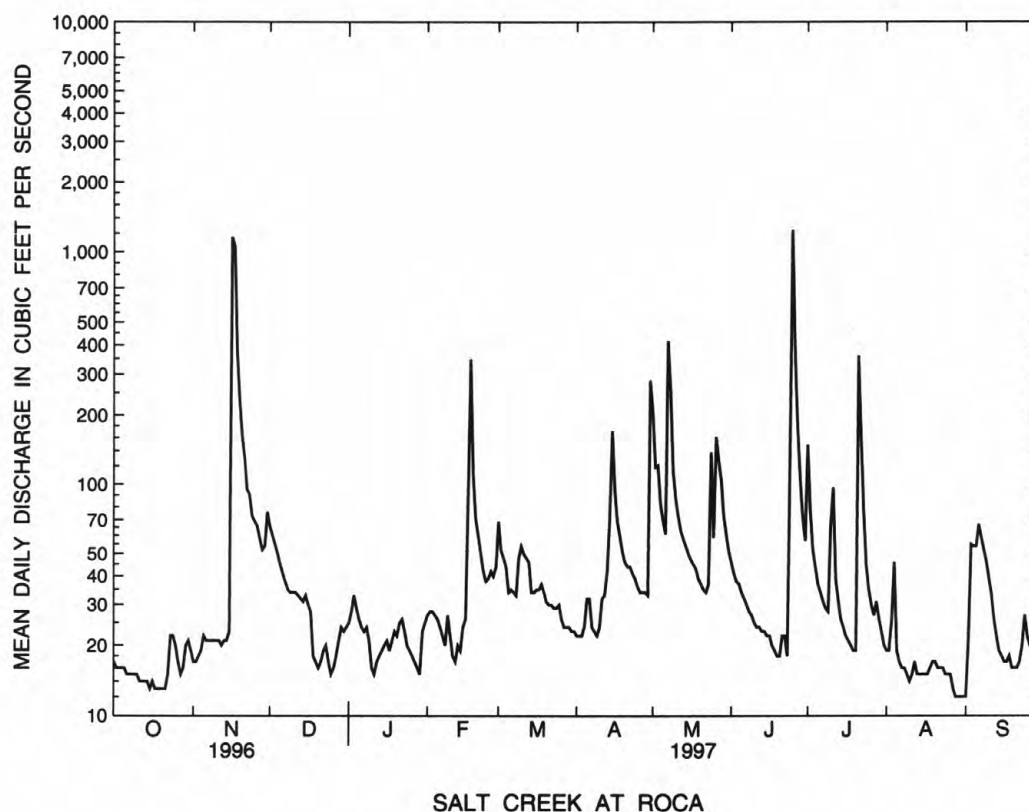
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06803000 SALT CREEK AT ROCA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.6	17.0	15.1	18.4	36.2	85.8	62.9	93.8	88.8	82.9	32.0	23.9
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1952 - 1997	
ANNUAL TOTAL	35578.0		18942			
ANNUAL MEAN	97.2		51.9		49.9	
HIGHEST ANNUAL MEAN					200	1987
LOWEST ANNUAL MEAN					6.15	1981
HIGHEST DAILY MEAN	2870	May 9	1240	Jun 25	6070	Jul 14 1952
LOWEST DAILY MEAN	2.4	Feb 3	12	Aug 28	.20	Jul 23 1955
ANNUAL SEVEN-DAY MINIMUM	4.7	Jan 30	13	Aug 26	.61	Sep 6 1955
INSTANTANEOUS PEAK FLOW			2760	Nov 16	16700	Jul 10 1958
INSTANTANEOUS PEAK STAGE			16.64	Nov 16	22.70	Jul 10 1958
ANNUAL RUNOFF (AC-FT)	70570		37570		36160	
10 PERCENT EXCEEDS	201		77		73	
50 PERCENT EXCEEDS	18		26		10	
90 PERCENT EXCEEDS	12		15		3.9	



PLATTE RIVER BASIN

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 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	27	21	144	34	45	104	25	329	67	257	22	17
2	24	19	114	41	47	93	24	185	61	164	20	18
3	21	20	98	49	48	74	25	216	e52	105	28	45
4	21	25	86	49	39	66	30	143	48	85	54	67
5	21	25	82	50	36	55	39	121	44	72	e36	64
6	20	28	78	e40	36	49	41	105	40	64	e27	106
7	19	25	71	30	33	47	33	404	36	57	e19	80
8	19	25	63	32	34	45	28	337	32	50	e19	67
9	20	24	60	31	e32	160	26	169	30	45	e18	59
10	18	23	59	e27	e30	97	32	132	29	46	e25	49
11	17	23	59	22	e29	76	39	114	28	133	e40	43
12	16	23	56	24	e30	65	44	102	28	73	20	38
13	17	22	52	26	e29	60	61	89	28	52	21	34
14	17	23	51	27	e31	54	87	80	26	42	20	31
15	16	27	50	28	e32	45	202	72	26	36	19	28
16	16	668	38	26	36	43	163	63	26	32	19	26
17	16	1410	24	25	88	42	118	61	25	29	18	24
18	16	485	64	31	395	45	98	56	24	26	20	23
19	16	318	30	32	238	42	87	49	23	25	26	23
20	16	263	22	31	141	39	78	44	23	23	23	20
21	16	e200	25	38	111	38	75	40	32	87	21	19
22	20	e165	31	46	87	35	77	38	31	327	20	27
23	21	e140	29	36	73	33	74	36	26	119	19	25
24	28	e120	26	35	62	33	68	117	70	74	19	49
25	25	e110	26	32	54	35	60	101	1200	49	18	34
26	22	e95	28	25	67	33	56	133	559	40	18	25
27	19	e85	29	24	64	30	53	164	246	36	18	20
28	17	e82	31	22	64	29	51	139	173	35	18	18
29	21	110	33	31	---	28	48	109	135	33	17	17
30	25	182	32	32	---	27	248	91	114	25	18	16
31	25	---	33	35	---	26	---	78	---	21	17	---
TOTAL	612	4786	1624	1011	2011	1648	2090	3917	3282	2262	697	1112
MEAN	19.7	160	52.4	32.6	71.8	53.2	69.7	126	109	73.0	22.5	37.1
MAX	28	1410	144	50	395	160	248	404	1200	327	54	106
MIN	16	19	22	22	29	26	24	36	23	21	17	16
AC-FT	1210	9490	3220	2010	3990	3270	4150	7770	6510	4490	1380	2210

e Estimated

PLATTE RIVER BASIN

195

06803080 SALT CREEK AT PIONEERS BOULEVARD AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.5	65.5	32.8	32.7	42.8	46.9	63.2	490	160	110	43.6	35.5
MAX	19.7	160	52.4	49.5	71.8	71.4	97.9	689	189	220	90.6	55.8
(WY)	1997	1997	1997	1995	1997	1995	1995	1995	1995	1996	1996	1996
MIN	11.0	13.8	15.0	16.1	16.5	16.2	22.1	126	109	38.2	17.7	10.3
(WY)	1996	1996	1996	1996	1996	1996	1996	1997	1997	1995	1995	1995

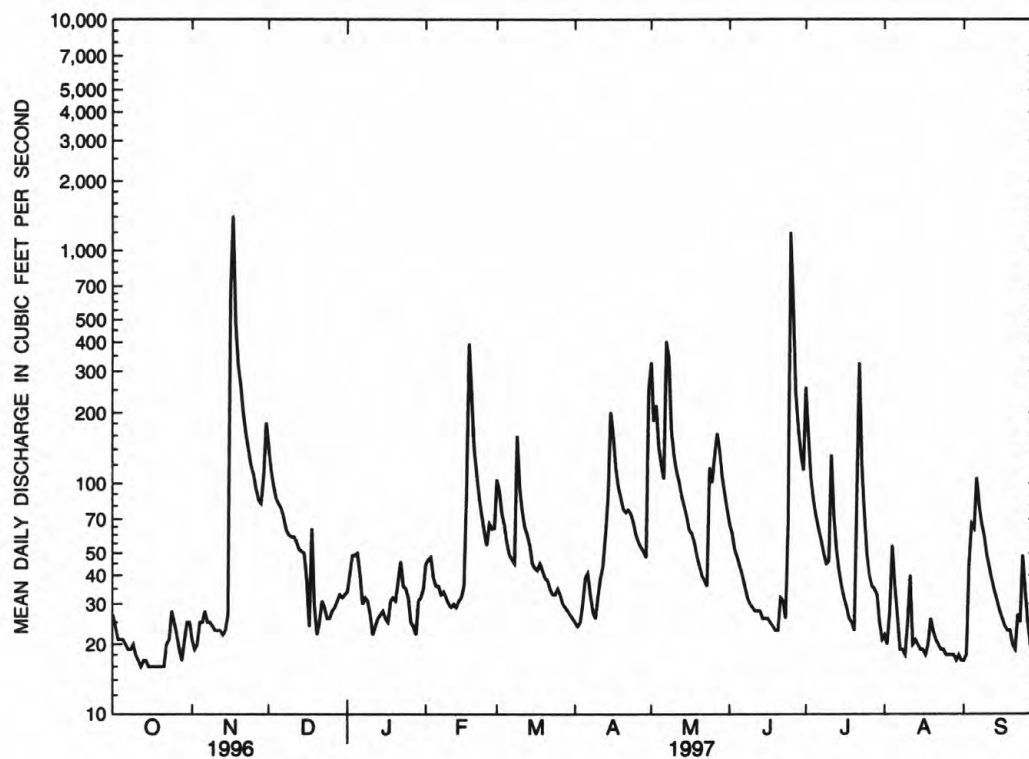
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1994 - 1997

ANNUAL TOTAL	46199.9	25052	
ANNUAL MEAN	126	68.6	95.3
HIGHEST ANNUAL MEAN			110
LOWEST ANNUAL MEAN			68.6
HIGHEST DAILY MEAN	3380	May 9	1410
LOWEST DAILY MEAN	4.2	Feb 3	16
ANNUAL SEVEN-DAY MINIMUM	6.1	Jul 13	16
INSTANTANEOUS PEAK FLOW			1860
INSTANTANEOUS PEAK STAGE			12.71
ANNUAL RUNOFF (AC-FT)	91640	49690	69070
10 PERCENT EXCEEDS	239	132	163
50 PERCENT EXCEEDS	25	36	29
90 PERCENT EXCEEDS	15	19	14



SALT CREEK AT PIONEERS BOULEVARD AT LINCOLN

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.8	e6.4	5.2	6.4	7.8	5.6	28	10	53	2.7	1.3
2	2.3	3.8	e6.6	6.8	5.6	7.2	5.8	23	9.2	25	2.5	1.5
3	2.5	4.2	e6.8	6.6	5.6	7.1	6.1	21	8.7	18	2.3	1.6
4	3.0	5.3	e7.0	6.8	5.3	6.5	7.4	17	8.9	14	2.1	1.6
5	3.1	5.3	e6.8	5.9	5.5	5.6	8.8	16	8.6	12	1.9	1.4
6	3.0	4.8	e6.6	4.4	4.6	5.9	7.7	15	8.6	12	1.8	1.3
7	2.9	4.4	e6.6	3.9	4.4	6.2	6.0	18	7.9	9.6	1.8	1.3
8	3.1	4.3	e6.4	4.2	4.9	6.1	5.5	16	7.2	8.7	1.7	1.3
9	3.3	4.5	e6.4	4.3	5.2	36	5.5	13	6.8	7.5	1.7	1.3
10	3.0	4.5	6.5	3.5	e5.2	16	6.8	12	6.8	122	1.7	1.2
11	3.2	4.6	6.2	4.4	e5.2	11	7.0	13	6.7	43	4.1	.70
12	3.5	4.7	5.9	3.7	e5.0	9.9	8.4	11	8.2	20	3.9	.62
13	3.5	4.9	5.8	2.6	e4.7	9.8	9.9	11	7.1	14	2.7	.62
14	3.4	5.2	5.9	1.8	e4.6	11	15	11	6.6	11	2.4	.62
15	3.3	5.9	6.4	2.0	e4.7	8.5	26	10	6.4	9.0	2.2	.62
16	3.4	68	4.9	4.0	16	9.8	16	10	6.6	8.0	2.2	.62
17	3.1	53	3.9	e3.8	56	7.7	12	10	6.2	7.0	2.1	.59
18	3.0	14	4.5	e3.8	69	7.2	11	10	5.9	6.2	1.9	.58
19	3.3	21	3.7	e3.8	21	7.0	10	9.0	6.3	5.6	3.7	.59
20	3.6	32	3.3	4.7	11	7.1	9.9	8.7	6.1	5.0	3.0	.58
21	3.5	30	e3.4	8.0	9.5	6.8	11	8.7	8.7	5.0	2.3	.59
22	3.9	20	e3.5	6.4	8.1	6.2	12	8.8	7.6	5.0	2.4	.89
23	4.8	8.7	e3.3	5.0	7.2	6.0	12	8.7	6.1	4.4	2.1	3.4
24	4.8	10	e3.4	e4.8	5.7	7.1	12	10	12	3.9	2.2	4.4
25	5.0	7.1	e3.7	e4.7	e5.8	6.4	11	9.8	251	3.5	3.0	2.7
26	4.6	6.2	e4.2	e4.7	e6.0	6.0	10	18	55	3.0	1.7	1.6
27	3.8	6.7	e4.5	e4.6	e6.4	6.2	11	17	34	3.0	1.4	1.2
28	4.4	7.2	e4.8	e4.4	7.8	6.5	11	16	25	3.8	1.4	.99
29	5.1	e7.6	e4.4	e4.2	---	6.0	11	14	20	3.5	1.2	.95
30	4.0	e7.2	e4.5	e4.5	---	5.9	32	12	16	3.0	1.2	.96
31	3.7	---	4.9	4.6	---	5.6	---	11	---	2.5	1.4	---
TOTAL	109.7	368.9	161.2	142.1	306.4	262.1	323.4	416.7	584.2	451.2	68.7	37.62
MEAN	3.54	12.3	5.20	4.58	10.9	8.45	10.8	13.4	19.5	14.6	2.22	1.25
MAX	5.1	68	7.0	8.0	69	36	32	28	251	122	4.1	4.4
MIN	2.3	3.8	3.3	1.8	4.4	5.6	5.5	8.7	5.9	2.5	1.2	.58
AC-FT	218	732	320	282	608	520	641	827	1160	895	136	75

e Estimated

PLATTE RIVER BASIN

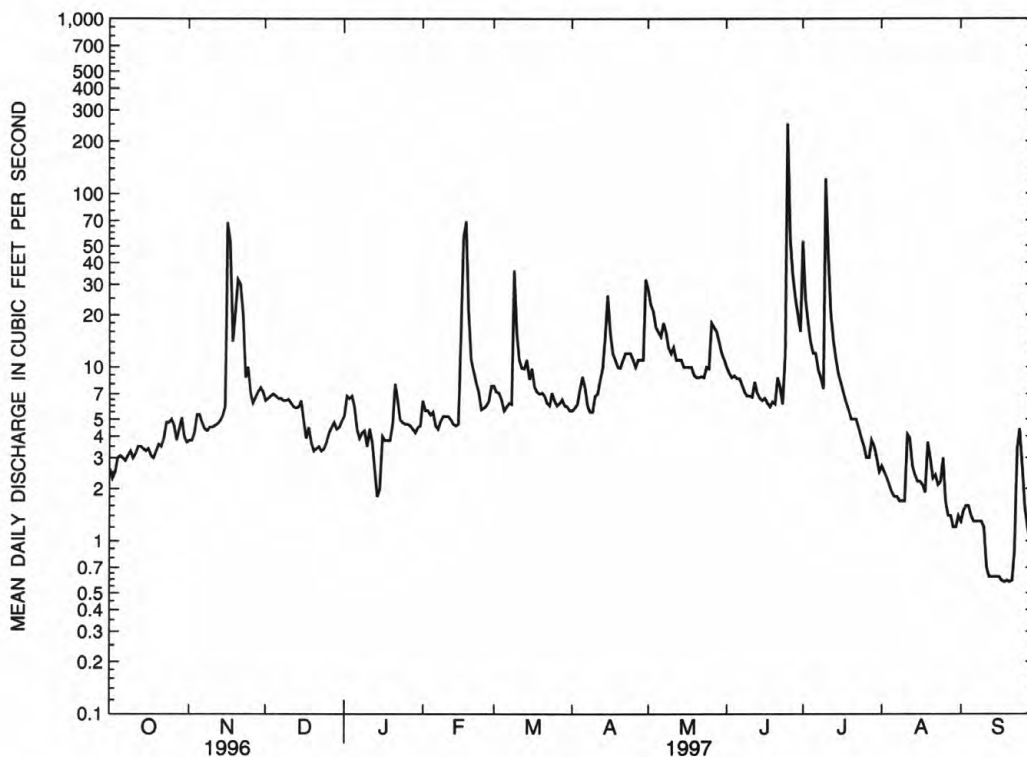
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06803093 HAINES BRANCH AT SW 56th ST. AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.95	6.44	4.34	4.69	8.19	7.40	11.5	78.2	26.3	11.2	4.61	4.31
MAX	3.64	12.3	5.20	6.03	10.9	10.5	19.3	139	30.4	14.6	7.87	9.46
(WY)	1996	1997	1997	1995	1997	1995	1995	1995	1995	1997	1996	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1994 - 1997	
ANNUAL TOTAL	5387.6		3232.22			
ANNUAL MEAN	14.7		8.86		14.2	
HIGHEST ANNUAL MEAN					19.9	
LOWEST ANNUAL MEAN					8.86	
HIGHEST DAILY MEAN	616	May 27	251	Jun 25	786	May 8 1995
LOWEST DAILY MEAN	1.0	Mar 8	.58	Sep 18	.58	Sep 18 1997
ANNUAL SEVEN-DAY MINIMUM	1.7	Feb 26	.60	Sep 15	.60	Sep 15 1997
INSTANTANEOUS PEAK FLOW			873	Jun 25	1780	May 7 1995
INSTANTANEOUS PEAK STAGE			8.59	Jun 25	12.06	May 7 1995
ANNUAL RUNOFF (AC-FT)	10690		6410		10320	
10 PERCENT EXCEEDS	30		16		27	
50 PERCENT EXCEEDS	4.3		5.8		4.8	
90 PERCENT EXCEEDS	2.5		1.8		1.8	



HAINES BRANCH AT SW 56TH ST AT LINCOLN

PLATTE RIVER BASIN

06803170 MIDDLE CREEK AT SW 40 th ST. AT LINCOLN, NE

LOCATION (REVISED).--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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	6.3	e8.2	11	e10	13	6.1	17	6.3	137	5.4	3.2
2	9.6	6.2	e8.4	8.2	8.7	12	6.2	14	5.9	98	5.2	3.3
3	9.1	6.2	e8.6	e6.2	7.9	12	6.8	14	5.8	90	4.8	7.3
4	9.3	6.5	e8.2	e6.4	7.1	12	7.4	12	5.8	49	4.4	6.6
5	9.1	6.7	e7.4	e6.6	6.8	11	8.8	11	5.5	39	4.1	6.7
6	9.2	6.4	e7.4	e6.8	6.5	10	12	9.5	5.3	37	4.0	6.7
7	11	6.2	7.5	e6.6	e5.6	9.8	8.9	22	5.0	34	3.7	6.8
8	16	6.0	7.6	e6.4	e5.4	10	7.5	17	4.9	24	3.5	6.9
9	16	6.0	7.2	6.0	e5.4	15	6.9	12	4.6	19	3.4	9.0
10	16	6.1	7.9	e5.8	e5.8	13	7.7	10	4.5	20	3.4	17
11	16	6.2	7.6	e7.0	e6.0	11	9.5	9.5	4.6	21	6.1	18
12	16	6.2	7.3	e6.8	e6.0	11	10	9.2	6.0	17	4.9	18
13	15	6.2	7.0	e7.0	e5.6	11	11	8.5	5.4	16	3.4	18
14	15	6.3	6.9	e8.0	e5.4	15	13	7.9	4.8	15	3.0	18
15	15	6.7	6.5	e9.4	e5.8	11	17	7.3	4.7	13	2.8	18
16	15	6.0	e6.0	e8.4	e5.0	9.2	13	6.5	4.7	12	2.8	18
17	15	7.6	e5.6	e8.0	21	9.2	10	6.4	4.6	12	2.8	17
18	15	15	e5.4	e8.8	79	9.5	9.7	6.4	4.7	11	2.9	18
19	15	13	e5.2	e10	27	8.9	9.6	6.7	4.2	10	4.3	18
20	15	23	e5.2	e11	19	8.2	9.5	5.9	4.1	10	3.9	17
21	15	22	e7.0	e12	18	8.7	11	5.3	5.3	9.2	3.3	17
22	15	23	e6.8	e10	18	8.5	12	5.1	5.1	8.7	3.1	18
23	15	29	e6.6	e8.8	15	7.9	12	5.0	4.6	8.3	3.0	16
24	15	33	e6.2	e8.2	13	7.7	11	5.4	17	7.8	3.1	6.9
25	15	e30	e5.8	e7.6	e12	8.4	10	5.6	564	7.5	3.0	5.6
26	15	e29	e6.2	e7.6	e11	7.4	9.5	7.7	101	7.1	3.0	4.9
27	15	9.0	e7.0	e7.4	e12	6.8	9.5	8.9	68	6.6	3.0	4.7
28	14	e8.0	e8.8	e7.0	13	7.3	9.1	8.7	57	6.5	3.1	4.5
29	6.6	e8.4	e8.0	e6.4	---	7.4	8.7	8.1	49	6.6	3.1	4.3
30	6.1	e8.2	e8.0	e8.0	---	7.1	16	7.3	43	5.8	3.1	4.1
31	6.0	---	e9.4	e9.0	---	6.6	---	6.9	---	5.5	3.0	---
TOTAL	404.3	480.8	220.9	246.4	361.0	305.6	299.4	286.8	1015.4	763.6	112.6	337.5
MEAN	13.0	16.0	7.13	7.95	12.9	9.86	9.98	9.25	33.8	24.6	3.63	11.3
MAX	16	76	9.4	12	79	15	17	22	564	137	6.1	18
MIN	6.0	6.0	5.2	5.8	5.0	6.6	6.1	5.0	4.1	5.5	2.8	3.2
AC-FT	802	954	438	489	716	606	594	569	2010	1510	223	669

e Estimated

PLATTE RIVER BASIN

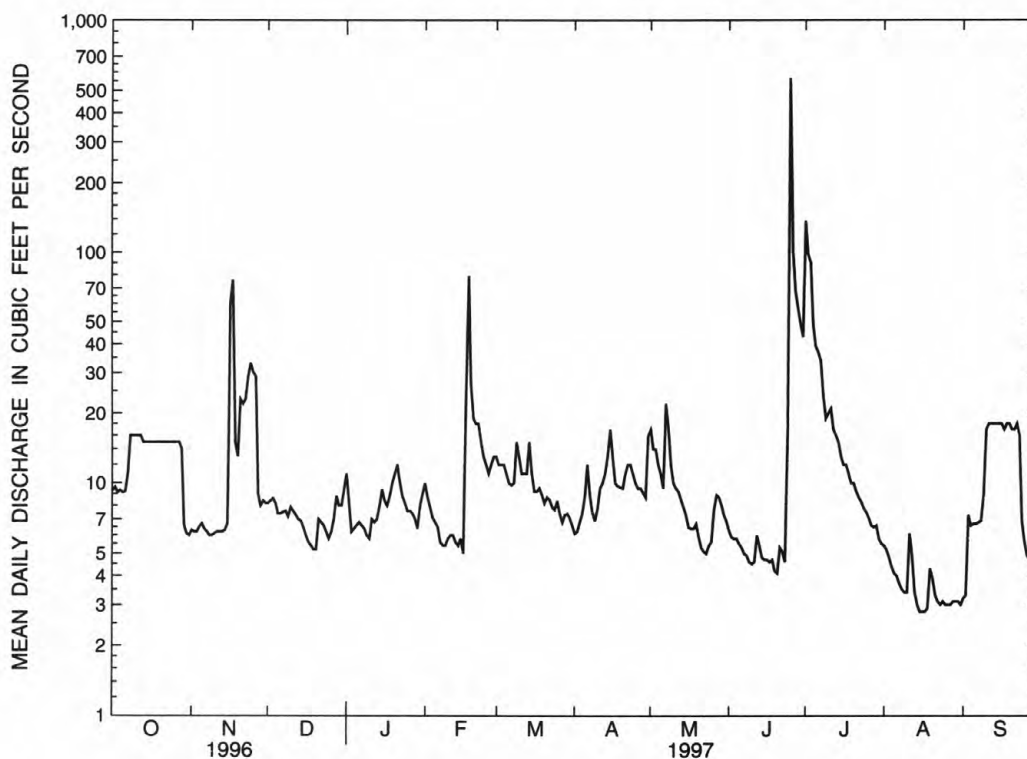
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06803170 MIDDLE CREEK AT SW 40 th ST. AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.89	8.48	6.02	6.55	9.38	8.66	9.80	92.8	42.6	13.8	6.58	11.4
MAX	13.0	16.0	7.13	7.95	12.9	12.7	17.5	136	65.7	24.6	12.4	16.4
(WY)	1997	1997	1997	1997	1997	1995	1995	1995	1996	1997	1996	1996
MIN	5.12	3.98	4.05	4.03	5.66	3.40	1.98	9.25	28.2	7.29	3.63	6.53
(WY)	1995	1996	1996	1996	1996	1996	1996	1997	1995	1995	1997	1995

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1994 - 1997
ANNUAL TOTAL	8843.1	4834.3	
ANNUAL MEAN	24.2	13.2	18.8
HIGHEST ANNUAL MEAN			22.5
LOWEST ANNUAL MEAN			13.2
HIGHEST DAILY MEAN	1160 May 27	564 Jun 25	1160 May 27 1996
LOWEST DAILY MEAN	1.1 Apr 25	2.8 Aug 15	.92 Aug 29 1995
ANNUAL SEVEN-DAY MINIMUM	1.2 Apr 21	3.0 Aug 22	1.2 Apr 21 1996
INSTANTANEOUS PEAK FLOW		2330 Jun 25	2670 May 27 1996
INSTANTANEOUS PEAK STAGE		12.02 Jun 25	12.97 May 27 1996
ANNUAL RUNOFF (AC-FT)	17540	9590	13640
10 PERCENT EXCEEDS	45	18	29
50 PERCENT EXCEEDS	7.3	8.0	7.1
90 PERCENT EXCEEDS	2.9	4.6	3.4



MIDDLE CREEK AT SW 40TH ST AT LINCOLN

PLATTE RIVER BASIN

06803500 SALT CREEK AT LINCOLN, NE

LOCATION.--Lat 40°50'49", long 96°40'54", in NW1/4SW1/4 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 except those for estimated period which is fair. Flood flow affected by several detention dams.

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	138	88	279	131	149	226	107	627	187	756	135	67
2	127	87	238	146	151	228	108	394	176	445	108	101
3	111	87	222	158	156	203	111	430	163	354	118	97
4	113	122	206	165	150	189	150	312	156	222	173	143
5	115	102	202	147	142	177	174	270	146	186	127	142
6	111	103	203	131	133	169	151	245	134	173	92	174
7	107	99	191	145	130	165	144	837	120	163	85	199
8	111	99	179	156	130	163	118	644	109	148	79	149
9	115	99	174	148	122	447	109	384	104	141	76	141
10	104	97	176	115	131	286	163	301	102	229	76	137
11	99	99	174	118	139	234	155	265	104	359	369	129
12	105	96	169	111	139	208	197	241	129	207	168	118
13	110	94	164	105	124	198	209	219	106	157	130	109
14	111	96	164	105	152	194	237	203	96	139	112	101
15	109	107	158	108	151	174	390	188	94	126	99	101
16	107	1490	139	110	155	168	361	172	119	115	98	98
17	101	2500	109	102	277	166	270	169	101	99	86	92
18	101	678	135	102	899	165	230	162	96	90	87	91
19	100	471	e106	106	581	164	211	151	92	85	204	89
20	97	435	e100	117	357	159	212	137	88	83	107	80
21	97	382	111	131	298	158	232	128	215	101	99	80
22	116	361	e110	144	245	152	214	123	105	510	92	168
23	128	349	e108	124	222	142	206	120	103	243	87	150
24	117	307	e110	122	212	158	187	195	349	186	81	280
25	115	220	110	100	197	154	176	220	3850	146	82	129
26	112	216	116	105	224	147	165	340	1110	125	79	99
27	100	221	118	100	204	140	160	388	499	159	82	80
28	101	196	116	101	208	138	158	302	363	169	77	71
29	130	316	120	105	---	129	150	254	289	140	74	70
30	89	354	122	111	---	116	616	225	242	119	79	66
31	93	---	124	138	---	114	---	204	---	109	67	---
TOTAL	3390	9971	4753	3807	6178	5631	6071	8850	9547	6284	3428	3551
MEAN	109	332	153	123	221	182	202	285	318	203	111	118
MAX	138	2500	279	165	899	447	616	837	3850	756	369	280
MIN	89	87	100	100	122	114	107	120	88	83	67	66
AC-FT	6720	19780	9430	7550	12250	11170	12040	17550	18940	12460	6800	7040

e Estimated

PLATTE RIVER BASIN

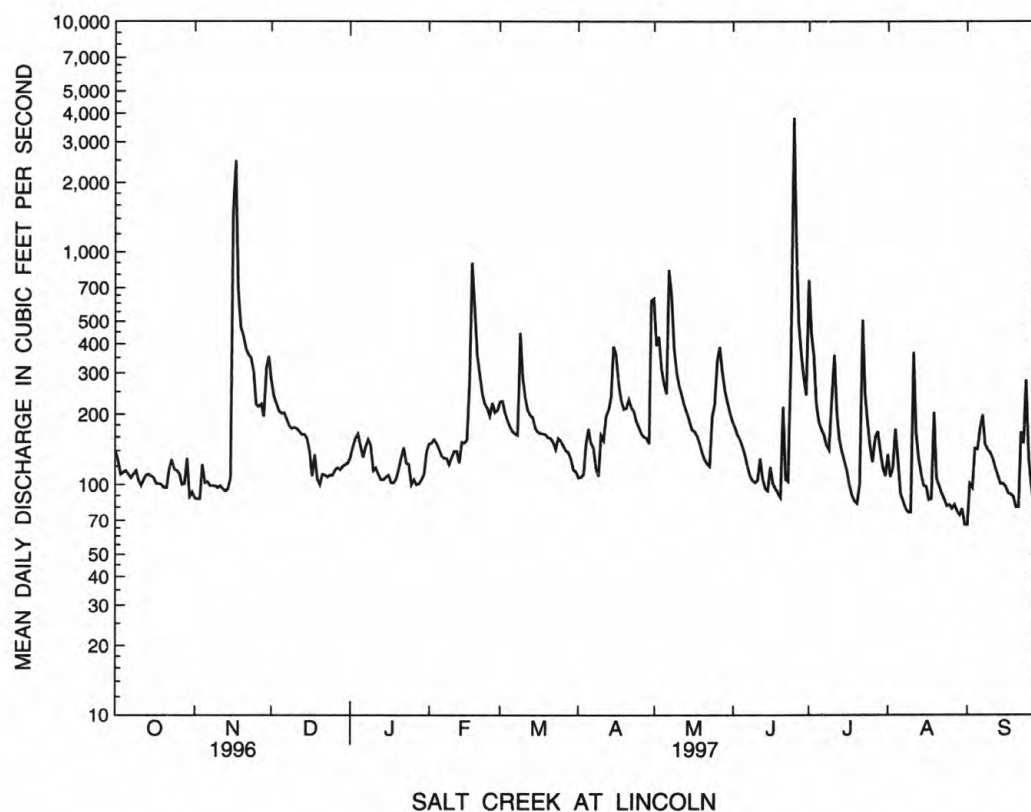
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06803500 SALT CREEK AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	174	108	94.7	104	171	340	275	399	493	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1950 - 1997	
ANNUAL TOTAL	140463		71461			
ANNUAL MEAN	384		196		239	
HIGHEST ANNUAL MEAN					721	
LOWEST ANNUAL MEAN					81.4	
HIGHEST DAILY MEAN	9150	May 27	3850	Jun 25	22100	Jun 2 1951
LOWEST DAILY MEAN	55	Jan 18	66	Sep 30	21	Jul 10 1977
ANNUAL SEVEN-DAY MINIMUM	83	Jan 18	75	Aug 26	26	May 19 1956
INSTANTANEOUS PEAK FLOW			5670	Jun 25	28400	Jul 24 1993
INSTANTANEOUS PEAK STAGE			10.95	Jun 25	26.52	Jul 24 1993
ANNUAL RUNOFF (AC-FT)	278600		141700		173200	
10 PERCENT EXCEEDS	737		314		390	
50 PERCENT EXCEEDS	146		140		95	
90 PERCENT EXCEEDS	94		93		51	



PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.2	11	e5.0	e5.4	e7.6	5.9	12	8.0	11	e4.6	3.5
2	2.9	4.1	9.5	e5.0	e6.0	e8.2	5.6	12	7.7	5.9	e4.6	5.0
3	2.6	4.2	8.6	e5.2	e6.4	e7.2	5.8	9.5	7.5	4.9	e4.4	4.1
4	3.0	5.1	8.2	e5.4	e7.0	e7.0	7.1	8.8	8.1	5.1	e4.2	4.1
5	3.5	5.9	8.5	e5.6	e7.6	7.0	10	11	8.7	5.1	e4.0	3.8
6	3.2	5.0	9.0	e5.8	e7.6	7.0	8.4	9.9	7.9	5.4	e4.0	3.8
7	2.7	4.7	8.7	e6.0	e7.4	7.2	6.3	47	7.9	4.9	e4.0	4.0
8	2.9	4.3	8.3	e6.1	e7.4	7.5	5.4	16	8.1	5.1	e3.9	3.8
9	2.9	4.4	8.1	e6.2	e7.2	11	5.4	9.7	8.7	5.6	e3.8	3.4
10	2.5	4.4	8.2	e6.0	e7.0	10	6.5	8.3	8.9	6.7	e3.7	3.6
11	2.8	4.9	8.7	e5.8	e6.8	9.2	7.7	7.9	9.2	6.2	e3.7	3.6
12	3.2	5.2	8.6	e5.8	e6.6	8.8	7.5	7.5	9.8	5.4	e3.6	3.0
13	3.4	5.4	9.3	e5.6	e6.6	9.3	13	7.5	9.7	4.8	e3.6	2.8
14	3.5	5.5	9.7	e5.4	e6.4	9.0	16	7.1	10	e4.6	e3.5	2.4
15	3.1	7.5	9.2	e5.4	e6.4	7.4	15	6.8	10	e4.5	e3.5	2.4
16	3.1	53	8.2	e5.8	e6.2	7.9	11	7.1	11	e4.4	3.1	2.4
17	2.4	33	e7.0	e6.0	e20	8.5	8.8	7.0	11	e4.3	2.9	2.6
18	2.3	12	e6.6	e6.2	e80	8.6	8.3	6.9	9.6	e4.2	3.0	2.4
19	2.6	11	e6.0	e6.4	e50	8.7	8.0	6.3	9.0	e4.1	4.8	2.1
20	3.0	9.9	e5.6	e7.0	e25	9.1	7.8	7.0	9.6	e4.8	4.5	2.4
21	2.7	9.0	e5.2	e7.2	e20	8.4	9.1	7.4	12	e6.0	4.5	2.3
22	2.4	8.6	e5.4	e7.4	e16	7.8	11	7.9	11	e7.0	4.2	2.3
23	3.3	9.3	e5.6	e7.6	e14	7.7	11	8.4	11	e5.6	3.8	2.6
24	3.5	8.0	e5.8	e7.2	e12	8.4	8.4	9.2	23	e5.4	3.2	4.2
25	3.7	6.5	e6.2	e6.8	e11	8.9	7.6	8.6	167	e5.2	3.2	4.0
26	4.2	6.2	e6.4	e6.6	e9.0	8.0	7.0	13	11	e5.0	3.0	2.4
27	3.3	6.0	e6.2	e6.0	e8.0	6.9	8.1	11	6.5	e4.8	3.0	2.3
28	3.6	7.0	e6.0	e5.6	e7.0	6.2	7.1	11	6.1	e4.6	3.3	2.3
29	5.5	12	e5.8	e5.0	---	7.1	6.5	10	6.3	e4.4	2.9	3.4
30	4.2	18	e5.4	e4.8	---	6.3	14	10	5.2	e4.2	3.1	2.1
31	3.6	---	e5.2	e5.2	---	6.4	---	9.1	---	e4.4	3.4	---
TOTAL	99.4	284.3	230.2	185.1	380.0	248.3	259.3	320.9	439.5	163.6	115.0	93.1
MEAN	3.21	9.48	7.43	5.97	13.6	8.01	8.64	10.4	14.6	5.28	3.71	3.10
MAX	5.5	53	11	7.6	80	11	16	47	167	11	4.8	5.0
MIN	2.3	4.1	5.2	4.8	5.4	6.2	5.4	6.3	5.2	4.1	2.9	2.1
AC-FT	197	564	457	367	754	493	514	637	872	325	228	185

e Estimated

PLATTE RIVER BASIN

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06803510 LITTLE SALT CREEK NEAR LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.4	7.25	6.47	7.31	12.4	27.0	17.5	22.9	23.0	27.9	12.2	10.7
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

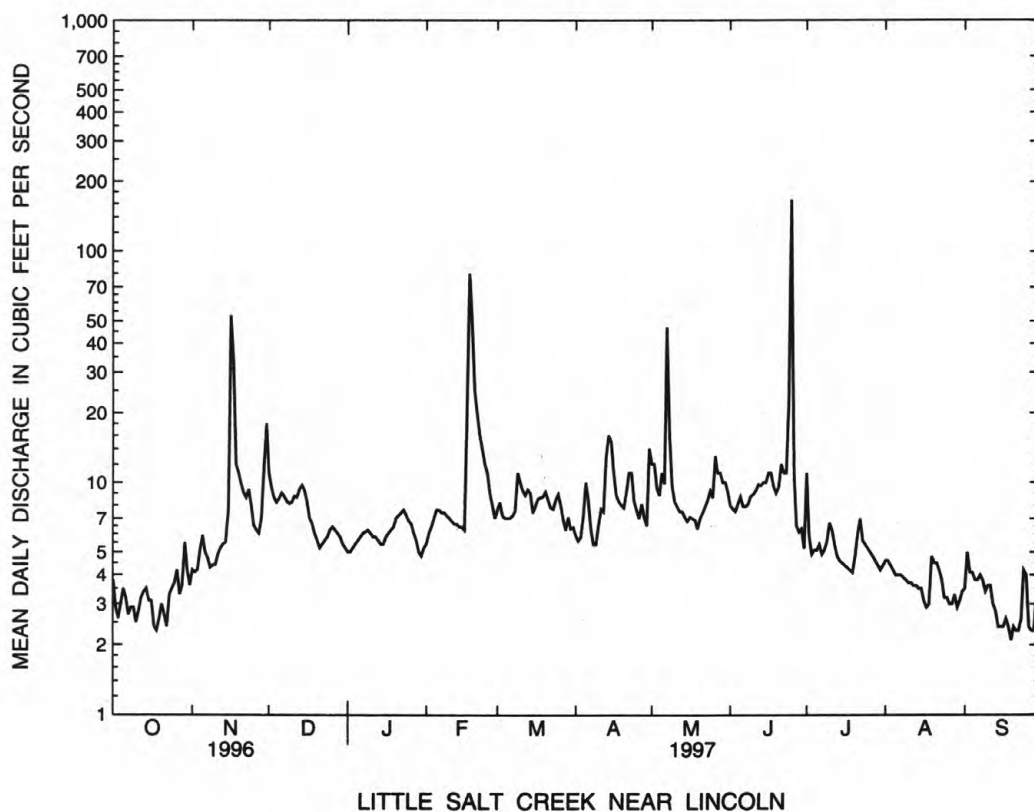
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1969 - 1997

ANNUAL TOTAL	5994.3	2818.7	
ANNUAL MEAN	16.4	7.72	15.6
MEDIAN OF ANNUAL MEANS			12.3
HIGHEST ANNUAL MEAN			51.7
LOWEST ANNUAL MEAN			3.59
HIGHEST DAILY MEAN	743 May 27	167 Jun 25	5020 Jul 24 1993
LOWEST DAILY MEAN	2.3 Oct 18	2.1 Sep 19	.20 Sep 29 1969
ANNUAL SEVEN-DAY MINIMUM	2.6 Oct 16	2.4 Sep 16	.28 Sep 28 1969
INSTANTANEOUS PEAK FLOW		758 Jun 25	8480 Jul 24 1993
INSTANTANEOUS PEAK STAGE		8.77 Jun 25	20.58 Jul 24 1993
ANNUAL RUNOFF (AC-FT)	11890	5590	11270
10 PERCENT EXCEEDS	18	11	19
50 PERCENT EXCEEDS	6.9	6.3	5.6
90 PERCENT EXCEEDS	4.0	3.1	2.3



PLATTE RIVER BASIN

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 1,120 ft above sea level.

REMARKS.-- Record good except those 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	149	119	267	145	186	224	127	624	187	701	138	75
2	137	115	233	160	184	236	124	394	175	450	112	121
3	131	115	217	170	189	215	128	414	165	372	105	93
4	129	151	203	177	186	205	167	313	157	241	168	134
5	129	124	201	165	179	196	194	273	149	208	136	132
6	124	123	197	150	171	188	162	253	138	197	103	134
7	124	122	187	156	169	185	154	925	126	190	96	207
8	127	121	180	151	168	183	132	678	117	176	93	142
9	129	122	177	153	161	445	128	381	113	168	88	134
10	125	124	178	e150	172	289	183	301	115	234	88	127
11	123	127	179	e150	173	244	180	272	118	362	442	122
12	122	126	177	e140	176	225	213	252	150	242	195	116
13	122	124	174	e140	163	217	231	241	126	189	141	111
14	123	128	177	e130	184	213	253	228	118	166	122	106
15	120	139	171	e130	183	197	368	216	115	153	106	106
16	122	1440	158	e140	187	191	348	201	141	140	100	106
17	120	2310	144	e130	343	185	268	195	119	122	90	99
18	123	747	e120	e130	917	184	235	183	118	112	89	99
19	124	497	e124	e140	597	182	219	175	114	104	231	98
20	121	452	e130	146	344	176	225	163	112	100	113	94
21	121	401	e120	158	285	172	252	154	255	111	103	93
22	135	383	e116	170	246	168	236	150	133	441	96	179
23	162	379	e110	158	226	159	232	146	126	242	89	203
24	138	344	e116	157	221	173	205	192	377	189	85	330
25	135	264	e136	e150	208	165	194	245	3210	151	82	152
26	130	217	e132	e140	228	155	184	343	1130	130	81	125
27	120	219	e132	e140	212	148	182	383	511	159	79	107
28	123	195	e132	e145	216	145	180	299	367	201	79	94
29	160	317	e140	e150	---	144	177	260	296	159	78	93
30	119	333	e140	e170	---	132	657	228	259	123	93	89
31	123	---	145	176	---	128	---	207	---	111	75	---
TOTAL	3990	10378	5013	4667	6874	6069	6538	9289	9337	6644	3696	3821
MEAN	129	346	162	151	246	196	218	300	311	214	119	127
MAX	162	2310	267	177	917	445	657	925	3210	701	442	330
MIN	119	115	110	130	161	128	124	146	112	100	75	75
AC-FT	7910	20580	9940	9260	13630	12040	12970	18420	18520	13180	7330	7580

e Estimated

PLATTE RIVER BASIN

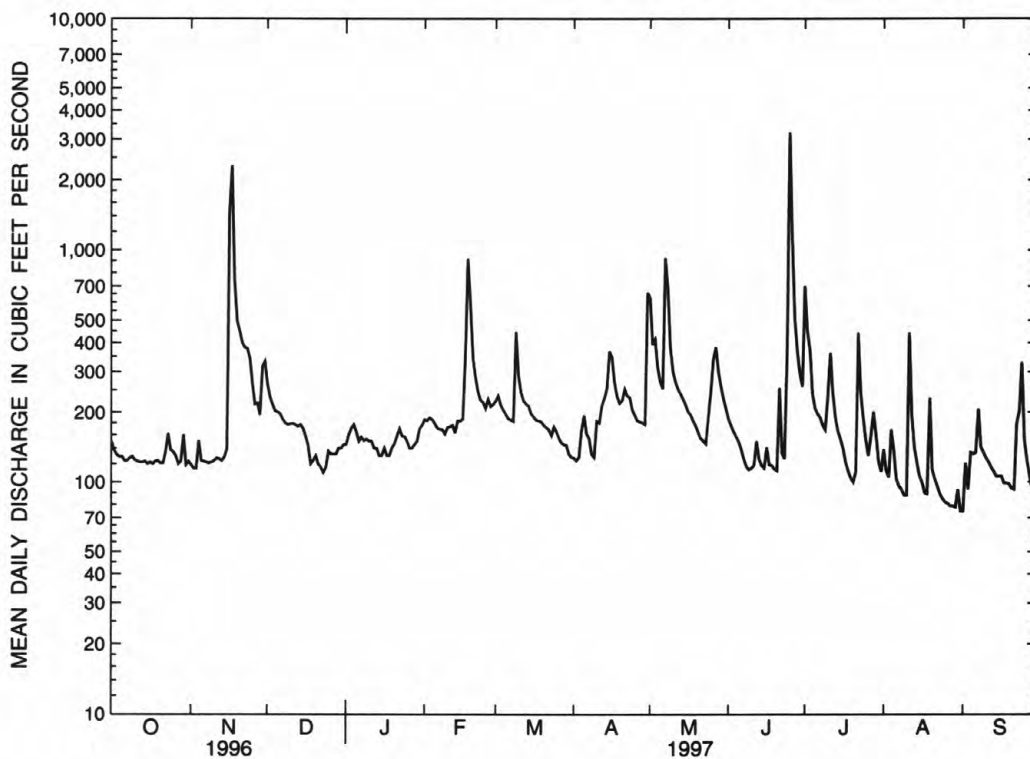
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06803513 SALT CREEK AT 70TH STREET AT LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	111	193	134	140	202	195	234	1186	576	313	200	173
MAX	129	346	162	154	246	262	346	1644	850	521	367	279
(WY)	1997	1997	1997	1995	1997	1995	1995	1995	1996	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1994 - 1997	
ANNUAL TOTAL	147004		76316			
ANNUAL MEAN	402		209		306	
HIGHEST ANNUAL MEAN					374	
LOWEST ANNUAL MEAN					209	
HIGHEST DAILY MEAN	8320	May 27	3210	Jun 25	8320	May 27 1996
LOWEST DAILY MEAN	78	Jan 6	75	Aug 31	66	Sep 17 1995
ANNUAL SEVEN-DAY MINIMUM	96	Jan 3	80	Aug 26	80	Aug 26 1997
INSTANTANEOUS PEAK FLOW			4670	Jun 25	11500	May 27 1996
INSTANTANEOUS PEAK STAGE			13.42	Jun 25	20.29	May 27 1996
ANNUAL RUNOFF (AC-FT)	291600		151400		221300	
10 PERCENT EXCEEDS	792		337		527	
50 PERCENT EXCEEDS	160		159		151	
90 PERCENT EXCEEDS	110		107		96	



SALT CREEK AT 70TH STREET AT LINCOLN

PLATTE RIVER BASIN

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 (revised). 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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	7.1	21	8.9	18	20	11	43	9.6	20	2.0	1.9
2	3.5	7.3	17	11	17	16	11	25	8.8	11	2.5	2.1
3	3.2	7.7	15	12	12	16	12	44	8.3	9.9	2.0	2.4
4	3.9	10	14	12	10	13	12	22	8.3	9.6	2.0	1.9
5	4.1	10	14	16	9.8	10	14	17	7.8	8.2	2.1	1.6
6	3.6	9.6	15	10	9.0	11	14	15	7.1	8.2	1.9	1.5
7	3.3	8.7	14	7.8	8.8	12	12	140	6.8	6.7	1.9	1.6
8	3.6	8.3	13	7.5	8.7	13	11	40	7.1	6.4	1.9	1.5
9	3.5	8.2	12	7.0	11	41	10	24	6.3	5.8	1.7	1.3
10	3.2	8.4	13	5.8	8.8	25	11	20	6.2	6.4	1.9	1.3
11	3.8	8.5	13	3.6	8.6	19	13	18	6.3	7.7	5.8	1.2
12	3.5	8.6	12	2.6	9.2	17	12	16	6.9	6.1	5.7	1.1
13	3.5	8.8	12	2.9	11	16	16	16	6.8	5.0	3.1	1.1
14	3.4	9.0	12	3.6	8.2	12	22	15	6.3	4.0	2.9	1.4
15	3.2	10	12	4.8	9.0	11	51	14	6.3	3.5	2.4	1.4
16	4.0	309	9.9	5.4	8.7	12	26	13	6.1	3.6	2.2	1.4
17	4.1	186	9.2	5.0	55	14	17	13	5.6	3.4	2.1	1.3
18	4.5	34	8.3	5.4	108	13	16	12	5.1	2.8	1.8	1.3
19	4.4	24	7.0	5.7	30	12	14	11	4.6	2.4	3.0	1.3
20	4.6	20	6.6	6.9	20	12	13	11	4.2	2.6	2.9	1.1
21	4.4	17	7.7	11	18	12	13	10	6.6	2.7	2.3	1.4
22	4.7	16	8.7	11	14	12	14	9.8	6.5	2.7	2.2	1.8
23	8.9	16	9.2	7.4	13	12	13	9.9	4.7	2.5	2.1	3.7
24	8.8	16	8.3	7.4	10	13	12	13	8.8	2.7	1.9	5.9
25	7.5	23	7.4	7.4	11	13	11	12	165	2.1	2.0	5.0
26	6.7	17	7.0	6.2	14	12	11	17	25	2.0	1.9	3.3
27	5.2	12	7.0	6.6	12	13	11	17	14	2.1	1.8	2.7
28	5.4	13	7.0	7.0	14	13	11	14	10	3.5	1.8	2.2
29	7.4	20	7.0	6.8	---	12	11	13	8.6	2.9	1.7	1.8
30	7.8	43	7.0	7.4	---	12	79	12	8.0	2.1	1.7	2.2
31	7.4	---	7.6	9.5	---	12	---	10	---	2.0	1.8	---
TOTAL	149.4	896.2	333.9	231.6	486.8	451	504	666.7	391.7	160.6	73.0	59.7
MEAN	4.82	29.9	10.8	7.47	17.4	14.5	16.8	21.5	13.1	5.18	2.35	1.99
MAX	8.9	309	21	16	108	41	79	140	165	20	5.8	5.9
MIN	3.2	7.1	6.6	2.6	8.2	10	10	9.8	4.2	2.0	1.7	1.1
AC-FT	296	1780	662	459	966	895	1000	1320	777	319	145	118

PLATTE RIVER BASIN

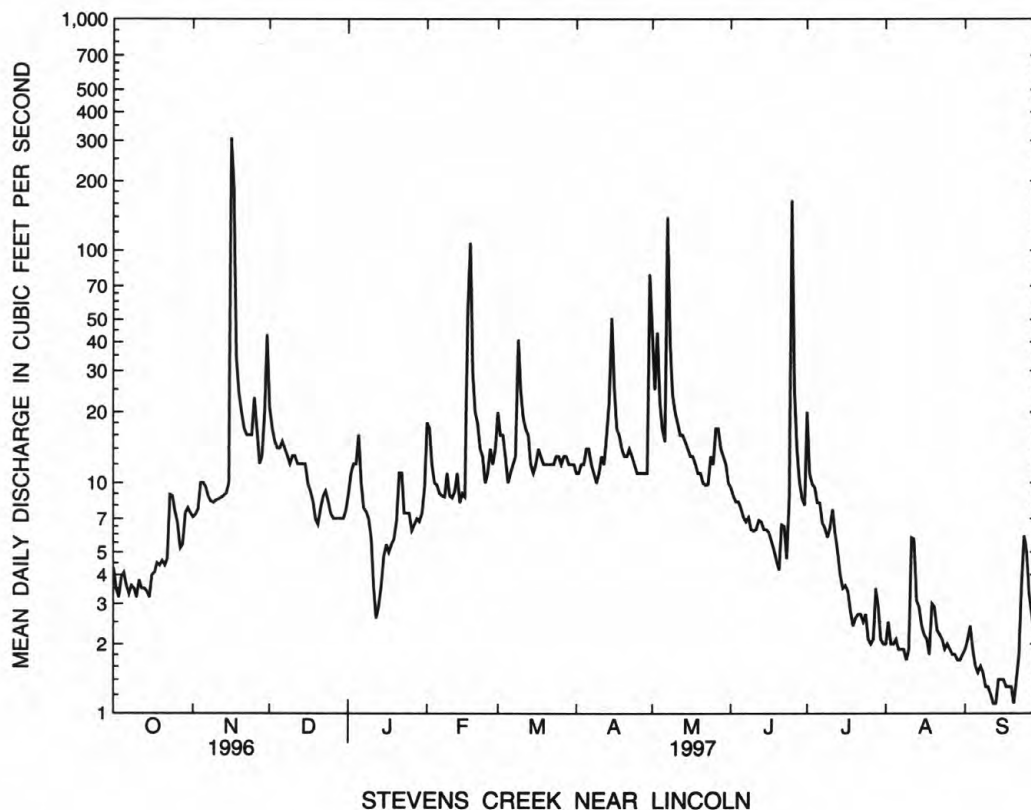
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06803520 STEVENS CREEK NEAR LINCOLN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.4	6.46	6.44	7.35	13.4	32.0	24.0	37.9	29.2	33.9	12.4	17.9
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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1969 - 1997
ANNUAL TOTAL	7503.5	4404.6	
ANNUAL MEAN	20.5	12.1	19.7
MEDIAN OF ANNUAL MEANS			17.5
HIGHEST ANNUAL MEAN			69.3 1993
LOWEST ANNUAL MEAN			1.84 1976
HIGHEST DAILY MEAN	665 Jul 20	309 Nov 16	4810 Sep 8 1989
LOWEST DAILY MEAN	1.0 Jul 18	1.1 Sep 12	.00 Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	1.2 Jul 12	1.3 Sep 9	.00 Jul 29 1977
INSTANTANEOUS PEAK FLOW (STAGE)		1020 Nov 16	12900 (19.42) Sep 8 1989
INSTANTANEOUS PEAK STAGE		8.58 Nov 16	19.57 Jun 13 1984
ANNUAL RUNOFF (AC-FT)	14880	8740	14250
10 PERCENT EXCEEDS	31	17	24
50 PERCENT EXCEEDS	5.4	8.6	3.9
90 PERCENT EXCEEDS	2.6	2.0	.82



PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE INST.	SPECIFIC CONDUCTANCE	PH WATER WHOLE FIELD	TEMPER-ATURE AIR	TEMPER-ATURE WATER	OXYGEN, DIS-SOLVED	COLI-FORM, FECAL, 0.7 μ M-MF	STREP-TOCOCCEI, KF	HARD-NESS AGAR	ALKA-LINITY TOTAL	
		(FT ³ /S) (00061)	(μ S/CM) (00095)	(STAND-ARD UNITS) (00400)	(°C) (00020)	(°C) (00010)	(MG/L) (00300)	(COLS./ 100 ML) (31625)	(COLS. PER 100 ML) (31673)	(MG/L AS CaCO ₃) (00900)	(MG/L AS CaCO ₃) (90410)	
OCT 09	1400	140	5710	7.0	20.0	15.0	8.9	<930	<330	360	290	
NOV 20	1030	155	1890	7.6	2.0	5.0	6.8	K13000	K32000	220	208	
DEC 10	1400	238	4080	7.5	8.0	2.0	12.1	K4200	K1400	340	308	
JAN 22	1545	190	4790	7.7	-1.0	3.0	11.5	K9000	13000	310	304	
FEB 27	1400	210	3760	8.1	0.0	4.5	9.4	2400	3200	330	280	
APR 22	1030	275	3360	7.7	16.5	12.0	8.6	9300	4400	270	257	
MAY 12	1300	280	3020	7.8	17.0	15.0	9.8	7300	1400	320	282	
JUN 09	1330	140	3850	8.0	22.5	21.5	8.5	2200	K480	360	296	
JUL 09	1100	200	4770	7.8	26.0	24.0	8.1	3800	4200	310	265	
AUG 15	1200	115	5720	7.7	30.0	25.0	9.5	14000	7600	320	268	
SEP 09	0800	140	4510	7.7	18.0	21.0	7.2	11000	6200	270	225	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM DIS-SOLVED (MG/L AS MG) (00925)	SODIUM ADSORPTION RATIO (00931)	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)	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)
OCT 09	93	30	24	1050	12	270	1500	0.68	19	3150	4.28	
NOV 20	62	17	8	283	2.2	100	390	0.46	15	996	1.35	
DEC 10	92	26	17	723	<0.10	210	1100	0.52	24	--	--	
JAN 22	84	24	21	840	11	230	1200	0.60	24	2610	3.55	
FEB 27	90	25	16	650	11	190	900	0.50	19	2070	2.81	
APR 22	74	21	15	561	9.5	180	840	0.47	16	1860	2.53	
MAY 12	87	25	14	595	9.9	180	870	0.50	16	1970	2.68	
JUN 09	95	29	23	1000	12	270	1500	0.62	19	3120	4.25	
JUL 09	81	25	23	908	14	250	1300	0.65	18	2750	3.74	
AUG 15	85	26	27	1110	15	290	1600	0.73	22	3340	4.54	
SEP 09	70	22	23	848	13	230	1200	0.12	16	2560	3.49	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

PLATTE RIVER BASIN

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 (REVISED).--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.--Records fair except for periods of estimated record, which are poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	9.6	28	e22	e19	21	15	20	14	25	6.3	6.8
2	5.9	10	19	e26	e20	19	14	18	13	16	7.4	6.8
3	4.3	13	16	e30	e20	20	12	18	13	13	7.0	6.9
4	6.2	13	15	e25	e19	18	12	16	14	13	7.1	5.5
5	8.6	16	16	e21	e19	16	18	16	14	13	6.4	6.2
6	8.7	15	19	e18	e18	15	14	14	14	13	6.9	7.0
7	7.7	14	18	e15	e18	18	11	17	13	13	6.8	7.5
8	7.4	13	18	e13	e17	21	9.4	15	13	18	6.7	7.4
9	8.7	11	16	e12	e17	42	8.9	14	13	14	6.4	6.2
10	7.4	9.9	17	e12	e16	38	9.5	13	13	13	6.4	5.6
11	8.4	11	17	e12	e16	28	10	14	14	13	9.4	5.5
12	12	8.6	17	e11	e16	26	11	12	14	13	13	5.4
13	15	11	18	e11	e15	27	15	13	14	12	8.2	6.4
14	15	10	18	e11	e15	25	23	13	14	12	7.5	6.0
15	13	15	18	e11	e15	18	31	12	14	11	7.8	6.4
16	14	102	e16	e12	e25	19	21	13	14	11	7.7	6.2
17	11	199	e15	e12	e100	22	15	15	14	10	6.8	6.2
18	8.2	35	e13	e14	400	20	16	15	14	9.9	6.2	6.4
19	11	25	e12	e16	154	20	15	14	14	9.9	6.8	6.3
20	13	20	e11	e20	44	24	13	13	14	9.9	8.4	5.0
21	9.6	18	e10	e18	33	23	13	12	15	11	7.1	4.9
22	6.8	17	e11	e16	22	20	18	12	15	11	7.2	5.6
23	11	19	e12	e15	18	17	17	12	14	9.9	7.1	8.9
24	12	19	e12	e13	16	18	15	12	25	9.8	7.7	e20
25	13	14	e13	e12	14	19	14	13	47	9.5	7.9	e18
26	15	16	e14	e11	19	20	13	13	21	9.0	8.1	e12
27	9.8	12	e14	e11	16	21	15	13	16	8.8	6.9	e10
28	11	13	e14	e10	17	17	14	12	15	8.6	7.6	e9.0
29	16	22	e15	e11	---	16	14	13	15	8.5	7.3	e8.0
30	12	58	e16	e13	---	16	19	13	14	7.9	7.6	e6.0
31	6.7	---	e20	e15	---	15	---	13	---	5.9	8.0	---
TOTAL	316.7	769.1	488	469	1138	659	445.8	433	471	362.6	231.7	228.1
MEAN	10.2	25.6	15.7	15.1	40.6	21.3	14.9	14.0	15.7	11.7	7.47	7.60
MAX	16	199	28	30	400	42	31	20	47	25	13	20
MIN	4.3	8.6	10	10	14	15	8.9	12	13	5.9	6.2	4.9
AC-FT	628	1530	968	930	2260	1310	884	859	934	719	460	452

e Estimated

PLATTE RIVER BASIN

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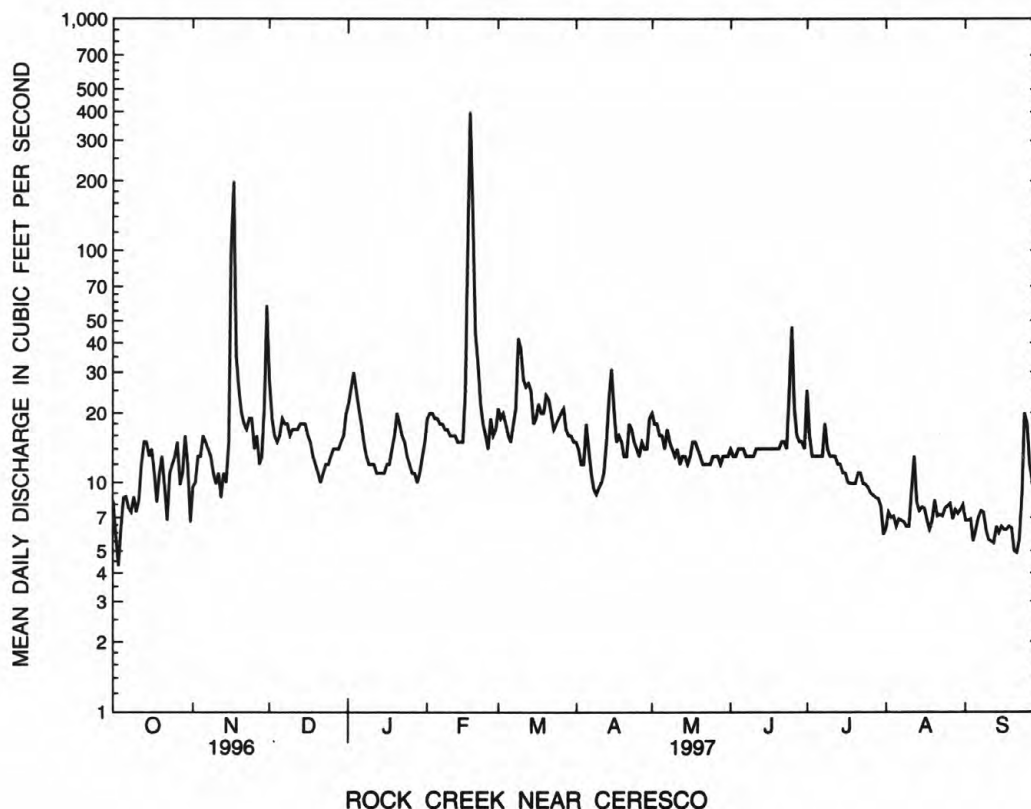
06803530 ROCK CREEK NEAR CERESCO, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.0	16.1	14.9	15.7	34.4	59.7	43.0	61.7	62.4	57.1	49.8	24.9
MAX	191	45.5	44.8	63.3	116	260	236	237	239	648	527	128
(WY)	1987	1978	1985	1973	1983	1979	1984	1996	1982	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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1971 - 1997
ANNUAL TOTAL	18774.4	6012.0	
ANNUAL MEAN	51.3	16.5	38.7
MEDIAN OF ANNUAL MEANS			30.6
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			8.68
HIGHEST DAILY MEAN	2270 May 27	400 Feb 18	11400 Aug 25 1987
LOWEST DAILY MEAN	3.0 Sep 18	4.3 Oct 3	.25 Jul 13 1976
ANNUAL SEVEN-DAY MINIMUM	4.4 Sep 12	5.8 Sep 16	1.1 Jul 11 1976
INSTANTANEOUS PEAK FLOW		846 Feb 18	*23300 Aug 25 1987
INSTANTANEOUS PEAK STAGE		5.79 Feb 18	19.60 Aug 25 1987
ANNUAL RUNOFF (AC-FT)	37240	11920	28030
10 PERCENT EXCEEDS	65	21	46
50 PERCENT EXCEEDS	14	13	12
90 PERCENT EXCEEDS	7.8	6.9	5.9

* From floodmark; includes road overflow.



PLATTE RIVER BASIN

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 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	197	134	409	e210	e265	291	182	920	233	785	e180	90
2	186	137	334	e220	e290	317	179	582	222	657	e160	137
3	180	129	304	e240	e300	290	183	596	212	460	e190	109
4	179	157	283	e270	316	281	213	463	208	327	e220	138
5	178	148	278	264	317	265	270	383	204	244	e200	150
6	175	132	271	e260	270	253	258	341	192	223	e150	149
7	171	128	260	e200	263	247	224	1390	187	206	e120	231
8	170	130	251	e170	257	242	200	1050	182	204	e110	174
9	176	126	237	e180	252	533	185	579	180	187	e110	159
10	172	127	241	e200	257	482	213	425	177	207	e150	151
11	167	130	251	e180	243	357	272	366	177	366	e500	143
12	165	127	240	e165	228	314	237	332	185	287	375	138
13	169	126	239	e165	211	306	333	312	146	197	197	131
14	169	122	236	e170	266	303	359	292	139	174	155	130
15	165	129	240	e175	267	276	541	272	131	162	137	128
16	164	1480	218	e170	245	260	552	251	148	e150	117	132
17	165	3600	183	e170	420	257	402	238	136	e140	113	131
18	157	1210	e180	e165	1810	259	337	231	133	e140	109	128
19	158	678	e170	e180	1200	251	304	218	127	e130	249	125
20	158	557	e150	e195	625	244	303	208	122	e130	157	120
21	156	496	e160	e220	514	245	297	195	238	e150	128	119
22	159	448	e150	e240	419	229	346	187	153	e600	117	133
23	211	439	e150	e225	375	219	330	187	130	e450	107	323
24	177	396	e150	e215	326	229	283	219	321	e250	104	382
25	163	320	e150	e185	314	231	262	295	3510	e200	100	241
26	154	281	e160	e195	337	218	248	383	1880	e190	102	161
27	143	290	e160	e190	299	206	241	455	731	e200	99	135
28	142	254	e170	e180	274	207	241	387	510	e240	97	120
29	175	319	e180	e180	---	206	236	338	415	e230	94	113
30	151	592	e200	e200	---	195	748	291	358	e170	102	110
31	135	---	e190	e245	---	184	---	263	---	e160	100	---
TOTAL	5187	13342	6795	6224	11160	8397	8979	12649	11687	8216	4849	4631
MEAN	167	445	219	201	399	271	299	408	390	265	156	154
MAX	211	3600	409	270	1810	533	748	1390	3510	785	500	382
MIN	135	122	150	165	211	184	179	187	122	130	94	90
AC-FT	10290	26460	13480	12350	22140	16660	17810	25090	23180	16300	9620	9190

e Estimated

PLATTE RIVER BASIN

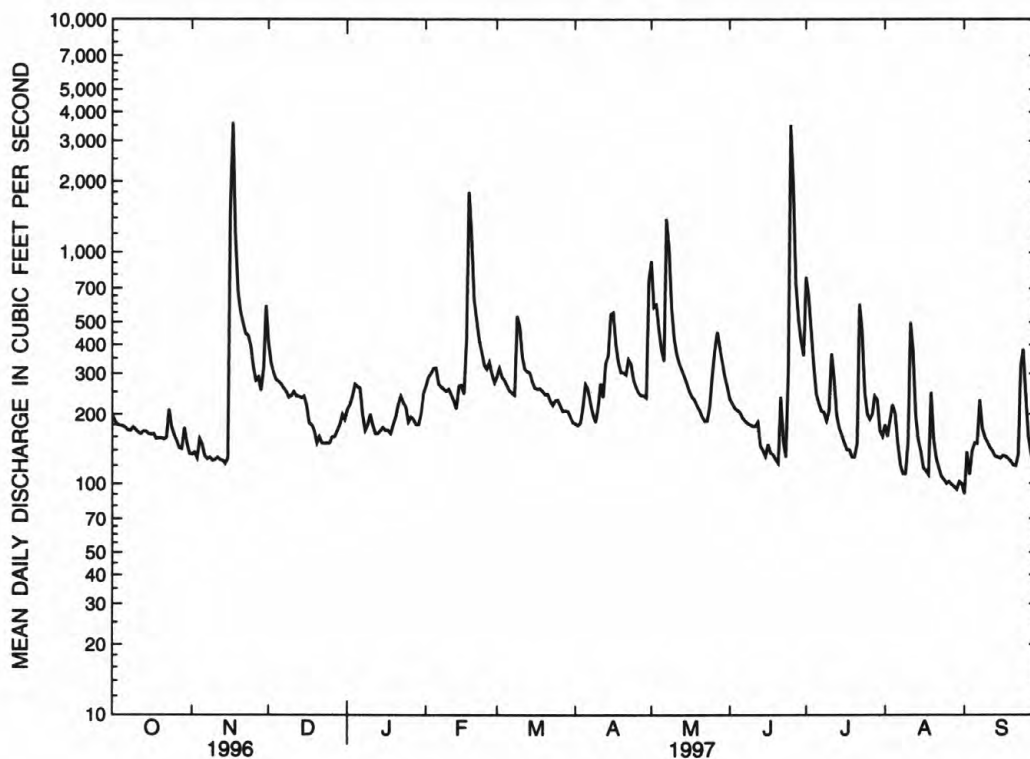
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06803555 SALT CREEK AT GREENWOOD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	257	164	143	157	264	518	403	569	691	525	322	265
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1952 - 1997	
ANNUAL TOTAL	199696		102116			
ANNUAL MEAN	546		280		355	
MEDIAN OF ANNUAL MEANS					286	
HIGHEST ANNUAL MEAN					1054	
LOWEST ANNUAL MEAN					107	
HIGHEST DAILY MEAN	13800	May 27	3600	Nov 17	37100	Jun 13 1984
LOWEST DAILY MEAN	103	Apr 27	90	Sep 1	14	Jan 10 1957
ANNUAL SEVEN-DAY MINIMUM	112	Apr 22	98	Aug 26	17	Jan 10 1957
INSTANTANEOUS PEAK FLOW (STAGE)			5530	Jun 25	46800	(26.50) Jun 13 1984
INSTANTANEOUS PEAK STAGE			8.31	Jun 25	26.57	Jul 24 1993
ANNUAL RUNOFF (AC-FT)	396100		202500		257000	
10 PERCENT EXCEEDS	1100		431		569	
50 PERCENT EXCEEDS	200		208		140	
90 PERCENT EXCEEDS	133		129		70	



SALT CREEK AT GREENWOOD

PLATTE RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	33	54	e50	97	e46	43	56	41	95	22	22
2	33	33	47	53	89	e45	43	52	40	137	22	350
3	32	33	43	61	63	e45	44	52	39	42	22	252
4	32	33	41	74	52	e46	49	50	39	38	22	39
5	32	33	e37	58	47	47	57	47	39	37	22	31
6	33	33	e36	90	e43	48	60	45	38	37	23	27
7	33	33	e35	64	e40	49	51	44	37	37	23	26
8	33	33	e35	e50	e38	50	45	45	37	97	21	26
9	33	33	e34	e47	e37	57	44	42	36	73	21	25
10	33	33	e34	e38	e37	70	45	42	36	39	21	24
11	33	33	e35	e30	e36	56	48	40	36	41	37	25
12	33	33	e35	e30	e36	54	44	40	37	37	64	24
13	33	33	e34	e33	e35	53	57	42	37	35	31	24
14	33	33	e34	e30	e34	49	60	42	36	33	23	25
15	32	33	e35	e36	e32	45	75	40	35	32	23	25
16	32	63	e33	e40	e40	50	71	40	36	32	22	24
17	32	300	e30	e30	48	52	59	40	35	31	22	25
18	32	70	e29	e35	568	52	55	41	34	31	22	24
19	32	54	e27	e50	901	50	52	39	34	29	23	23
20	33	50	e24	68	213	49	51	38	33	29	27	23
21	32	46	e25	73	143	49	52	38	87	30	45	23
22	32	45	e26	78	77	49	56	40	79	29	24	26
23	32	45	e25	63	70	47	58	38	42	28	22	109
24	34	e38	e24	e50	64	48	53	39	83	28	22	169
25	34	e36	e23	e44	53	50	50	44	170	27	22	41
26	33	e35	e22	e35	e50	49	48	46	57	26	22	33
27	31	e38	e23	e30	e48	46	48	49	44	27	27	30
28	31	41	e25	e28	e46	46	47	49	40	30	23	28
29	33	45	e27	e30	---	46	47	47	38	25	23	27
30	34	60	e32	e45	---	46	50	45	37	24	24	27
31	34	---	e40	67	---	45	---	42	---	23	23	---
TOTAL	1013	1461	1004	1510	3037	1534	1562	1354	1412	1259	790	1577
MEAN	32.7	48.7	32.4	48.7	108	49.5	52.1	43.7	47.1	40.6	25.5	52.6
MAX	34	300	54	90	901	70	75	56	170	137	64	350
MIN	31	33	22	28	32	45	43	38	33	23	21	22
AC-FT	2010	2900	1990	3000	6020	3040	3100	2690	2800	2500	1570	3130

e Estimated

PLATTE RIVER BASIN

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06804000 WAHOO CREEK AT ITHACA, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.0	38.8	34.6	38.5	74.0	124	87.4	121	221	87.6	92.1	72.1
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

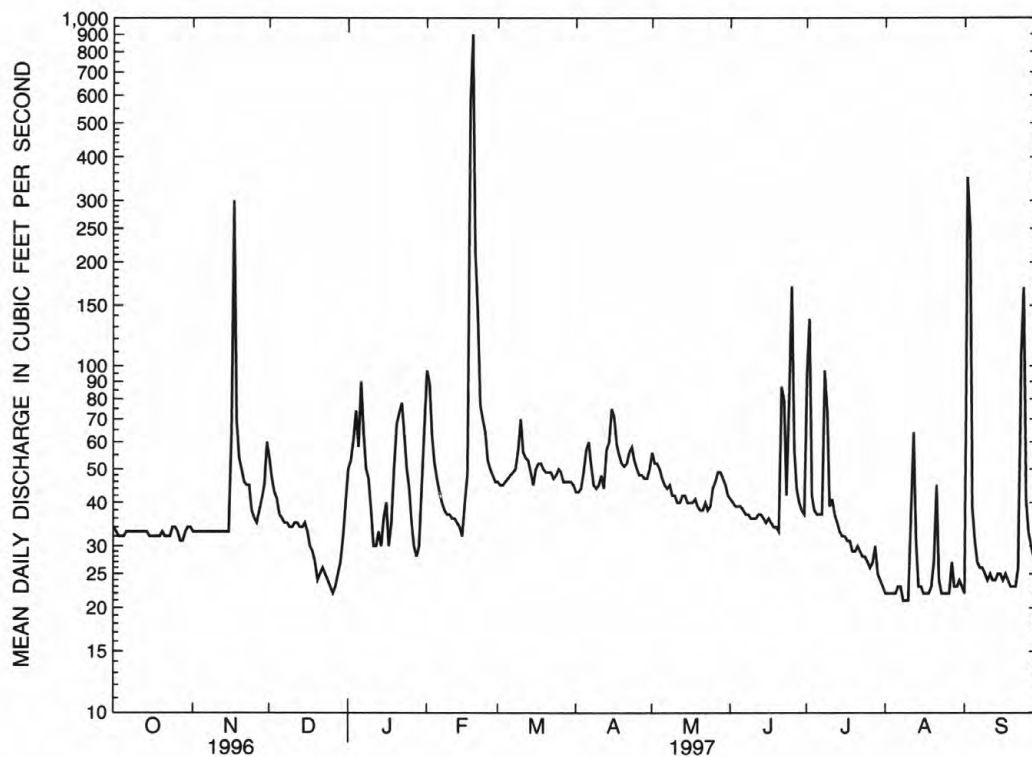
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1950 - 1997

ANNUAL TOTAL	39428	17513	
ANNUAL MEAN	108	48.0	86.7
MEDIAN OF ANNUAL MEANS			77.1
HIGHEST ANNUAL MEAN			207
LOWEST ANNUAL MEAN			15.3
HIGHEST DAILY MEAN	4460 May 27	901 Feb 19	22100 Jun 24 1963
LOWEST DAILY MEAN	12 Feb 3	21 Aug 8	3.3 Jun 11 1955
ANNUAL SEVEN-DAY MINIMUM	15 Jan 30	22 Aug 4	4.4 Oct 12 1955
INSTANTANEOUS PEAK FLOW		1750 Feb 19	77400 Jun 24 1963
INSTANTANEOUS PEAK STAGE		14.30 Feb 19	22.93 Jun 24 1963
ANNUAL RUNOFF (AC-FT)	78210	34740	62840
10 PERCENT EXCEEDS	108	63	110
50 PERCENT EXCEEDS	45	37	35
90 PERCENT EXCEEDS	26	24	18



WAHOO CREEK AT ITHACA

PLATTE RIVER BASIN

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 fair except for estimated periods, 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	52	54	71	e80	e130	78	61	83	e66	e180	39	30
2	51	51	62	e90	e160	76	61	80	e64	e260	39	63
3	49	51	60	e100	e120	73	63	76	e64	e150	38	539
4	50	53	59	e130	e100	74	70	75	e62	68	36	96
5	51	53	e56	e110	e90	71	78	74	e60	64	32	52
6	52	52	e54	e100	e80	68	79	67	e60	60	34	46
7	51	52	e52	e94	e74	70	75	66	e58	69	34	41
8	50	50	e50	e80	e72	68	65	66	e56	85	36	38
9	50	50	e50	e68	e70	79	61	65	e54	117	34	35
10	49	50	e49	e60	e66	90	65	63	e54	78	35	33
11	50	51	e50	e56	e64	81	68	62	e52	76	48	33
12	50	50	e50	e56	e62	77	72	61	e54	68	82	34
13	51	51	e52	e54	e60	77	70	63	e56	67	71	34
14	52	51	e52	e54	e58	75	79	62	e56	55	45	34
15	51	52	e50	e58	e58	70	85	62	e54	59	42	34
16	51	69	e49	e56	e100	69	98	65	e50	51	41	32
17	50	241	e48	e54	e150	73	82	64	e52	47	39	32
18	51	125	e46	e70	e600	75	79	63	e50	46	37	31
19	52	70	e42	e88	e1400	73	77	67	e50	46	35	30
20	50	65	e40	e110	e900	73	72	62	e50	44	37	28
21	50	61	e38	e120	e500	73	75	e62	e80	49	53	28
22	52	58	e37	e104	148	72	80	e64	e110	50	44	30
23	53	e56	e35	e90	106	69	80	e60	e90	45	35	46
24	53	e56	e33	e76	94	70	80	e60	e120	41	36	181
25	54	e60	e35	e68	85	72	80	e64	e270	40	33	68
26	53	e70	e37	e60	83	71	75	e70	e300	39	32	44
27	50	e80	e40	e56	77	66	74	e74	e200	43	30	39
28	50	e90	e45	e54	73	66	75	e78	e160	48	30	35
29	53	e80	e50	e56	---	66	74	e76	e120	44	29	33
30	54	74	e60	e70	---	66	79	e72	e100	39	29	32
31	55	---	e66	e100	---	63	---	e68	---	37	28	---
TOTAL	1590	2026	1518	2422	5580	2244	2232	2094	2672	2165	1213	1831
MEAN	51.3	67.5	49.0	78.1	199	72.4	74.4	67.5	89.1	69.8	39.1	61.0
MAX	55	241	71	130	1400	90	98	83	300	260	82	539
MIN	49	50	33	54	58	63	61	60	50	37	28	28
AC-FT	3150	4020	3010	4800	11070	4450	4430	4150	5300	4290	2410	3630

e Estimated

PLATTE RIVER BASIN

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06804700 WAHOO CREEK AT ASHLAND, NE--Continued

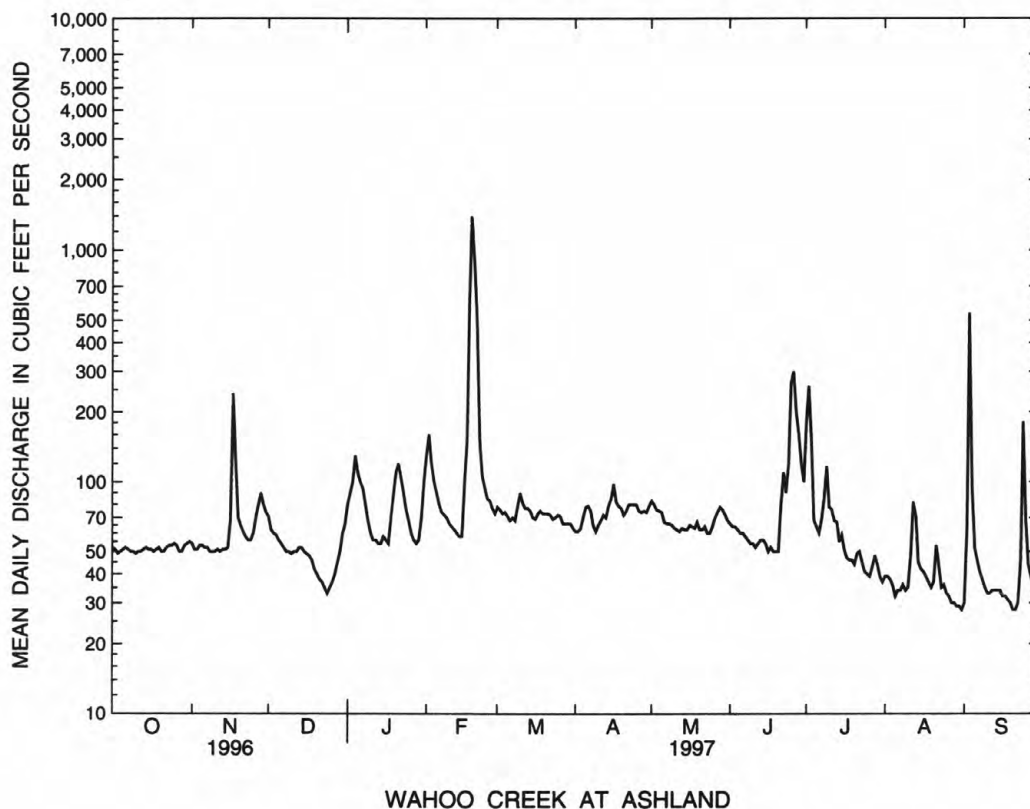
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.4	63.0	56.1	61.2	100	164	104	215	385	282	87.0	63.2
MAX	98.2	95.7	75.4	91.5	199	580	200	552	1031	1032	221	150
(WY)	1994	1994	1995	1995	1997	1993	1995	1995	1991	1993	1993	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1990 - 1997	
ANNUAL TOTAL	53751		27587			
ANNUAL MEAN	147		75.6		137	
HIGHEST ANNUAL MEAN					223	
LOWEST ANNUAL MEAN					63.9	
HIGHEST DAILY MEAN	4000 May 27		e*1400 Feb 19		7000 Jun 15 1991	
LOWEST DAILY MEAN	23 Feb 2		28 Aug 31		21 Sep 16 1990	
ANNUAL SEVEN-DAY MINIMUM	27 Jan 30		30 Aug 26		24 Sep 11 1990	
INSTANTANEOUS PEAK FLOW					7000 Jun 15 1991	
INSTANTANEOUS PEAK STAGE					20.50 Jun 15 1991	
ANNUAL RUNOFF (AC-FT)	106600		54720		99110	
10 PERCENT EXCEEDS	174		99		182	
50 PERCENT EXCEEDS	69		60		66	
90 PERCENT EXCEEDS	47		36		39	

e Estimated.

* Backwater from ice; instantaneous peak flow and stage probably occurred sometime during period of no gage-height record Feb. 18-20.



PLATTE RIVER BASIN

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 fair except those 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	1.6	1.3	e1.5	e1.6	2.2	e2.5	1.3	1.5	1.7	e8.0	e1.9	1.4
2	1.5	1.3	e1.4	e1.6	2.1	2.6	1.4	1.5	1.7	e9.0	e1.8	21
3	1.4	1.3	e1.5	e1.7	e2.0	2.7	1.4	1.4	1.7	e3.5	e1.7	10
4	1.5	1.4	e1.4	e1.8	e1.9	2.7	1.5	1.3	1.9	e3.3	e1.8	10
5	1.5	1.4	e1.3	e1.6	e1.9	2.7	2.2	1.3	3.5	e3.2	e1.8	9.8
6	1.5	1.3	e1.5	e1.6	e1.9	2.7	1.8	1.3	2.2	e3.1	e1.9	9.8
7	1.5	1.3	e1.5	e1.6	e1.8	2.8	1.4	1.3	1.9	e3.0	e1.8	9.1
8	1.5	1.3	e1.6	e1.7	e1.7	2.8	1.3	1.3	1.8	e3.0	e1.8	6.9
9	1.5	1.3	e1.5	e1.6	e1.8	3.2	1.3	1.3	1.8	e6.2	e1.7	4.4
10	1.3	1.3	e1.6	e1.6	e1.8	2.9	1.3	1.3	1.8	e3.5	e1.7	2.4
11	1.3	1.3	e1.6	e1.5	e1.7	3.0	1.2	1.3	1.9	e3.2	e1.7	1.7
12	1.3	1.3	e1.7	e1.5	e1.6	3.0	1.1	1.1	2.1	e3.0	e4.4	1.5
13	1.3	1.3	e1.7	e1.6	e1.5	3.2	1.2	1.1	2.1	e2.9	e1.5	1.2
14	1.3	1.4	e1.8	e1.6	e1.4	2.8	1.3	1.1	2.2	e2.6	e1.1	1.1
15	1.3	1.5	e1.7	e1.5	e1.5	2.6	1.5	1.1	2.3	e2.5	e1.2	1.2
16	1.4	2.5	e1.7	e1.6	e1.6	2.6	1.3	1.1	3.6	e2.5	e1.2	1.1
17	1.3	1.8	e1.8	e1.5	e1.8	2.6	1.2	1.2	3.0	e2.4	e1.6	.90
18	1.3	1.6	e1.8	e1.6	e3.5	2.6	1.2	1.3	2.5	e2.4	e1.4	.80
19	1.3	1.6	e1.9	e1.7	e2.8	2.6	1.1	1.4	2.5	e2.4	1.7	.74
20	1.4	1.6	e1.8	1.7	e2.8	2.4	1.5	1.4	2.4	e2.3	1.4	.69
21	3.1	e1.6	e1.7	2.1	2.8	2.2	1.7	1.4	4.6	e2.3	1.3	.66
22	8.1	e1.6	e1.6	2.0	2.7	1.9	1.8	1.6	4.4	e2.3	1.3	1.0
23	5.5	e1.6	e1.6	e1.8	2.6	1.8	1.7	1.7	3.4	e2.2	1.4	2.2
24	2.6	e1.6	e1.5	e1.7	2.6	1.8	1.6	1.8	6.9	e2.2	1.4	1.8
25	2.3	e1.5	e1.5	e1.6	e2.5	1.7	1.4	1.7	5.8	e2.3	1.3	1.7
26	2.2	e1.6	e1.5	e1.6	e2.4	1.6	1.4	1.7	4.0	e2.3	1.3	1.6
27	1.8	e1.6	e1.4	e1.6	e2.3	1.6	1.4	1.7	3.0	e2.3	1.3	1.4
28	1.7	e1.6	e1.5	e1.5	e2.5	1.6	1.4	1.7	2.5	e2.3	1.7	1.2
29	1.9	e1.6	e1.5	e1.4	---	1.4	1.4	1.7	2.3	e2.5	1.6	1.1
30	1.5	e1.6	e1.4	e1.3	---	1.4	1.6	1.7	e2.3	e2.2	1.5	.97
31	1.3	---	e1.5	e1.5	---	1.4	---	1.7	---	e2.0	1.4	---
TOTAL	60.0	45.0	49.0	50.3	59.7	73.4	42.9	44.0	83.8	96.9	50.6	109.36
MEAN	1.94	1.50	1.58	1.62	2.13	2.37	1.43	1.42	2.79	3.13	1.63	3.65
MAX	8.1	2.5	1.9	2.1	3.5	3.2	2.2	1.8	6.9	9.0	4.4	21
MIN	1.3	1.3	1.3	1.3	1.4	1.4	1.1	1.1	1.7	2.0	1.1	.66
AC-FT	119	89	97	100	118	146	85	87	166	192	100	217

e Estimated

PLATTE RIVER BASIN

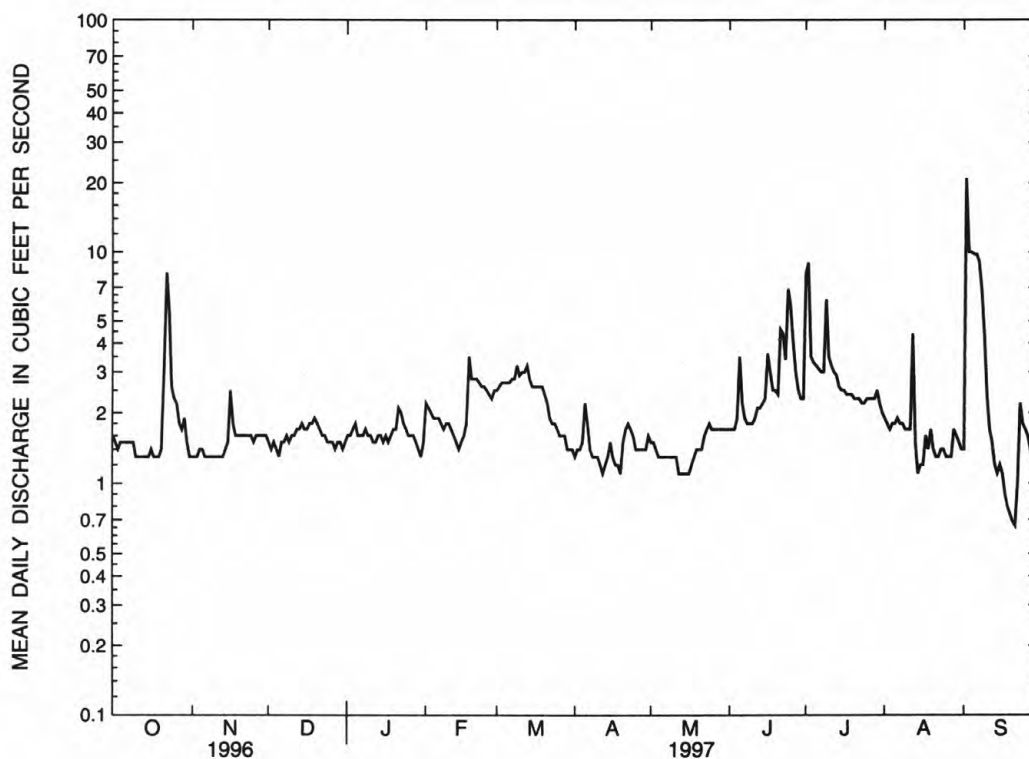
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06804900 JOHNSON CREEK NEAR MEMPHIS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.57	1.69	1.68	1.72	2.15	4.68	2.18	3.01	11.0	6.59	2.13	2.18
MAX	2.56	2.34	2.04	2.07	3.61	17.8	3.76	6.24	26.9	26.1	4.76	3.79
(WY)	1994	1995	1994	1996	1995	1993	1995	1995	1991	1993	1993	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	1042.3		764.96			
ANNUAL MEAN	2.85		2.10		3.34	
HIGHEST ANNUAL MEAN					6.79	
LOWEST ANNUAL MEAN					1.75	
HIGHEST DAILY MEAN	124	Jun 23	21	Sep 2	240	Jul 23 1993
LOWEST DAILY MEAN	1.1	Jan 30	.66	Sep 21	.36	Jul 22 1995
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 27	.84	Sep 16	.65	Jun 28 1992
INSTANTANEOUS PEAK FLOW (STAGE)			92	Sep 2	269	(10.25) Jun 14 1991
INSTANTANEOUS PEAK STAGE			8.16	Sep 2	10.49	Jun 1 1994
ANNUAL RUNOFF (AC-FT)	2070		1520		2420	
10 PERCENT EXCEEDS	3.1		3.0		3.4	
50 PERCENT EXCEEDS	2.2		1.6		1.8	
90 PERCENT EXCEEDS	1.4		1.3		1.1	



PLATTE RIVER BASIN

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 o Louisville, and at mile 16.5.

DRAINAGE AREA (REVISED).--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-76-1: Drainage area.

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.

REVISIONS.--Daily discharge for February 16, 1995 has been revised to 4,800 ft³/s (from 48,000 ft³/s). Because of this revision, the statistical summary for water year 1995 is reprinted at the end of this record.

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	10500	7080	7540	e6000	e7000	12100	9400	10600	11900	14100	2280	4900
2	10600	7150	9310	e5200	e7200	12100	8660	11000	11400	13100	3220	7000
3	10200	6890	10100	e5400	e7400	15000	8690	11400	10200	12000	3000	14500
4	10100	6330	9270	e5600	e7800	15100	8890	10900	9750	11300	2780	7310
5	9990	6830	9350	e5800	e8200	14300	9640	10900	9470	11200	3000	5970
6	9660	8590	9220	e6200	e8400	13100	9650	10600	9330	9870	2790	6470
7	9500	6290	9370	e6400	e8400	12700	10000	10900	8690	9370	2900	5590
8	9330	7430	9690	e6600	e8400	11900	9830	10600	9220	8470	2670	5350
9	9200	7210	9010	e6800	e8200	11700	9900	9560	8910	9710	2840	5570
10	9080	7660	9300	e6800	e8200	14900	9950	9170	8330	8090	2590	5580
11	8900	7080	9050	e6600	e8000	13200	10100	9110	7950	7980	3070	6160
12	9100	7260	8620	e6000	e8000	12400	10800	8610	8030	8590	4530	6320
13	8910	6720	9130	e5200	e8000	12100	10300	8140	7500	7920	5260	6590
14	8830	6480	9750	e4800	e8000	12600	10400	8190	8430	6460	6430	6380
15	8210	6770	9550	e4700	e8200	11800	10600	7660	8110	6290	7030	6400
16	8930	7500	9040	e5000	e8400	11100	11700	7940	9250	6710	6770	6390
17	8770	15100	8940	e5400	e12000	9780	12700	7320	8640	7160	8250	6330
18	8590	17500	6790	e6200	e20000	11400	13300	7380	9050	5500	8440	6200
19	9220	13100	1240	e6800	e30000	9530	12800	7480	9070	5720	8150	6080
20	9220	11100	1390	e7400	e36000	9920	12300	7180	9690	4550	7580	5820
21	8600	10700	1510	e7800	e39000	10100	11900	6920	15900	4840	7150	5920
22	8020	10100	2320	e8000	e28000	9670	11700	7200	23200	4410	6890	6330
23	8290	10000	3020	e8200	20400	8380	12800	6770	17200	3830	6660	7130
24	7890	9870	e3400	e8400	16600	10500	13000	6720	15700	3180	7050	7810
25	7510	7600	e4000	e8200	14800	9710	12200	7330	23900	3540	6700	8690
26	6820	6760	e4500	e8000	16600	8970	11100	8560	18800	3270	6710	14000
27	7390	5780	e5000	e7800	15600	9040	10800	9250	15300	3280	5710	11100
28	6680	5290	e5200	e7600	13100	9160	10100	12000	14500	3060	5840	9890
29	6740	5250	e5800	e7400	---	8170	9120	12900	13100	3440	5160	8510
30	6430	6500	e5400	e7200	---	8520	9250	12600	13600	2780	5710	8330
31	7360	---	e5200	e7000	---	9600	---	12600	---	2330	4960	---
TOTAL	268570	247920	211010	204500	389900	348550	321580	287490	354120	212050	162120	218620
MEAN	8664	8264	6807	6597	13930	11240	10720	9274	11800	6840	5230	7287
MAX	10600	17500	10100	8400	39000	15100	13300	12900	23900	14100	8440	14500
MIN	6430	5250	1240	4700	7000	8170	8660	6720	7500	2330	2280	4900
AC-FT	532700	491700	418500	405600	773400	691300	637900	570200	702400	420600	321600	433600

e Estimated

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)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5040	5309	4733	4575	7467	11280	9708	9697	11160	6223	4051	4318
MAX	15630	10580	10910	9755	17270	27010	34250	35350	39430	43440	13890	12870
(WY)	1987	1987	1985	1984	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 1996 CALENDAR YEAR

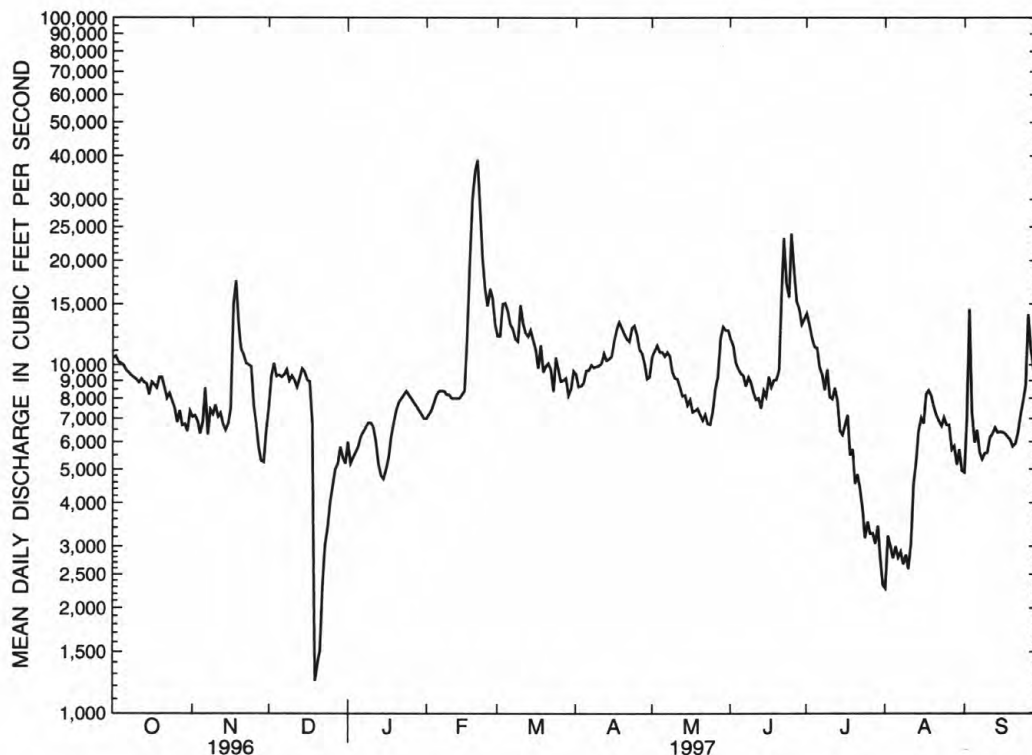
FOR 1997 WATER YEAR

WATER YEARS 1953 - 1997

ANNUAL TOTAL	3630370	3226430	
ANNUAL MEAN	9919	8840	6976
HIGHEST ANNUAL MEAN			16210 1984
LOWEST ANNUAL MEAN			2885 1956
HIGHEST DAILY MEAN	45600 May 28	39000 Feb 21	138000 Jul 25 1993
LOWEST DAILY MEAN	1240 Dec 19	1240 Dec 19	131 Sep 3 1976
ANNUAL SEVEN-DAY MINIMUM	2410 Dec 19	2410 Dec 19	159 Aug 29 1976
INSTANTANEOUS PEAK FLOW (STAGE)		e46000 (*8.33)Feb 21	160000(11.90)Jul 25 1993
INSTANTANEOUS PEAK STAGE		*8.76 Feb 19	12.45 Mar 30 1960
ANNUAL RUNOFF (AC-FT)	7201000	6400000	5054000
10 PERCENT EXCEEDS	15300	12900	12800
50 PERCENT EXCEEDS	8600	8330	5120
90 PERCENT EXCEEDS	4600	4980	1980

e Estimated.

* Backwater from ice.



PLATTE RIVER AT LOUISVILLE

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 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 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. FT ³ /S (00061)	SPECIFIC CON- DUCT- ANCE (μS/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (°C) (00010)	BAROMETRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CaCO ₃) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CaCO ₃ (MG/L) (00904)	SOLIDS, RESIDUE AT 180 °C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
OCT											
10	1000	8900	770	8.7	12.5	728	7.1	250	--	568	--
DEC											
10	1030	8590	710	7.8	0.0	728	13.1	250	45	470	467
FEB											
28	1030	12200	566	7.6	1.0	734	10.3	170	24	326	308
MAR											
21	1030	9160	695	7.7	11.0	736	12.0	230	34	439	430
APR											
23	1100	12800	627	7.9	11.5	726	11.6	230	40	401	389
MAY											
15	1030	7750	656	8.4	13.5	728	11.0	210	28	444	419
MAY											
28	0930	11300	617	8.1	12.0	742	9.5	220	0	434	429
JUN											
05	1100	11100	550	8.1	22.0	735	8.5	190	46	380	379
JUN											
19	1145	10100	630	8.1	25.5	734	8.1	200	68	459	442
JUN											
23	1100	17400	543	7.7	26.5	738	6.6	190	53	406	377
JUN											
26	1030	17500	553	7.8	25.5	739	6.9	190	49	387	358
JUL											
10	1100	7900	528	7.6	24.0	726	8.1	180	32	384	367
AUG											
12	1000	4410	665	8.3	18.0	737	--	160	0	415	413
AUG											
15	1000	7300	532	8.5	22.5	727	9.6	160	22	378	355
SEP											
09	1130	5260	706	8.6	23.5	728	10.3	170	19	415	392

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 1996 TO SEPTEMBER 1997

DATE	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)	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 10	--	--	65	21	76	2	11	--	--	190	43
DEC 10	0.64	10900	72	18	49	1	9.5	256	0	120	27
FEB 28	0.44	10700	50	12	29	1	12	184	0	65	18
MAR 21	0.60	10900	67	16	43	1	10	244	0	98	30
APR 23	0.55	13900	67	16	39	1	9.3	234	0	83	24
MAY 15	0.60	9290	56	17	55	2	9.3	222	0	110	40
MAY 28	0.59	13200	59	17	51	2	9.7	270	0	92	41
JUN 05	0.52	11400	49	16	54	2	10	174	0	100	38
JUN 19	0.62	12500	53	17	67	2	11	164	0	150	37
JUN 23	0.55	19100	49	15	46	1	12	162	0	120	27
JUN 26	0.53	18300	52	14	41	1	11	167	0	110	23
JUL 10	0.52	8190	48	14	48	2	9.1	177	0	100	37
AUG 12	0.56	4940	41	13	70	2	8.1	--	--	72	71
AUG 15	0.51	7450	42	13	52	2	9.2	166	0	93	41
SEP 09	0.56	5900	45	15	63	2	10	168	10	92	49

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 1996 TO SEPTEMBER 1997

DATE	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 TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
OCT 10	0.50	28	0.52	0.01	0.53	0.02	1.9	0.28	1.9	0.30	2.4	0.83
DEC 10	0.40	33	2.4	0.03	2.4	0.15	0.55	0.25	0.70	0.40	3.1	2.8
FEB 28	0.30	22	1.6	0.02	1.6	0.61	2.1	0.89	2.7	1.5	4.3	3.1
MAR 21	0.42	30	2.5	0.03	2.5	0.08	0.90	0.28	0.99	0.37	3.5	2.9
APR 23	0.40	27	1.7	0.02	1.7	<0.02	1.9	--	1.9	0.63	3.6	2.3
MAY 15	0.46	16	0.62	0.03	0.65	<0.02	1.9	--	1.9	0.24	2.5	0.89
MAY 28	0.35	18	1.4	0.04	1.4	<0.02	3.0	--	3.0	0.45	4.4	1.8
JUN 05	0.41	17	0.86	0.02	0.88	<0.02	1.2	--	1.2	0.30	2.0	1.2
JUN 19	0.50	18	0.25	0.01	0.26	<0.02	2.9	--	2.9	0.37	3.2	0.63
JUN 23	0.46	20	1.0	0.11	1.2	0.16	4.4	0.41	4.6	0.57	5.7	1.7
JUN 26	0.47	19	1.6	0.11	1.7	0.08	4.5	0.50	4.6	0.59	6.3	2.3
JUL 10	0.49	18	1.0	0.02	1.0	<0.02	6.6	--	6.6	0.39	7.6	1.4
AUG 12	0.32	23	0.18	0.02	0.20	0.04	1.1	0.22	1.1	0.27	1.3	0.47
AUG 15	0.41	23	--	0.01	<0.05	<0.02	3.0	--	3.0	0.48	3.0	--
SEP 09	0.45	25	--	<0.01	<0.05	<0.02	2.0	--	2.0	0.32	2.0	--

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(National Stream-Quality Accounting Network, NASQAN, station
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)	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)	CHRO- MIUM, DIS- SOLVED (µ G/L AS CR) (01030)
OCT 10	0.35	0.04	0.04	2.0	10	5	158	<1.0	119	<1.0	1.0
DEC 10	0.31	0.20	0.20	3.0	<1.0	5	146	<1.0	75	<1.0	3.0
FEB 28	0.71	0.17	0.21	2.0	<1.0	4	132	<1.0	49	<1.0	2.0
MAR 21	0.30	0.16	0.64	2.0	<1.0	5	137	<1.0	63	<1.0	2.0
APR 23	0.67	0.22	0.20	1.1	<1.0	5	127	<1.0	61	<1.0	4.2
MAY 15	0.39	<0.01	0.02	1.5	<1.0	5	110	<1.0	79	<1.0	3.3
MAY 28	0.89	0.06	0.08	3.2	<1.0	4	120	<1.0	73	<1.0	4.4
JUN 05	0.18	0.03	0.05	1.1	<1.0	6	106	<1.0	80	<1.0	3.0
JUN 19	0.52	0.03	0.02	2.2	<1.0	5	115	<1.0	104	<1.0	<1.0
JUN 23	1.2	0.16	0.16	2.9	<1.0	5	142	<1.0	84	<1.0	<1.0
JUN 26	1.8	0.19	0.22	1.3	<1.0	5	138	<1.0	81	<1.0	5.1
JUL 10	2.0	0.16	0.16	2.2	<1.0	5	124	<1.0	82	<1.0	2.8
AUG 12	0.28	0.06	0.11	1.6	<1.0	8	92	<1.0	78	<1.0	2.9
AUG 15	0.64	0.02	0.03	1.9	<1.0	7	105	<1.0	74	<1.0	1.0
SEP 09	0.46	0.09	0.10	1.5	<1.0	9	106	<1.0	87	<1.0	1.5

PLATTE RIVER BASIN

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	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 10	<1.0	7.0	<3.0	<1.0	29	<1.0	4.0	2.0	3	<1.0	600
DEC 10	<1.0	<1.0	<3.0	<1.0	22	5.0	3.0	2.0	3	<1.0	500
FEB 28	<1.0	8.0	16	<1.0	15	10	3.0	3.0	2	<1.0	310
MAR 21	<1.0	1.1	<3.0	<1.0	17	1.2	3.5	1.2	4	<1.0	443
APR 23	<1.0	7.7	<3.0	<1.0	21	<1.0	2.9	2.7	4	<1.0	404
MAY 15	<1.0	1.4	<3.0	<1.0	24	1.5	3.6	1.6	3	<1.0	417
MAY 28	<1.0	1.8	<3.0	<1.0	22	<1.0	4.2	3.0	4	<1.0	435
JUN 05	<1.0	1.1	<3.0	<1.0	24	<1.0	3.6	1.6	4	<1.0	375
JUN 19	<1.0	1.9	<3.0	<1.0	28	<1.0	4.7	1.9	3	<1.0	435
JUN 23	<1.0	3.1	<3.0	<1.0	21	<1.0	4.8	4.0	2	<1.0	434
JUN 26	<1.0	2.7	<3.0	<1.0	19	<1.0	5.4	3.5	2	<1.0	389
JUL 10	<1.0	2.6	<3.0	<1.0	19	<1.0	4.9	2.1	3	<1.0	339
AUG 12	<1.0	1.4	<3.0	<1.0	22	<1.0	3.8	1.6	2	<1.0	338
AUG 15	<1.0	2.3	<3.0	<1.0	20	<1.0	4.0	2.0	2	<1.0	351
SEP 09	<1.0	1.6	<3.0	<1.0	23	<1.0	4.3	1.8	2	<1.0	390

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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- PENDE 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 10	8	<1.0	17	4.0	3.8	<0.002	<0.002	<0.002	0.12	<0.002	<0.002
DEC 10	<6	3.0	12	2.0	3.6	<0.002	<0.002	<0.002	0.09	<0.002	<0.002
FEB 28	<6	2.0	7.0	0.20	8.0	<0.002	0.006	<0.002	0.11	<0.002	<0.002
MAR 21	<6	<1.0	9.9	1.5	3.7	<0.002	E0.003	<0.002	0.38	<0.002	<0.002
APR 23	<6	<1.0	9.3	1.9	5.6	0.007	0.004	<0.002	0.11	<0.002	<0.002
MAY 15	8	<1.0	11	0.40	4.5	0.08	0.02	<0.002	0.41	<0.002	<0.002
MAY 28	<6	1.9	9.8	2.4	6.1	0.64	0.24	<0.002	2.4	<0.002	<0.002
JUN 05	10	<1.0	11	2.9	6.4	0.11	0.03	<0.002	2.6	<0.002	<0.002
JUN 19	10	<1.0	15	>5.0	6.4	0.03	0.03	<0.002	1.2	<0.002	<0.002
JUN 23	11	2.1	11	>5.0	5.6	1.4	0.31	<0.002	6.6	<0.002	<0.002
JUN 26	10	<1.0	9.2	7.9	5.9	0.49	0.59	<0.002	6.4	<0.002	<0.002
JUL 10	7	<1.0	8.8	3.1	4.5	0.20	0.04	<0.002	1.6	<0.002	<0.002
AUG 12	8	1.5	5.1	2.8	3.7	<0.002	E0.003	<0.002	0.17	<0.002	<0.002
AUG 15	11	2.1	9.0	>5.0	3.4	<0.002	0.01	<0.002	0.14	<0.002	<0.002
SEP 09	12	<1.0	8.0	3.2	3.5	0.008	<0.002	<0.002	0.20	<0.002	<0.002

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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 1996 TO SEPTEMBER 1997

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 10	<0.003	<0.003	<0.004	0.007	<0.002	E0.03	<0.002	<0.001	<0.003	<0.02	<0.002
DEC 10	<0.003	<0.003	<0.004	0.009	<0.002	E0.02	<0.002	<0.001	<0.003	<0.02	<0.002
FEB 28	<0.003	E0.01	<0.004	0.02	<0.002	E0.01	<0.002	<0.001	<0.003	<0.02	<0.002
MAR 21	<0.003	<0.003	E0.003	0.01	<0.002	E0.02	<0.002	<0.001	<0.003	<0.02	<0.002
APR 23	<0.003	<0.003	<0.004	0.04	0.004	E0.03	0.005	<0.001	<0.003	<0.02	<0.002
MAY 15	<0.003	<0.003	<0.004	0.07	E0.002	E0.05	<0.002	<0.001	<0.003	<0.02	E0.003
MAY 28	<0.003	<0.003	E0.004	0.62	E0.001	E0.09	<0.002	<0.001	<0.003	<0.02	0.004
JUN 05	<0.003	<0.003	<0.004	0.17	<0.002	E0.05	<0.002	<0.001	<0.003	<0.02	<0.002
JUN 19	<0.003	<0.003	<0.004	0.20	<0.002	E0.08	<0.002	<0.001	<0.003	<0.02	<0.002
JUN 23	<0.003	E0.04	<0.004	1.6	E0.001	E0.19	0.005	<0.001	<0.003	<0.02	<0.002
JUN 26	<0.003	E0.05	<0.004	1.1	E0.001	E0.28	0.007	<0.001	<0.003	<0.02	<0.002
JUL 10	<0.003	E0.03	0.009	0.32	E0.002	E0.07	0.004	<0.001	<0.003	<0.02	<0.002
AUG 12	E0.14	<0.003	<0.004	0.02	<0.002	E0.02	0.01	<0.001	<0.003	<0.02	<0.002
AUG 15	<0.003	<0.003	<0.004	0.02	E0.001	E0.02	<0.002	<0.001	<0.003	<0.02	<0.07
SEP 09	<0.003	<0.003	<0.004	0.02	<0.002	E0.04	0.005	<0.001	<0.003	<0.02	<0.002

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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)	FONOPOS 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 SENCOR WATER DISSOLV (µ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µ G/L) (82671)
OCT 10	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.01	<0.004	<0.004
DEC 10	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.02	<0.004	<0.004
FEB 28	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.07	0.005	<0.004
MAR 21	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.44	<0.004	<0.004
APR 23	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.06	<0.004	<0.004
MAY 15	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.22	<0.004	<0.004
MAY 28	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	1.3	0.02	<0.004
JUN 05	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.84	<0.004	<0.004
JUN 19	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.27	<0.004	<0.004
JUN 23	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	3.4	0.06	<0.004
JUN 26	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	4.3	0.09	<0.004
JUL 10	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.76	0.02	<0.004
AUG 12	<0.004	<0.003	<0.003	<0.004	<0.002	0.04	<0.001	<0.006	0.04	<0.004	<0.004
AUG 15	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.05	0.01	<0.004
SEP 09	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006	0.06	<0.004	<0.004

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
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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 FLTRD 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 10	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.01	<0.003	<0.004	<0.01
DEC 10	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.005	<0.003	<0.004	<0.01
FEB 28	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.008	<0.003	<0.004	<0.01
MAR 21	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.007	<0.003	<0.004	<0.01
APR 23	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.02	<0.003	<0.004	<0.01
MAY 15	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.007	<0.003	<0.004	<0.01
MAY 28	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	0.03	<0.003	<0.004	<0.01
JUN 05	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.01	<0.003	<0.004	<0.01
JUN 19	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.01	<0.003	<0.004	<0.01
JUN 23	<0.003	<0.004	<0.004	0.02	<0.005	<0.002	<0.006	0.04	<0.003	<0.004	<0.01
JUN 26	<0.003	<0.004	<0.004	0.02	<0.005	<0.002	<0.006	0.03	<0.003	<0.004	<0.01
JUL 10	<0.003	<0.004	<0.004	0.02	<0.005	<0.002	<0.006	0.03	<0.003	<0.004	<0.01
AUG 12	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	0.03	<0.003	<0.004	<0.01
AUG 15	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.009	<0.003	<0.004	<0.01
SEP 09	<0.003	<0.004	<0.004	<0.004	<0.005	<0.002	<0.006	E0.009	<0.003	<0.004	<0.01

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 (National Water-Quality Assessment, NAWQA, station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)	TRI- FLUR- 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 10	<0.007	0.02	E0.006	<0.007	<0.01	<0.002	<0.001	<0.002	443	10600	46
DEC 10	<0.007	<0.005	<0.01	<0.007	<0.01	<0.002	<0.001	<0.002	648	15000	22
FEB 28	<0.007	E0.005	<0.01	<0.007	<0.01	<0.002	<0.001	E0.003	1380	45500	33
MAR 21	<0.007	E0.005	<0.01	<0.007	<0.01	<0.002	<0.001	<0.002	1130	27900	37
APR 23	<0.007	<0.005	<0.01	<0.007	<0.01	<0.002	<0.001	<0.002	2330	80500	41
MAY 15	<0.007	0.006	<0.01	<0.007	<0.01	<0.002	<0.001	0.004	440	9210	40
MAY 28	0.02	0.02	0.02	<0.007	<0.01	<0.002	<0.001	0.005	2150	65600	58
JUN 05	<0.007	0.02	<0.01	<0.007	<0.01	<0.002	<0.001	<0.002	698	21000	54
JUN 19	<0.007	0.01	E0.002	<0.007	<0.01	<0.002	<0.001	<0.002	689	18700	79
JUN 23	E0.003	0.04	E0.008	<0.007	<0.01	<0.002	<0.001	0.01	2850	134000	89
JUN 26	0.05	0.03	E0.01	<0.007	<0.01	<0.002	<0.001	0.01	3420	162000	89
JUL 10	<0.007	0.02	E0.006	<0.007	<0.01	<0.002	<0.001	0.009	2720	58000	92
AUG 12	<0.007	<0.005	E0.004	<0.007	<0.01	<0.002	<0.001	<0.002	245	2920	84
AUG 15	<0.007	0.008	E0.006	<0.007	<0.01	<0.002	<0.001	<0.002	563	11100	72
SEP 09	<0.007	0.006	<0.01	<0.007	<0.01	<0.002	<0.001	<0.002	304	4320	73

WEeping WATER CREEK BASIN

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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	e70	63	e80	198	44	177	71	417	37	29
2	29	36	e62	66	e100	100	46	120	68	164	38	233
3	27	36	e60	67	e90	70	49	136	65	85	39	71
4	27	43	e58	65	e74	63	55	106	65	81	38	44
5	28	50	e58	e54	e70	58	65	98	64	74	36	36
6	27	47	e56	e50	69	57	74	93	64	70	35	33
7	28	41	e56	e50	68	57	68	646	60	66	34	32
8	27	40	63	52	e66	56	77	335	59	65	33	31
9	28	40	58	52	e64	68	88	119	57	62	31	33
10	27	38	59	40	e60	74	102	100	57	64	31	30
11	26	37	60	e37	e58	65	110	94	56	72	36	29
12	26	37	59	e33	e54	61	120	92	57	65	48	28
13	28	38	57	e30	e52	62	129	92	57	60	43	28
14	27	39	57	e30	e50	60	132	89	56	56	39	28
15	27	43	57	e40	e54	54	147	81	55	53	37	28
16	26	325	e48	e50	e60	56	147	77	54	51	35	28
17	26	518	e47	e58	e70	56	144	74	53	50	39	27
18	26	109	e46	e54	e78	57	142	72	51	48	37	26
19	26	82	e48	e48	e70	56	124	68	50	47	37	25
20	25	75	e48	e70	e60	55	110	65	48	47	39	23
21	26	71	e50	e78	e52	55	109	65	53	50	36	22
22	29	66	e52	e82	e48	52	110	65	83	51	34	26
23	67	66	e52	e76	e46	51	102	64	76	49	33	43
24	62	63	e48	e68	e44	53	96	144	73	46	32	40
25	52	e54	e44	e60	e44	57	99	79	795	44	30	35
26	42	e54	e44	e50	e46	54	97	84	293	40	29	33
27	34	60	e42	e45	e50	51	91	84	102	40	28	30
28	30	62	e46	e36	e60	49	87	82	81	46	28	27
29	52	70	e50	e38	---	47	79	81	73	47	29	24
30	51	104	e50	e44	---	46	154	80	69	43	32	24
31	40	---	e54	e56	---	44	---	74	---	39	31	---
TOTAL	1028	2380	1659	1642	1737	1942	2997	3636	2865	2192	1084	1146
MEAN	33.2	79.3	53.5	53.0	62.0	62.6	99.9	117	95.5	70.7	35.0	38.2
MAX	67	518	70	82	100	198	154	646	795	417	48	233
MIN	25	36	42	30	44	44	44	64	48	39	28	22
AC-FT	2040	4720	3290	3260	3450	3850	5940	7210	5680	4350	2150	2270

Estimated

WEeping WATER CREEK BASIN

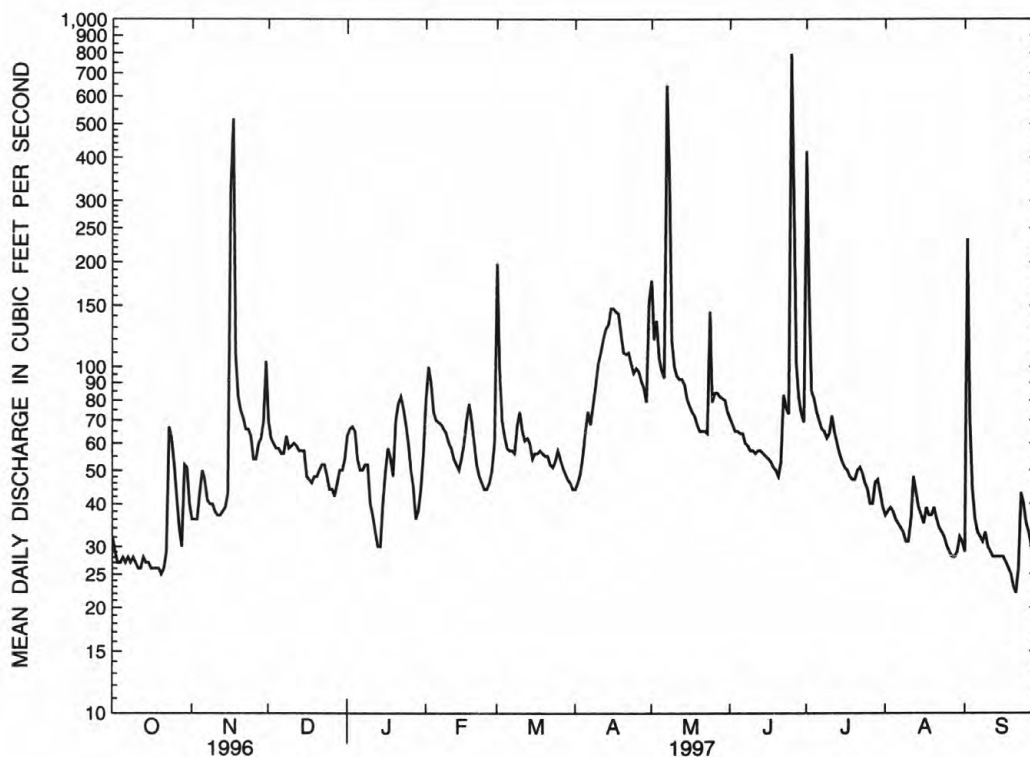
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06806500 WEeping WATER CREEK AT UNION, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.7	44.4	39.0	40.8	82.8	129	106	172	191	187	91.2	71.8
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1951 - 1997	
ANNUAL TOTAL	31047		24308			
ANNUAL MEAN	84.8		66.6		101	
MEDIAN OF ANNUAL MEANS					75.4	
HIGHEST ANNUAL MEAN					433	
LOWEST ANNUAL MEAN					19.9	
HIGHEST DAILY MEAN	2310	May 27	795	Jun 25	34000	Jul 23 1993
LOWEST DAILY MEAN	22	Jan 7	22	Sep 21	.10	Sep 10 1955
ANNUAL SEVEN-DAY MINIMUM	26	Jan 15	25	Sep 16	.13	Sep 9 1955
INSTANTANEOUS PEAK FLOW			1520	Jun 25	65100	Jul 23 1993
INSTANTANEOUS PEAK STAGE			13.22	Jun 25	30.97	Jul 23 1993
ANNUAL RUNOFF (AC-FT)	61580		48210		73500	
10 PERCENT EXCEEDS	108		100		163	
50 PERCENT EXCEEDS	45		54		38	
90 PERCENT EXCEEDS	30		29		8.8	



WEeping WATER CREEK AT UNION

MISSOURI RIVER MAIN STEM

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.--Estimated daily discharges: Dec. 22. 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, 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64200	62200	60400	28000	36200	54800	77200	95800	86100	83200	70000	71500
2	64100	61800	61300	27800	38700	56300	81100	97500	84300	82600	69900	81100
3	63300	62100	62200	28400	41700	57500	83600	98200	83200	81500	69900	81700
4	62900	61700	60900	31700	42300	58000	85400	97500	82100	81200	69500	77500
5	62400	62000	57800	35600	41500	57600	86100	98100	81400	80700	69400	73500
6	61700	62200	55400	36200	39800	55900	86600	96700	80300	79700	69100	72500
7	61100	63000	52700	34300	39300	54600	90000	95800	79200	77600	69000	72300
8	61300	62300	50700	33000	39700	55800	95300	96100	78700	76100	68900	71700
9	61000	63600	47100	33400	39300	56700	99300	95800	78700	74400	69100	72300
10	60000	64000	44300	34100	38900	62100	104000	95200	78300	74000	70000	72300
11	59400	64500	43500	33300	38200	65100	107000	94700	77800	73800	71300	72000
12	59700	65200	41400	31800	38400	67900	109000	94500	77400	73900	72600	71800
13	59700	65600	39500	29400	38900	67300	111000	94800	77500	73500	72300	71900
14	59500	65300	39000	30100	39300	66900	109000	94200	79500	72700	72400	72000
15	59300	65600	39400	31100	40000	66100	108000	91500	79800	72800	72600	71700
16	60200	67800	38200	31900	40800	62500	109000	89800	78800	72500	72600	71500
17	60400	73300	36500	31500	41900	61600	112000	88400	77500	72500	71900	71900
18	61400	77800	35100	31000	45200	60800	113000	86900	76300	72100	72700	71400
19	61600	71700	29300	31200	60600	62400	110000	84800	75400	71400	73000	71200
20	61900	66500	25800	32100	65400	63100	106000	84600	74900	71700	72900	70900
21	61500	65700	22100	33500	68600	60600	105000	84300	77000	72700	72000	71200
22	61200	64300	e21600	34800	71200	60500	104000	83000	88900	72800	71400	71900
23	62700	63500	23600	36900	71200	61700	101000	81600	88900	73400	71400	73300
24	62200	63100	27100	37500	62200	60800	99800	81500	86000	72600	71000	74100
25	61800	61300	25400	36800	55900	61000	99700	82000	91300	72300	71400	73700
26	61200	59100	23700	36600	55000	62700	98600	82400	96800	72300	71200	74900
27	62100	57900	23500	36000	55800	63500	96500	82600	89400	71400	71200	76100
28	62000	57700	25700	35700	55200	67300	95100	84700	83800	71200	71000	74500
29	62500	58200	27400	35700	---	70300	92900	88600	81500	71500	71400	74600
30	62300	59300	27900	35400	---	71500	93600	89400	80300	71800	71600	75200
31	62100	---	28300	35000	---	74500	---	87700	---	70800	71500	---
TOTAL	1906700	1918300	1196800	1029800	1341200	1927400	2968800	2798700	2451100	2310700	2204200	2202200
MEAN	61510	63940	38610	33220	47900	62170	98960	90280	81700	74540	71100	73410
MAX	64200	77800	62200	37500	71200	74500	113000	98200	96800	83200	73000	81700
MIN	59300	57700	21600	27800	36200	54600	77200	81500	74900	70800	68900	70900
AC-FT	3782000	3805000	2374000	2043000	2660000	3823000	5889000	5551000	4862000	4583000	4372000	4368000

e Estimated

MISSOURI RIVER MAIN STEM

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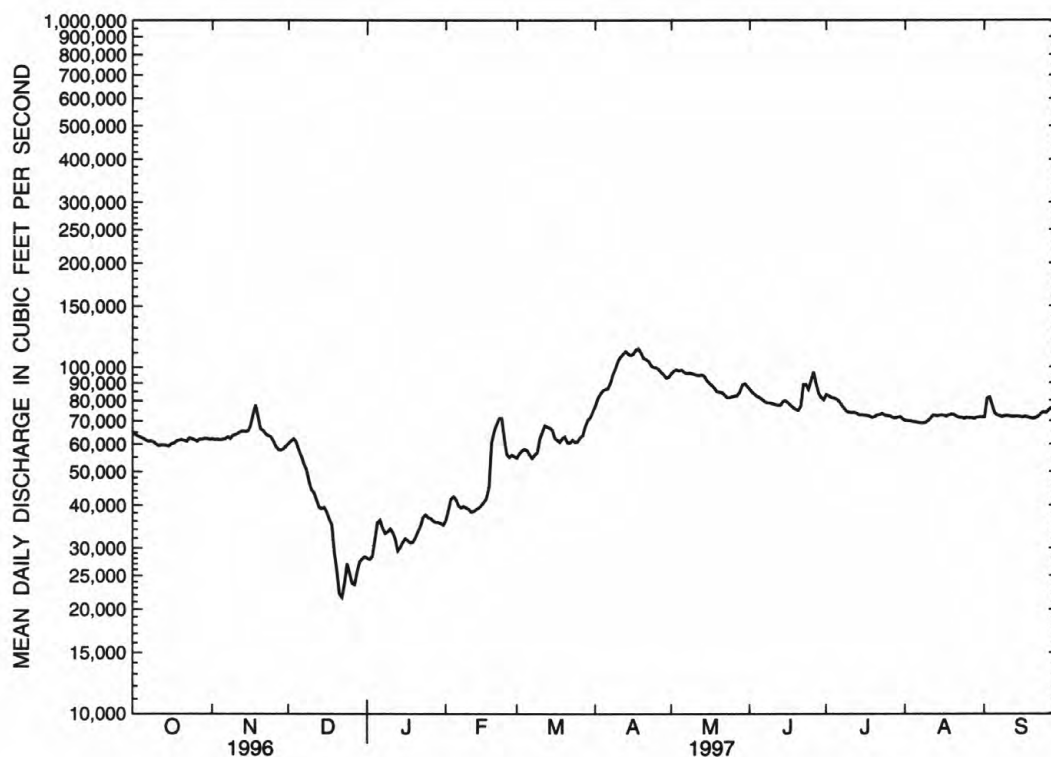
06807000 MISSOURI RIVER AT NEBRASKA CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42000	37460	25400	20720	26050	38020	47640	47470	52200	46400	42840	42830
MAX	69440	68480	52410	39970	48630	66730	98960	90280	117500	116700	71540	73410
(WY)	1987	1976	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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	^a WATER YEARS 1953 - 1997
ANNUAL TOTAL	20596400	24255900	
ANNUAL MEAN	56270	66450	39050
HIGHEST ANNUAL MEAN			66450
LOWEST ANNUAL MEAN			25370
HIGHEST DAILY MEAN	139000	Jun 24	113000
LOWEST DAILY MEAN	17000	Jan 21	21600
ANNUAL SEVEN-DAY MINIMUM	23900	Dec 21	23900
INSTANTANEOUS PEAK FLOW			113000
INSTANTANEOUS PEAK STAGE			23.42
ANNUAL RUNOFF (AC-FT)	40850000	48110000	28290000
10 PERCENT EXCEEDS	72200	93800	61600
50 PERCENT EXCEEDS	60000	70000	36800
90 PERCENT EXCEEDS	29300	35500	17100

a Post-regulation, revised.



MISSOURI RIVER AT NEBRASKA CITY

LITTLE NEMAHA RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	135	e450	e100	e210	737	115	1670	215	425	97	54
2	92	120	e260	e110	e220	e400	119	733	196	426	95	76
3	85	115	e230	e130	e215	e240	125	836	183	275	92	94
4	82	118	e220	e120	e190	e200	142	631	176	230	89	73
5	85	128	e210	e110	e175	e190	190	460	171	204	88	62
6	84	125	e205	e104	e165	e180	282	365	164	189	85	58
7	88	118	204	e102	e160	e175	218	901	153	176	80	55
8	90	115	e200	e98	e150	176	174	1550	142	165	81	55
9	90	113	e200	e96	e150	e174	146	677	136	155	79	53
10	87	109	e195	e92	e150	e262	162	446	134	719	76	51
11	84	109	e190	e84	e150	e220	206	362	135	1030	92	50
12	82	108	189	e88	e145	e190	216	310	135	398	95	50
13	82	107	168	e94	e145	e176	e240	285	134	244	93	51
14	82	107	175	e98	e140	e170	343	262	130	193	90	50
15	83	124	176	e100	151	174	1670	239	125	166	88	50
16	79	1890	e175	e108	e165	e160	1060	224	137	149	76	50
17	79	e1000	e170	e96	e200	153	572	215	125	138	79	49
18	79	e800	e170	e96	e500	153	412	210	111	127	75	48
19	82	640	e150	e98	879	149	336	194	101	117	81	47
20	83	417	e100	e110	e580	142	298	184	96	109	86	43
21	80	322	e110	e130	e380	138	285	174	110	120	79	45
22	88	262	e110	e120	e254	136	275	171	114	1260	70	53
23	224	268	e108	e110	e220	125	271	171	106	431	65	91
24	341	e250	e104	e100	e205	125	258	704	123	269	63	125
25	195	e240	e98	e96	e210	136	223	680	3700	191	61	135
26	150	e240	e98	e92	e215	134	207	424	1690	143	57	97
27	121	e250	e100	e88	e300	125	201	424	732	127	54	76
28	109	e250	e106	e88	e500	119	196	338	457	152	53	69
29	145	e400	e110	e90	---	115	189	296	357	165	51	65
30	200	825	e100	e110	---	115	462	261	259	129	62	59
31	153	---	e90	e160	---	115	---	229	---	109	61	---
TOTAL	3503	9805	5171	3218	7124	5804	9593	14626	10547	8731	2393	1934
MEAN	113	327	167	104	254	187	320	472	352	282	77.2	64.5
MAX	341	1890	450	160	879	737	1670	1670	3700	1260	97	135
MIN	79	107	90	84	140	115	115	171	96	109	51	43
AC-FT	6950	19450	10260	6380	14130	11510	19030	29010	20920	17320	4750	3840

e Estimated

LITTLE NEMAHA RIVER BASIN

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06811500 LITTLE NEMAHA RIVER AT AUBURN, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	226	127	112	117	228	447	347	554	512	606	232	251
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

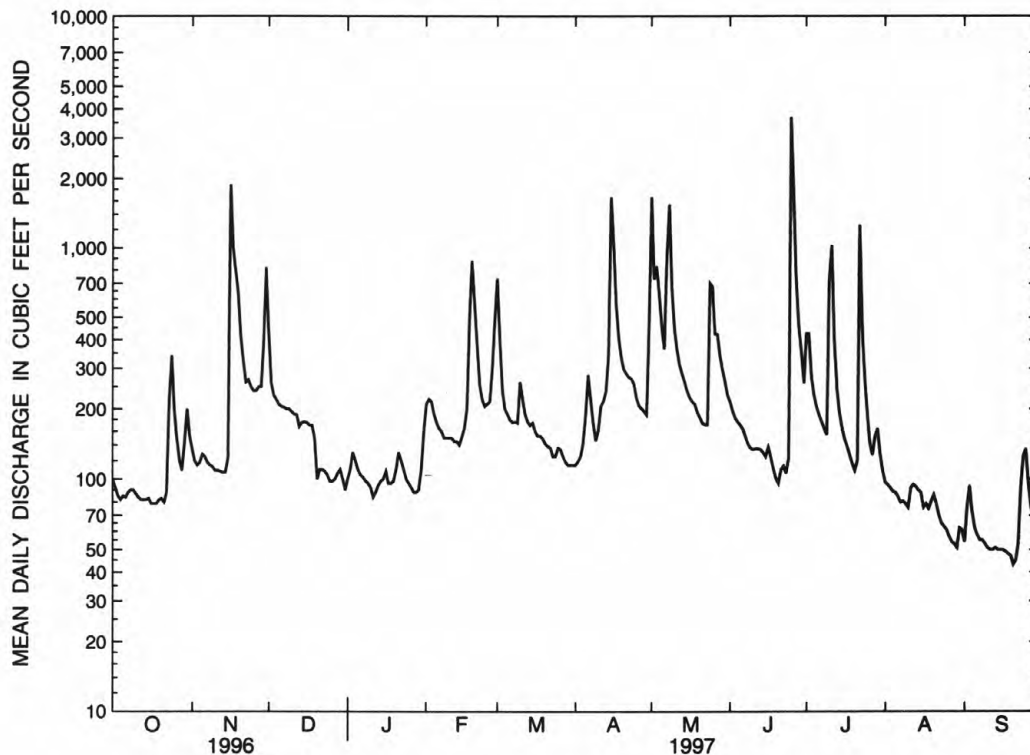
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1950 - 1997

ANNUALTOTAL	164061	82449										
ANNUAL MEAN		448					226			314		
MEDIAN OF ANNUAL MEANS										244		
HIGHEST ANNUAL MEAN										1389		1993
LOWEST ANNUAL MEAN										64.4		1981
HIGHEST DAILY MEAN				16600	May 9		3700	Jun 25		70400		Jul 24 1993
LOWEST DAILY MEAN				41	Feb 2		43	Sep 20		.87		Jul 6 1977
ANNUAL SEVEN-DAY MINIMUM				48	Jan 29		47	Sep 15		1.1		Jul 3 1977
INSTANTANEOUS PEAK FLOW							11300	Nov 16		164000		May 9 1950
INSTANTANEOUS PEAK STAGE							17.13	Nov 16		*27.65		May 9 1950
ANNUAL RUNOFF (AC-FT)				325400			163500			227400		
10 PERCENT EXCEEDS				646			424			454		
50 PERCENT EXCEEDS				118			142			100		
90 PERCENT EXCEEDS				66			76			34		

* From floodmark.



LITTLE NEMAHA RIVER AT AUBURN

MISSOURI RIVER MAIN STEM

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.--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 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70300	68900	70000	33600	40800	61200	80800	106000	92200	93200	71500	74000
2	69100	68600	69400	33400	42500	63100	84800	107000	89800	94100	71500	80400
3	69200	68500	69600	33500	46000	63300	88900	108000	87500	91200	72000	92300
4	68900	68200	68900	35100	48300	63300	91500	106000	85800	89000	71600	86100
5	68900	68000	65500	39100	47300	62500	94500	106000	85300	88300	71400	78900
6	68300	67800	62100	41400	45100	60700	95600	104000	84400	87100	71600	75600
7	67400	69000	59700	40400	43500	57300	98500	104000	83200	84300	70900	75000
8	67600	68100	57600	38100	43700	57400	103000	112000	81900	81800	70900	74400
9	68100	68900	54800	37300	43500	57200	107000	109000	81100	80000	71000	74200
10	67400	69000	50600	38000	42900	61000	109000	105000	81100	78900	71300	74700
11	66200	69400	48400	37800	42300	68400	112000	102000	79900	81600	72400	74400
12	65600	69400	47100	36600	42000	72300	113000	100000	79300	80300	74700	73900
13	65900	69400	44900	35400	41700	73100	112000	100000	79800	79700	75000	73500
14	65200	68900	43800	33800	41700	71600	115000	99700	79600	78800	75000	73800
15	64600	68700	43900	35400	41800	71600	121000	98500	81100	78100	76100	73400
16	64200	75200	43800	36300	42400	68800	118000	96100	81600	77600	76600	73400
17	65300	103000	43000	36300	43100	65500	116000	94200	80400	76400	76800	73800
18	66200	93000	40500	35500	47300	63600	115000	92200	78100	76000	77200	73900
19	67400	87400	37600	35200	66400	64700	114000	89800	77600	74300	77800	73400
20	67600	78600	33000	35700	80200	65900	113000	87100	77500	73700	78300	73300
21	67200	76000	30900	37100	77400	64500	112000	86400	77500	73200	77400	73600
22	67300	75700	28300	38400	81200	62700	113000	85600	85200	75100	76700	74600
23	68700	75200	28100	40200	77900	64200	112000	84600	95800	74100	76100	76500
24	72000	74700	31500	42400	70700	63800	111000	84600	95400	74800	75900	77100
25	70200	73500	32900	42100	62900	63400	109000	87200	105000	73100	75800	77500
26	68600	69900	31100	41100	61500	65500	108000	92400	112000	73400	75400	77200
27	67000	67000	29700	40300	62100	67000	106000	91700	107000	74100	75500	79700
28	67800	65700	30300	39900	61600	69500	104000	93100	98900	73700	75100	78300
29	68400	66900	32400	40000	---	72900	102000	94400	94200	72600	74900	77800
30	69900	70800	33300	39900	---	74300	102000	95000	93100	73200	74900	77500
31	69000	---	33700	39800	---	77400	---	94100	---	72100	74800	---
TOTAL	2099500	2183400	1396400	1169100	1487800	2037700	3181600	3015700	2611300	2453800	2306100	2292200
MEAN	67730	72780	45050	37710	53140	65730	106100	97280	87040	79150	74390	76410
MAX	72000	103000	70000	42400	81200	77400	121000	112000	112000	94100	78300	92300
MIN	64200	65700	28100	33400	40800	57200	80800	84600	77500	72100	70900	73300
AC-FT	4164000	4331000	2770000	2319000	2951000	4042000	6311000	5982000	5180000	4867000	4574000	4547000

MISSOURI RIVER MAIN STEM

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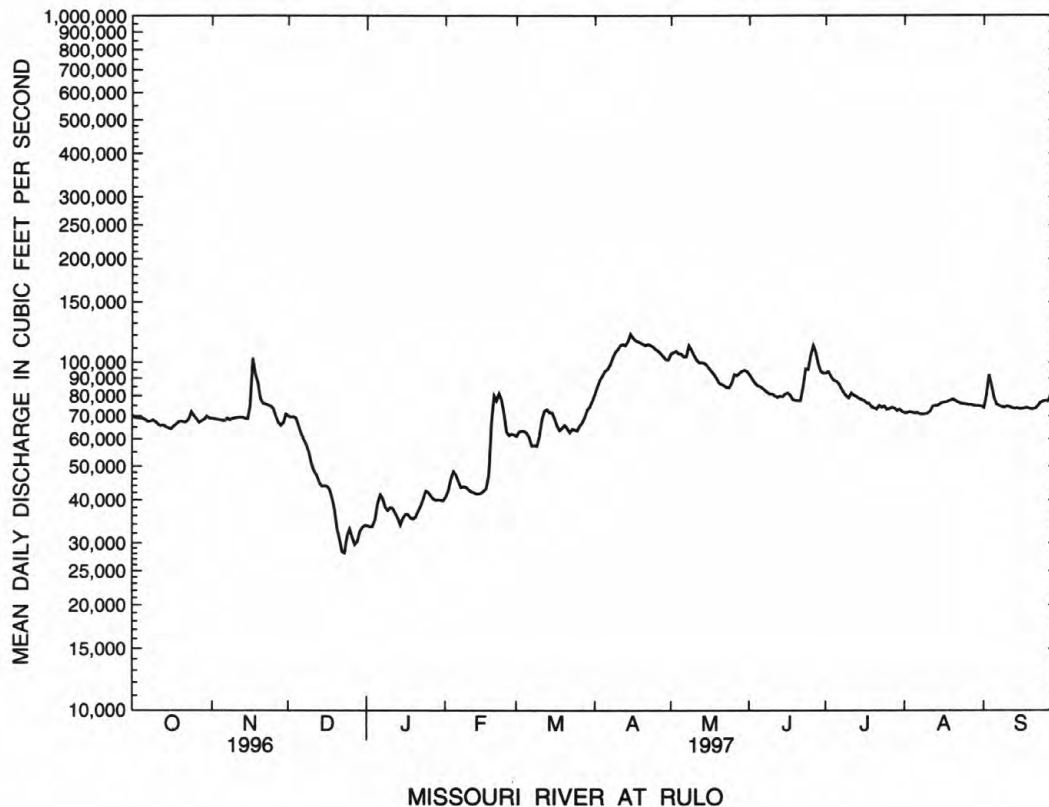
06813500 MISSOURI RIVER AT RULO, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44010	39440	26060	21970	28000	41220	51040	51480	56210	50710	45040	45430
MAX	77770	72780	55240	42280	53140	79590	106100	97280	130600	164800	78730	76410
(WY)	1987	1997	1987	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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		*WATER YEARS 1958 - 1997	
ANNUAL TOTAL	23029200		26234600			
ANNUAL MEAN	62920		71880		41750	
HIGHEST ANNUAL MEAN					71880	
LOWEST ANNUAL MEAN					26340	
HIGHEST DAILY MEAN	146000	Jun 26	121000	Apr 15	289000	Jul 24 1993
LOWEST DAILY MEAN	21200	Jan 22	28100	Dec 23	4420	Jan 13 1957
ANNUAL SEVEN-DAY MINIMUM	28200	Jan 21	30300	Dec 22	5560	Nov 30 1955
INSTANTANEOUS PEAK FLOW			123000	Apr 15	307000	Jul 24 1993
INSTANTANEOUS PEAK STAGE			20.95	Jun 26	25.37	Jul 24 1993
ANNUAL RUNOFF (AC-FT)	45680000		52040000		30250000	
10 PERCENT EXCEEDS	83400		102000		66400	
50 PERCENT EXCEEDS	66600		73300		38400	
90 PERCENT EXCEEDS	33100		40000		18200	

* Post-regulation period



MISSOURI RIVER BASIN

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)
June 25	1715	*6,220	*21.50	No other peak greater than base discharge.			

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	6.3	18	152	68	65	164	22	440	43	103	12	e5.3
2	4.4	14	86	89	76	123	23	202	39	80	11	e5.1
3	3.4	12	74	99	83	80	27	194	35	64	9.9	e4.7
4	2.4	12	55	91	77	65	32	114	36	64	8.8	e4.5
5	2.8	12	58	59	68	51	58	92	35	56	7.7	4.2
6	2.7	11	54	46	61	46	113	80	32	50	7.6	4.1
7	43	8.5	46	44	60	45	61	83	28	46	7.7	4.1
8	105	8.5	41	40	56	45	40	329	26	49	7.4	4.2
9	28	8.6	39	37	55	52	33	139	24	41	7.1	4.2
10	14	8.6	42	e34.0	52	96	52	87	25	37	6.9	3.3
11	9.2	8.8	41	e32.0	49	63	149	71	27	51	7.3	3.1
12	6.0	8.8	38	29	48	50	129	61	122	37	9.8	3.1
13	5.4	8.8	35	26	48	45	241	56	36	30	9.9	3.3
14	4.9	9.0	34	29	50	39	978	53	28	27	9.2	3.4
15	4.3	9.5	34	32	51	34	1710	47	31	25	9.2	3.2
16	4.4	715	25	31	57	38	501	47	995	23	8.0	3.2
17	4.8	1660	23	32	79	37	283	51	190	22	125	3.4
18	4.3	309	e23.0	36	221	37	220	52	90	20	29	3.1
19	4.6	199	e24.0	37	150	35	185	46	60	19	17	2.9
20	4.6	140	e25.0	e39.0	125	35	149	39	50	19	15	2.4
21	4.0	105	e26.0	e39.0	376	34	128	38	48	20	12	2.5
22	7.0	83	29	e39.0	142	31	130	36	52	28	9.2	3.0
23	41	75	34	e39.0	95	29	123	36	40	19	7.8	8.3
24	169	57	41	e38.0	65	28	106	38	334	16	7.3	13
25	75	37	53	e34.0	48	28	86	58	4090	15	e7.3	12
26	31	61	50	e33.0	77	27	75	326	570	12	e7.2	7.9
27	16	63	49	e31.0	64	26	75	127	285	15	e6.8	5.6
28	11	50	50	e30.0	91	24	71	72	205	170	e6.4	4.4
29	39	109	52	e32.0	---	24	66	61	155	39	e6.2	3.8
30	79	303	55	e40.0	---	25	334	57	115	23	e6.1	3.2
31	30	---	57	e45.0	---	23	---	49	---	15	e5.6	---
MEAN	24.7	137	46.6	42.9	88.9	47.7	207	103	262	39.8	13.1	4.62
MAX	169	1660	152	99	376	164	1710	440	4090	170	125	13
MIN	2.4	8.5	23	26	48	23	22	36	24	12	5.6	2.4
AC-FT	1520	8180	2870	2640	4940	2930	12300	6310	15560	2450	808	275

MISSOURI RIVER BASIN

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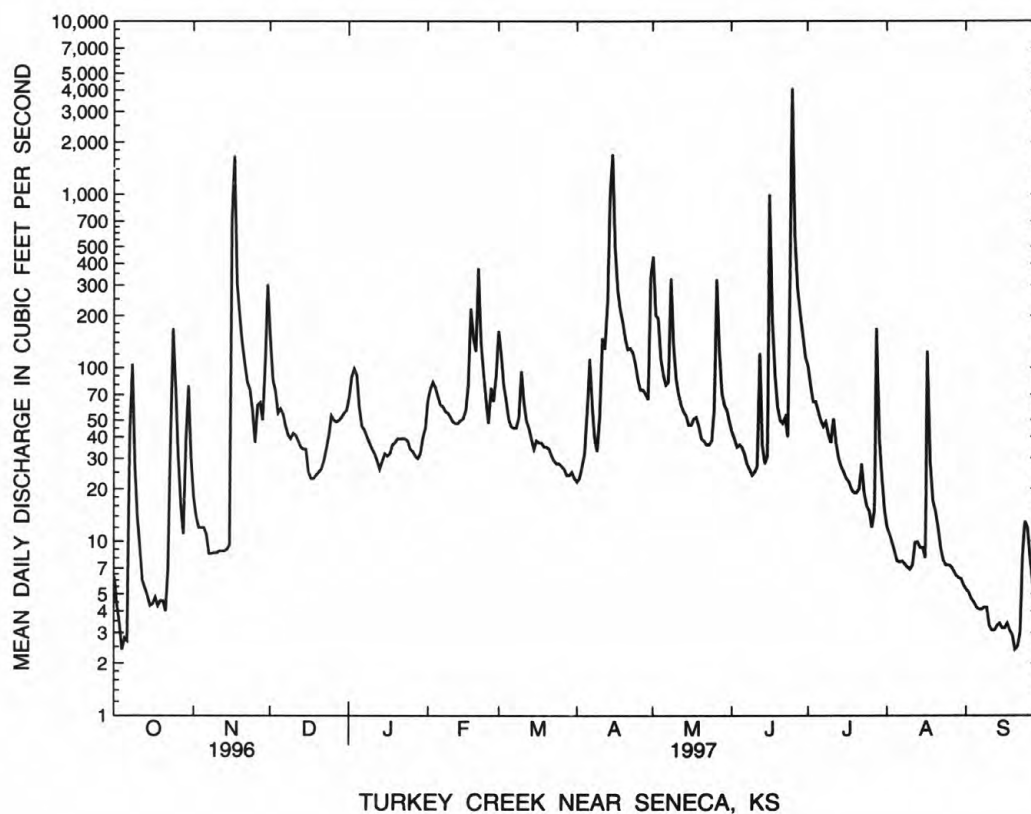
BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.0	43.7	34.1	40.9	91.7	205	168	224	235	212	86.7	137
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1949 - 1997	
ANNUAL MEAN	64.3		83.9		129	
HIGHEST ANNUAL MEAN					547	
LOWEST ANNUAL MEAN					3.24	
HIGHEST DAILY MEAN2	730	May 27	4090	Jun 25	16700	Oct 11 1973
LOWEST DAILY MEAN	1.6	Sep 14	2.4	Oct 4	.00	Jul 28 1956
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 12	2.9	Sep 16	.00	Aug 21 1956
INSTANTANEOUS PEAK FLOW			6220	Jun 25	21400	Oct 11 1973
INSTANTANEOUS PEAK STAGE			21.50	Jun 25	24.77	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	46680		60780		93420	
10 PERCENT EXCEEDS	111		141		207	
50 PERCENT EXCEEDS	17		38		22	
90 PERCENT EXCEEDS	4.4		5.0		2.0	



BIG NEMAHA RIVER BASIN

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 861.24 ft 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.

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	165	292	e960	e300	438	620	258	2810	344	407	123	96
2	136	237	e580	443	467	879	266	1490	305	480	114	109
3	118	217	485	488	500	658	278	1130	279	453	112	97
4	109	220	406	500	510	521	323	905	264	344	112	86
5	105	229	365	408	486	440	411	719	263	293	100	90
6	102	224	359	e250	452	387	568	619	246	256	96	82
7	153	212	340	e160	418	375	476	884	226	231	94	89
8	294	202	314	e150	e350	366	356	2830	214	224	89	86
9	269	197	294	e155	e330	418	306	1300	201	397	87	84
10	153	194	296	e130	e310	464	377	786	198	237	85	72
11	113	193	302	e116	e300	496	1180	617	195	2180	88	71
12	99	193	297	e110	e290	428	1140	538	307	925	93	65
13	94	193	276	e125	e290	389	987	492	461	564	94	72
14	91	193	265	e140	e290	353	3220	453	259	344	100	78
15	89	199	253	e130	e300	323	6790	422	218	248	99	68
16	89	4190	e160	e110	e320	315	2740	398	886	201	110	68
17	86	13100	e140	e110	e400	322	1570	410	979	169	381	62
18	83	2990	e130	e140	716	335	1120	396	400	149	511	59
19	81	1450	e120	e175	1030	331	923	364	289	140	200	58
20	83	919	e116	e190	655	325	794	331	240	130	325	54
21	82	685	e160	e200	1920	328	717	309	237	128	171	56
22	100	538	e140	e210	1260	314	700	291	234	127	118	58
23	401	461	e120	e212	669	299	664	278	215	202	103	87
24	1320	416	e130	e200	528	298	614	303	228	183	97	120
25	875	e300	e150	e180	426	294	564	688	9160	132	91	160
26	524	e230	e200	e150	435	288	519	1010	5470	110	85	149
27	323	e230	e190	e130	512	282	494	978	1750	115	94	117
28	255	e250	e180	e110	484	279	469	646	994	237	126	99
29	319	533	e180	e110	---	275	459	535	673	523	124	86
30	515	1520	e220	e120	---	273	1300	443	489	314	116	70
31	414	---	e260	e250	---	268	---	389	---	160	107	---
TOTAL	7640	31007	8388	6202	15086	11943	30583	23764	26224	10603	4245	2548
MEAN	246	1034	271	200	539	385	1019	767	874	342	137	84.9
MAX	1320	13100	960	500	1920	879	6790	2830	9160	2180	511	160
MIN	81	193	116	110	290	268	258	278	195	110	85	54
AC-FT	15150	61500	16640	12300	29920	23690	60660	47140	52020	21030	8420	5050

e Estimated

BIG NEMAHA RIVER BASIN

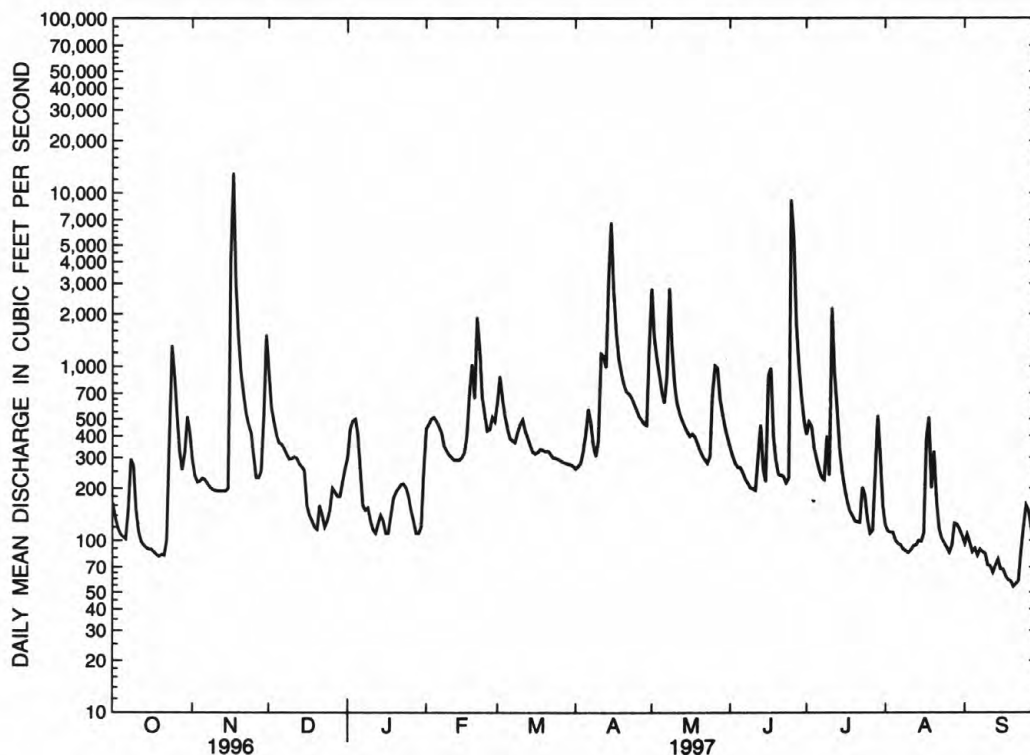
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06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	435	250	185	230	439	890	768	1059	1139	1009	492	660
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1944-1997	
ANNUAL TOTAL	207312		178233			
ANNUAL MEAN	566		488		627	
MEDIAN OF ANNUAL MEANS					488	
HIGHEST ANNUAL MEAN					2559	
LOWEST ANNUAL MEAN					86.7	
HIGHEST DAILY MEAN	22300	May 27	13100	Nov 17	57600	Oct 11 1973
LOWEST DAILY MEAN	60	Feb 3	54	Sep 20	3.0	Jul 9 1977
ANNUAL SEVEN-DAY MINIMUM	66	Jan 29	59	Sep 16	4.0	Jul 4 1977
INSTANTANEOUS PEAK FLOW			20100	Nov 17	71600	Oct 11 1973
INSTANTANEOUS PEAK STAGE			17.91	Nov 17	31.40	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	411200		353500		454300	
10 PERCENT EXCEEDS	965		894		1060	
50 PERCENT EXCEEDS	160		278		160	
90 PERCENT EXCEEDS	87		92		45	



BIG NEMAHA RIVER AT FALLS CITY

KANSAS RIVER BASIN

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., Dund 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 fair. 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	e3.4	e2.7	e5.0	e3.8	e8.0	6.3	5.3	7.3	.09	.65	7.7
2	4.2	e4.0	e2.6	e5.4	e3.7	e10	7.0	5.4	10	.01	1.8	4.3
3	3.9	e4.5	e2.5	e5.4	e3.5	12	8.6	4.8	7.2	.15	2.1	2.3
4	3.0	e4.8	e2.5	e5.2	e3.2	9.8	8.4	4.9	5.6	.00	.27	1.9
5	2.7	e4.8	e2.6	e4.3	e2.8	9.3	7.7	4.8	6.6	.00	.20	2.4
6	2.6	e4.7	e2.7	e3.8	e2.4	9.9	5.8	8.6	5.8	.00	3.1	4.2
7	3.1	e4.6	e2.8	e3.7	e2.2	10	6.7	3.3	8.9	.00	.21	5.3
8	3.3	4.9	e2.8	e3.8	e2.2	9.6	5.6	2.2	11	.00	.00	5.4
9	2.1	8.6	e2.9	e4.0	e2.2	9.2	6.1	1.7	8.6	.00	2.0	5.1
10	1.3	8.6	e3.0	e4.4	e2.3	9.3	6.5	1.4	6.6	.00	2.8	5.5
11	1.4	8.0	e3.0	e4.4	e2.5	8.8	7.0	1.3	7.7	.00	7.4	6.3
12	1.2	e7.6	e2.9	e4.3	e2.7	9.0	11	.82	7.4	.24	8.2	6.4
13	1.1	e6.8	e2.7	e4.0	e2.9	9.1	14	.92	5.4	.77	5.5	4.4
14	1.0	e5.6	e2.5	e3.5	e3.3	7.5	11	.52	5.2	.00	4.5	3.3
15	1.4	e3.5	e2.3	e2.8	e3.7	e5.8	9.1	.53	7.2	.00	3.5	1.4
16	1.4	e3.2	e2.1	e2.7	e4.0	e6.0	8.9	.47	9.3	.00	3.5	1.6
17	1.9	e3.2	e1.8	e2.6	e4.5	e6.8	8.4	.34	9.6	.00	2.1	4.5
18	1.5	e3.5	e1.7	e2.7	e4.8	e7.8	7.3	.34	5.5	.00	.40	5.2
19	2.7	e3.9	e1.7	e2.9	e5.0	8.1	6.4	1.4	12	.00	5.2	4.4
20	5.7	e4.0	e1.8	e3.0	e5.0	8.2	5.6	1.5	6.6	.10	6.8	1.6
21	4.4	e3.9	e1.9	e3.1	e4.8	8.2	5.5	2.1	13	.00	7.3	3.4
22	5.0	e3.4	e2.0	e3.1	e4.2	7.9	5.2	2.9	8.3	.00	2.5	4.5
23	4.9	e3.0	e2.0	e3.2	e3.6	7.6	4.6	4.9	7.3	.00	.87	3.9
24	3.7	e2.6	e1.9	e3.1	e3.6	7.8	4.5	4.6	8.8	.00	.64	3.61
25	3.6	e2.4	e1.8	e3.0	e3.8	6.9	5.0	7.3	10	.00	.26	2.8
26	3.7	e2.6	e1.8	e2.7	e4.3	7.1	5.7	11	11	.00	.50	2.5
27	3.5	e2.8	e1.9	e2.6	e5.2	7.3	6.0	13	2.9	.00	2.3	2.7
28	3.2	e2.9	e2.3	e2.8	e6.4	6.8	5.8	14	1.6	.00	2.5	2.8
29	e3.1	e2.9	e2.8	e3.3	---	6.5	6.0	12	.68	.00	.95	2.2
30	e3.1	e2.8	e3.5	e3.7	---	6.5	5.5	13	.53	.00	.93	3.4
31	e3.2	---	e4.1	e3.8	---	7.0	---	7.9	---	.00	1.6	---
TOTAL	90.5	131.5	75.6	112.3	102.6	253.8	211.2	143.24	217.61	1.36	80.58	115.0
MEAN	2.92	4.38	2.44	3.62	3.66	8.19	7.04	4.62	7.25	.044	2.60	3.83
MAX	5.7	8.6	4.1	5.4	6.4	12	14	14	13	.77	8.2	7.7
MIN	1.0	2.4	1.7	2.6	2.2	5.8	4.5	.34	.53	.00	.00	1.4
AC-FT	180	261	150	223	204	503	419	284	432	2.7	160	228

e Estimated

KANSAS RIVER BASIN

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06821500 ARIKAREE RIVER AT HAIGLER, NE--Continued

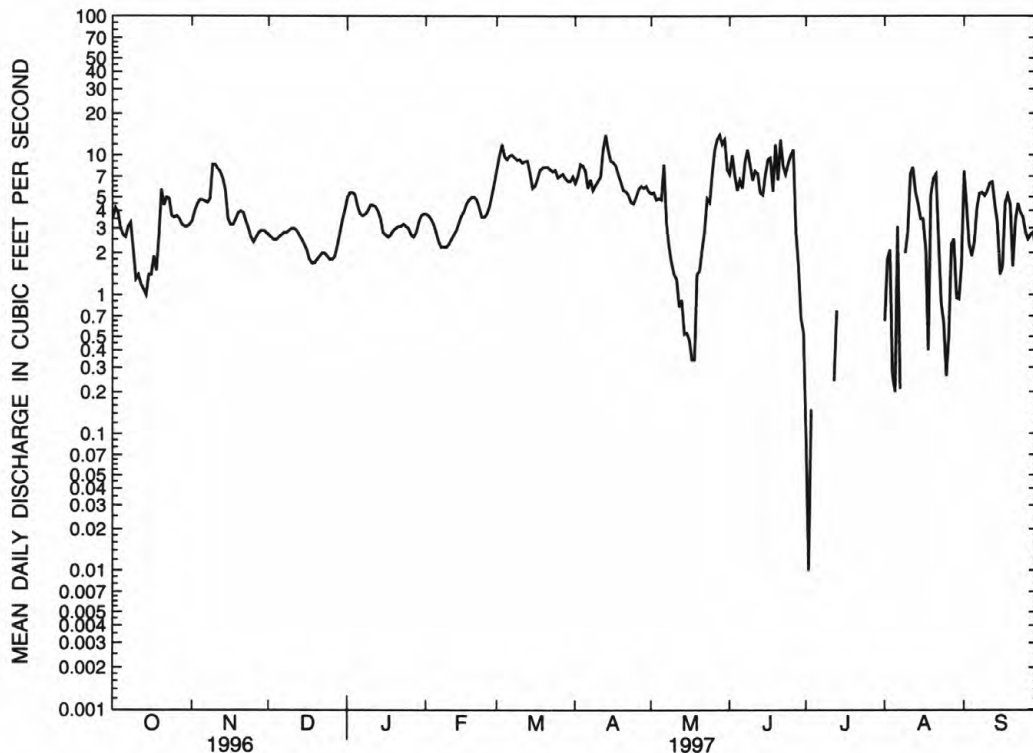
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.95	8.34	6.74	7.95	16.3	28.9	23.7	42.0	41.2	20.5	18.6	15.7
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1932 - 1997	
ANNUAL TOTAL	2856.86		1535.29			
ANNUAL MEAN	7.81		4.21		20.0	
MEDIAN OF ANNUAL MEANS					15.4	
HIGHEST ANNUAL MEAN					127	
LOWEST ANNUAL MEAN					3.69	
HIGHEST DAILY MEAN	120	Sep 19	14	Apr 13	17000	May 31 1935
LOWEST DAILY MEAN	.32	Feb 4	.00	Jul 4	.00	Jul 21 1932
ANNUAL SEVEN-DAY MINIMUM	.35	Jan 30	.00	Jul 4	.00	Jul 30 1934
INSTANTANEOUS PEAK FLOW (STAGE)			28 (5.15)	Sep 1	50000	May 31 1935
INSTANTANEOUS PEAK STAGE			*5.90	Jan 30	**11.20	May 31 1935
ANNUAL RUNOFF (AC-FT)	5670	3050	14470			
10 PERCENT EXCEEDS	13	8.6	31			
50 PERCENT EXCEEDS	5.6	3.6	9.0			
90 PERCENT EXCEEDS	.63	.34	.80			

* Backwater from ice.

** Site and datum then in use.



ARIKAREE RIVER AT HAIGLER

KANSAS RIVER BASIN

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 and period Oct. 26 to Nov. 5, 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	1	32	35	51	51	39	50	49	51	12	7.0	188.0
2	33	38	52	51	e39	50	52	49	16	7.0	12	7.8
3	40	41	53	50	e39	49	53	47	39	7.0	9.2	8.3
4	41	42	51	49	e39	48	52	44	41	6.8	14	9.2
5	41	40	57	46	e38	45	51	21	39	6.6	74	9.1
6	41	36	52	e44	e37	45	50	13	35	6.8	86	8.7
7	31	37	52	e43	e37	45	53	11	25	7.0	69	16
8	29	42	52	e42	e36	44	57	11	22	7.3	48	18
9	40	43	53	44	e36	44	56	10	28	7.2	22	16
10	39	43	51	47	e36	43	56	10	28	6.0	16	15
11	39	44	50	47	e36	43	57	10	28	5.6	16	13
12	41	44	49	e47	e37	44	58	9.9	27	5.9	19	12
13	41	45	50	e48	e38	45	58	9.6	27	6.3	19	12
14	36	44	50	e49	e39	43	57	9.6	27	6.5	19	15
15	36	44	50	e49	39	42	56	9.2	26	6.1	23	16
16	29	46	51	e46	48	45	56	9.1	26	6.4	23	9.0
17	57	50	e45	e44	53	46	57	9.1	24	4.0	23	8.4
18	57	46	e44	e44	52	45	57	9.1	18	4.4	25	7.6
19	46	47	e44	e45	52	44	58	9.1	13	5.0	25	15
20	45	47	e45	e45	52	43	56	8.9	19	6.6	25	11
21	45	48	e45	e43	50	41	54	8.9	8.7	7.2	24	8.7
22	40	49	e44	e42	50	40	53	9.4	7.1	7.2	27	9.1
23	41	51	e43	e41	50	40	50	26	7.2	7.0	24	12
24	41	51	e43	41	52	39	51	18	6.8	5.6	22	12
25	42	49	e42	e38	53	38	51	16	11	5.4	21	12
26	47	50	e42	e37	53	37	50	23	8.3	6.4	16	10
27	46	53	e43	e37	53	38	48	15	7.2	7.2	13	9.6
28	37	53	e46	e37	52	44	48	14	6.9	7.2	9.7	8.2
29	34	52	e47	e37	---	42	50	15	6.7	7.8	9.4	7.0
30	32	52	e49	e38	---	46	49	20	6.1	7.3	9.4	5.1
31	34	---	50	e38	---	47	---	31	---	23	8.2	---
TOTAL	1233	1362	1496	1360	1235	1355	1603	556.9	596.0	216.8	768.9	328.8
MEAN	39.8	45.4	48.3	43.9	44.1	43.7	53.4	18.0	19.9	6.99	24.8	11.0
MAX	57	53	57	51	53	50	58	51	41	23	86	18
MIN	29	35	42	37	36	37	48	8.9	6.1	4.0	8.2	5.1
AC-FT	2450	2700	2970	2700	2450	2690	3180	1100	1180	430	1530	652

e Estimated

KANSAS RIVER BASIN

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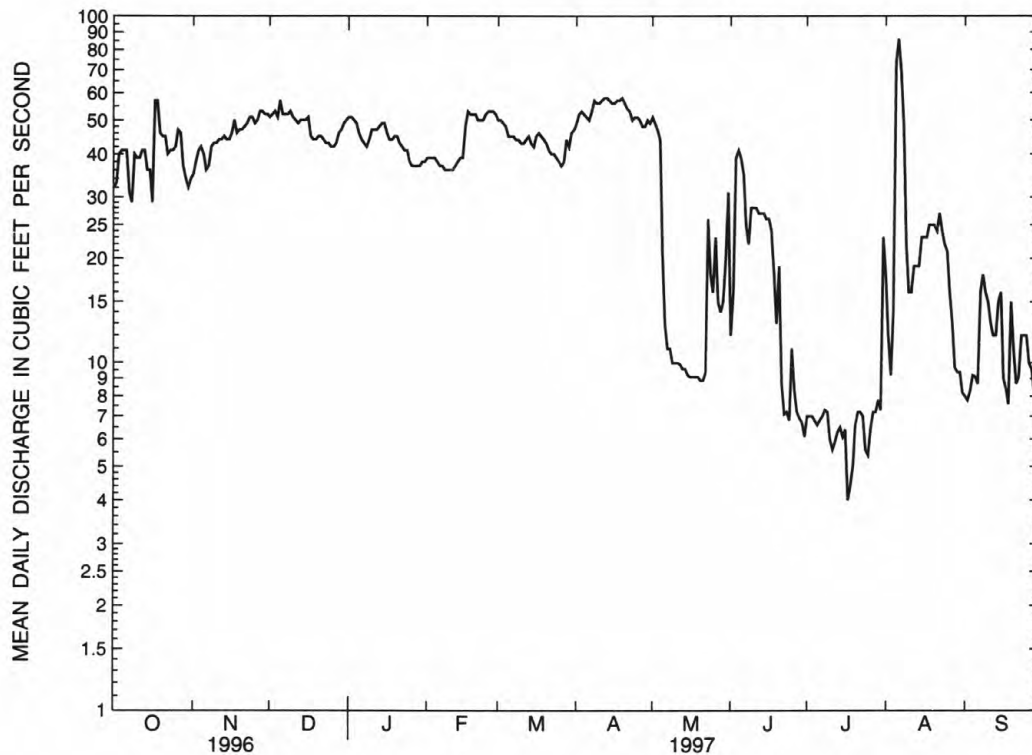
06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.2	57.0	61.0	60.5	62.5	65.0	58.1	42.2	35.2	19.0	19.0	26.6
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	44.1	43.7	23.5	11.0	12.2	5.36	4.12	5.78
(WY)	1979	1989	1993	1979	1997	1997	1972	1992	1952	1978	1940	1978

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1935 - 1997
ANNUAL TOTAL	12880.1	12111.4	
ANNUAL MEAN	35.2	33.2	45.1
HIGHEST ANNUAL MEAN			65.3
LOWEST ANNUAL MEAN			30.0
HIGHEST DAILY MEAN	76 Feb 6	86 Aug 6	761 May 15 1951
LOWEST DAILY MEAN	2.4 Sep 12	4.0 Jul 17	1.7 Jul 11 1938
ANNUAL SEVEN-DAY MINIMUM	2.7 May 19	5.5 Jul 13	2.3 Aug 5 1940
INSTANTANEOUS PEAK FLOW (STAGE)		93 (1.27) Aug 6	2110 Apr 28 1947
INSTANTANEOUS PEAK STAGE		*3.78 Jan 12	5.92 Apr 28 1947
ANNUAL RUNOFF (AC-FT)	25550	24020	32640
10 PERCENT EXCEEDS	54	52	72
50 PERCENT EXCEEDS	41	39	50
90 PERCENT EXCEEDS	9.7	7.3	9.0

* Backwater from ice.



NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

KANSAS RIVER BASIN

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., Dund County, Hydrologic Unit 10250002, on upstream side of bridge (revised), 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 (revised) 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	e3.8	e3.8	e5.8	e6.2	e4.8	3.8	4.9	3.8	.00	.00	.00
2	4.8	e3.8	e3.8	e6.0	e6.4	e4.8	4.0	5.6	4.8	.00	.00	.00
3	4.6	e3.8	e4.0	e6.0	e6.2	e4.8	4.3	5.5	5.1	.00	.00	.00
4	4.6	e3.8	e4.1	e5.8	e5.8	e4.9	4.6	3.5	4.8	.00	.00	.00
5	4.6	e3.8	e4.1	e5.4	e5.4	4.6	4.4	4.4	5.5	.00	.00	.00
6	5.0	e3.8	e4.1	e5.2	e5.0	3.6	4.2	3.9	4.5	.00	7.6	.00
7	5.1	3.7	e4.0	e5.2	e4.6	3.8	4.2	4.2	3.3	.00	17	.00
8	5.1	3.9	e3.8	e5.0	e4.1	3.2	3.9	4.2	3.5	.00	11	.00
9	5.2	4.0	e3.9	e5.0	e4.5	3.9	3.7	4.4	3.3	.00	7.5	.00
10	5.3	4.2	e4.1	e4.8	e4.7	3.6	5.5	3.5	1.4	.00	6.6	.00
11	3.6	4.1	e4.0	e4.3	e4.8	4.0	8.8	3.8	1.0	.00	7.8	.00
12	4.1	4.3	e4.0	e3.6	e4.9	4.0	9.4	3.8	1.3	.00	8.0	.00
13	5.2	4.4	e4.1	e5.4	e5.0	3.9	4.9	3.5	1.4	.00	7.4	1.9
14	5.3	4.8	e4.0	e6.2	e5.2	e3.9	4.3	3.6	1.1	.00	6.5	3.0
15	5.3	e4.8	e3.7	e6.4	e5.0	e3.8	4.8	3.4	1.2	.00	3.7	.04
16	5.1	e4.8	e3.3	e6.6	5.0	3.6	5.4	3.1	.92	.00	.00	.99
17	5.4	e4.7	e3.0	e6.6	5.8	e3.7	4.5	3.2	.95	.00	.00	1.8
18	5.6	e4.6	e2.6	e7.0	5.7	e3.5	5.2	3.8	.74	.00	.00	1.6
19	4.9	e4.6	e2.4	e7.2	5.2	e3.4	5.0	5.0	.95	.00	.00	1.8
20	5.4	e4.5	e2.9	e7.0	5.2	3.4	5.1	4.8	.55	.00	.00	1.9
21	5.7	e4.4	e3.2	e7.0	4.6	4.3	4.9	4.2	.11	.00	.00	3.0
22	5.7	e4.2	e3.2	e6.6	4.5	4.3	4.8	4.2	.06	.00	.00	3.4
23	5.3	e3.9	e3.1	e6.0	4.8	4.2	5.0	5.5	.05	.00	.00	3.5
24	5.2	e3.5	e3.0	e5.4	e4.5	3.9	5.0	5.5	.03	.00	.00	3.4
25	e5.0	e3.9	e2.8	e5.0	e4.7	3.8	5.5	4.9	.01	.00	.00	3.2
26	e4.9	e4.3	e3.2	e4.4	e4.9	3.1	5.3	5.1	.00	.00	.00	2.6
27	e4.7	e4.4	e4.0	e3.8	e5.0	3.6	4.1	5.2	.00	.00	.00	2.3
28	e4.5	e4.4	e4.3	e4.5	e4.8	4.0	4.4	4.7	.00	.00	.00	1.7
29	e4.4	e4.2	e4.5	e5.0	---	4.2	4.7	5.1	.00	.00	.00	1.7
30	e4.4	e4.0	e5.0	e5.4	---	4.3	4.4	5.0	.00	.00	.00	1.9
31	e3.9	---	e5.4	e5.8	---	3.6	---	4.5	---	.00	.00	---
TOTAL	152.2	125.4	115.4	173.4	142.5	122.5	148.1	136.0	50.37	0.00	83.10	39.73
MEAN	4.91	4.18	3.72	5.59	5.09	3.95	4.94	4.39	1.68	.000	2.68	1.32
MAX	5.7	4.8	5.4	7.2	6.4	4.9	9.4	5.6	5.5	.00	17	3.5
MIN	3.6	3.5	2.4	3.6	4.1	3.1	3.7	3.1	.00	.00	.00	.00
AC-FT	302	249	229	344	283	243	294	270	100	.00	165	79

e Estimated

KANSAS RIVER BASIN

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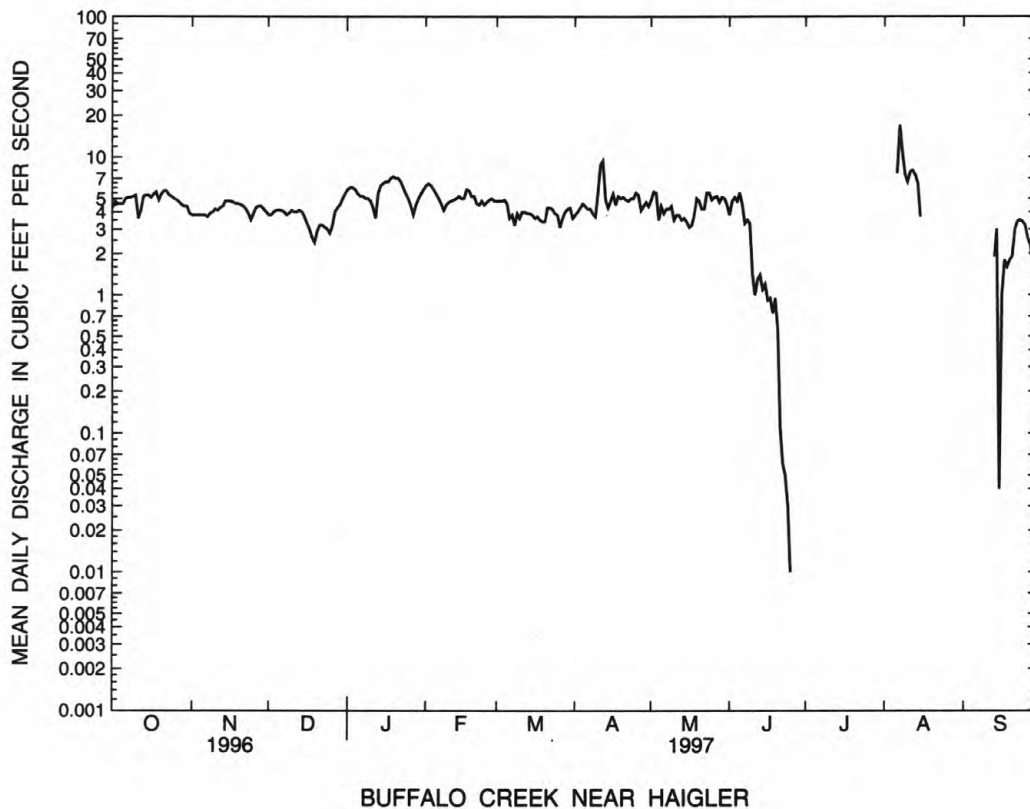
06823500 BUFFALO CREEK NEAR HAIGLER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.90	8.13	8.29	8.54	9.18	9.45	9.24	7.88	5.78	2.80	2.50	4.31
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	4.18	3.72	4.11	5.09	3.95	3.92	2.11	.000	.000	.001	.92
(WY)	1965	1997	1997	1996	1997	1997	1989	1965	1994	1997	1976	1974

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1941 - 1997
ANNUAL TOTAL	1601.96	1288.70	
ANNUAL MEAN	4.38	3.53	6.90
HIGHEST ANNUAL MEAN			10.9
LOWEST ANNUAL MEAN			3.53
HIGHEST DAILY MEAN	12 May 27	17 Aug 7	90 Aug 11 1950
LOWEST DAILY MEAN	.00 Jun 27	.00 Jun 26	.00 Aug 3 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 26	.00 Jun 26	.00 Aug 14 1973
INSTANTANEOUS PEAK FLOW (STAGE)		17 (1.59) Aug 7	140 (4.37) Jun 27 1948
INSTANTANEOUS PEAK STAGE*		2.34 Jan 14	*5.93 Jan 3 1976
ANNUAL RUNOFF (AC-FT)	3180	2560	5000
10 PERCENT EXCEEDS	6.5	5.5	11
50 PERCENT EXCEEDS	4.7	4.0	7.6
90 PERCENT EXCEEDS	.07	.00	.30

* Backwater from ice.



KANSAS RIVER BASIN

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 good 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	8.9	e7.0	9.6	e12	11	11	7.4	7.5	8.6	7.8	8.0	7.6
2	9.7	e7.0	9.4	13	11	11	8.3	7.9	9.5	8.1	7.8	7.4
3	9.8	e7.0	e8.8	13	11	11	8.5	7.6	9.3	7.9	7.7	6.8
4	9.5	e7.0	e9.2	13	11	11	8.6	7.6	9.0	8.0	7.5	7.3
5	9.2	e7.2	e9.4	e12	10	11	8.9	7.6	8.8	8.0	8.1	7.3
6	9.1	e7.4	10	e12	11	10	7.1	7.7	8.5	8.1	27	7.7
7	9.2	e7.6	e9.4	e12	11	10	7.5	7.9	8.6	8.0	13	7.8
8	9.3	7.6	e9.4	12	e9.4	10	8.0	7.9	8.4	7.9	7.9	7.7
9	9.1	7.4	e9.2	12	e8.6	10	8.9	7.9	8.6	8.1	7.7	7.5
10	9.0	e8.0	e9.0	e12	e9.0	9.9	9.4	7.9	8.7	8.0	7.6	7.4
11	5.5	e8.0	e9.2	e12	e10	9.5	12	7.9	8.5	8.2	7.7	7.5
12	8.9	e8.0	e9.4	e11	11	9.7	9.8	8.0	8.2	8.1	7.4	7.4
13	9.0	e8.4	e9.0	e9.6	11	9.7	10	8.0	8.0	7.9	6.4	7.4
14	9.0	e8.8	e9.2	e8.6	11	9.5	10	7.9	8.0	8.0	8.1	7.4
15	9.0	e9.0	e9.2	e14	11	9.8	10	7.9	7.9	8.0	8.9	7.7
16	9.2	e9.2	e9.0	e14	9.5	9.1	14	8.0	7.9	7.5	7.8	7.6
17	9.6	e9.6	e8.4	e14	10	9.2	14	8.1	8.0	7.0	7.6	7.5
18	9.3	10	e7.8	e13	11	9.1	12	8.3	8.0	6.8	7.4	7.6
19	9.2	9.9	e6.8	e12	21	8.7	11	9.2	8.0	7.0	4.8	7.9
20	9.4	9.7	e6.0	e12	17	8.7	11	8.7	8.5	8.1	4.6	7.9
21	9.5	9.4	e6.4	12	14	8.6	10	8.7	9.4	8.1	4.2	8.1
22	9.6	9.5	e7.0	12	12	8.5	10	8.6	8.3	7.6	4.6	8.0
23	9.5	9.5	e7.4	12	12	8.8	10	8.9	7.9	7.2	5.8	8.0
24	9.5	e14	e7.2	12	12	8.5	9.3	8.7	7.9	7.0	6.7	8.2
25	9.5	e12	e7.2	e11	12	7.9	8.7	9.1	7.9	6.8	7.1	8.1
26	e9.2	9.0	e7.0	e11	12	8.0	8.6	9.0	7.9	6.9	7.2	8.2
27	e8.8	9.0	e7.4	e9.6	12	8.3	8.5	8.9	7.8	6.6	7.1	8.0
28	e8.4	9.1	e8.6	e8.6	11	8.0	8.4	8.5	7.7	7.0	7.3	8.3
29	e8.0	9.1	e10	e10	---	7.8	8.1	9.3	7.7	7.7	7.5	8.2
30	e7.6	9.3	e11	11	---	7.7	7.5	9.2	7.7	8.2	7.7	8.1
31	e7.2	---	e11	11	---	7.8	---	9.0	---	8.1	7.7	---
TOTAL	277.7	263.7	267.6	363.4	322.5	287.8	285.5	257.4	249.2	237.7	245.9	231.6
MEAN	8.96	8.79	8.63	11.7	11.5	9.28	9.52	8.30	8.31	7.67	7.93	7.72
MAX	9.8	14	11	14	21	11	14	9.3	9.5	8.2	27	8.3
MIN	5.5	7.0	6.0	8.6	8.6	7.7	7.1	7.5	7.7	6.6	4.2	6.8
AC-FT	551	523	531	721	640	571	566	511	494	471	488	459

e Estimated

KANSAS RIVER BASIN

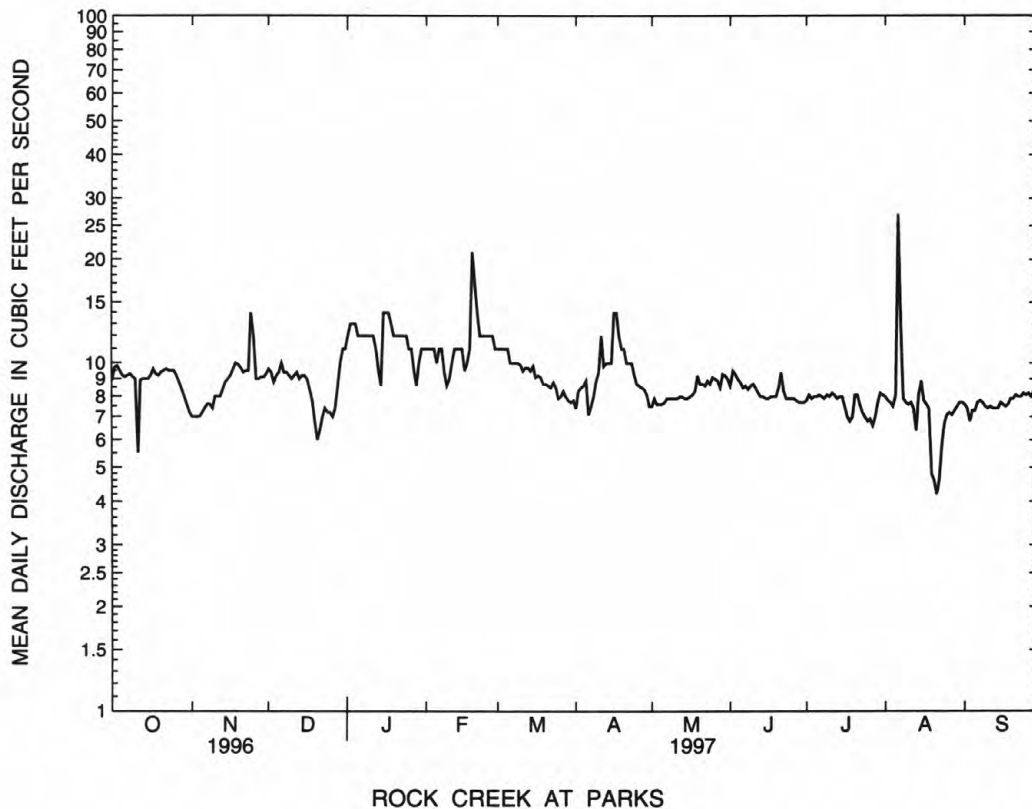
251

06824000 ROCK CREEK AT PARKS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.6	13.5	13.5	13.5	13.8	13.9	13.9	13.9	13.3	12.1	11.5	11.9
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	9.00	8.30	8.31	7.67	7.93	7.72
(WY)	1993	1997	1997	1996	1996	1985	1996	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1941 - 1997
ANNUAL TOTAL	3434.1	3290.0	
ANNUAL MEAN	9.38	9.01	13.1
HIGHEST ANNUAL MEAN			15.8
LOWEST ANNUAL MEAN			9.01
HIGHEST DAILY MEAN	25 May 27	27 Aug 6	111 Jul 6 1965
LOWEST DAILY MEAN	5.5 Oct 11	4.2 Aug 21	2.6 Nov 19 1975
ANNUAL SEVEN-DAY MINIMUM	6.4 Feb 1	5.4 Aug 19	3.1 Feb 17 1943
INSTANTANEOUS PEAK FLOW		34 Aug 6	493 Jul 5 1965
INSTANTANEOUS PEAK STAGE		2.25 Aug 6	6.00 Jul 5 1965
ANNUAL RUNOFF (AC-FT)	6810	6530	9490
10 PERCENT EXCEEDS	11	12	16
50 PERCENT EXCEEDS	9.4	8.6	13
90 PERCENT EXCEEDS	7.2	7.3	9.7



KANSAS RIVER BASIN

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.

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.

REVISIONS.--The maximum discharge for water year 1995 has been revised to 170 ft³/sec, July 20, 1995, gage height 2.92 ft.

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	40	19	23	e35	e40	28	25	17	37	27	.00	.00
2	37	19	23	e38	e44	27	24	16	38	27	.00	.00
3	36	19	21	e39	48	27	24	16	37	12	.00	.00
4	35	20	21	e36	42	25	25	17	33	1.2	.00	.00
5	34	20	17	e30	36	24	25	16	32	.83	.00	.00
6	32	20	26	e22	e34	24	23	18	30	.57	.00	.00
7	32	20	26	e15	35	25	23	17	27	.40	.00	.00
8	32	19	24	e13	29	24	22	16	27	.29	.00	.00
9	31	20	25	e13	31	24	23	15	29	.22	.00	.00
10	31	20	25	e14	e31	24	22	15	29	.17	.00	.00
11	30	20	25	e11	e31	24	18	15	30	.00	.00	.00
12	30	20	24	e9.6	31	24	23	15	30	.00	.00	.00
13	30	20	24	e9.0	31	23	28	14	31	.00	.00	.00
14	30	20	24	e9.2	31	22	28	13	29	.00	.00	.00
15	29	e20	22	e9.4	31	22	26	13	30	.00	.00	.00
16	29	e20	27	e11	30	23	27	12	29	.00	.00	.00
17	28	e19	13	e15	30	23	27	11	30	.00	.00	.00
18	28	23	e12	e20	31	21	26	11	35	.00	.00	.00
19	28	23	e10	e25	30	22	26	16	35	.00	.00	.00
20	28	23	e9.0	e30	31	23	26	15	38	.00	.00	.00
21	28	23	e10	e40	30	23	23	14	49	.00	.00	.00
22	27	22	e12	e47	30	22	21	14	29	.00	.00	.00
23	26	23	e13	e38	28	23	20	16	16	.00	.00	.00
24	26	e21	e12	e30	25	23	18	15	16	.00	.00	.00
25	27	e21	e11	e22	31	22	18	14	16	.00	.00	.00
26	25	e20	e10	e18	33	23	19	16	22	.00	.00	.00
27	18	e19	e10	e13	29	25	21	38	18	.00	.00	.00
28	21	e20	e10	e15	30	23	22	48	16	.00	.00	.00
29	22	23	e14	e20	---	24	24	47	18	.00	.00	.00
30	17	23	e22	e28	---	24	18	42	23	.00	.00	.00
31	18	---	e28	e34	---	25	---	38	---	.00	.00	---
TOTAL	885	619	573.0	709.2	913	736	695	600	859	69.68	0.00	0.00
MEAN	28.5	20.6	18.5	22.9	32.6	23.7	23.2	19.4	28.6	2.25	.000	.000
MAX	40	23	28	47	48	28	28	48	49	27	.00	.00
MIN	17	19	9.0	9.0	25	21	18	11	16	.00	.00	.00
AC-FT	1760	1230	1140	1410	1810	1460	1380	1190	1700	138	.00	.00

e Estimated

KANSAS RIVER BASIN

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06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE--Continued

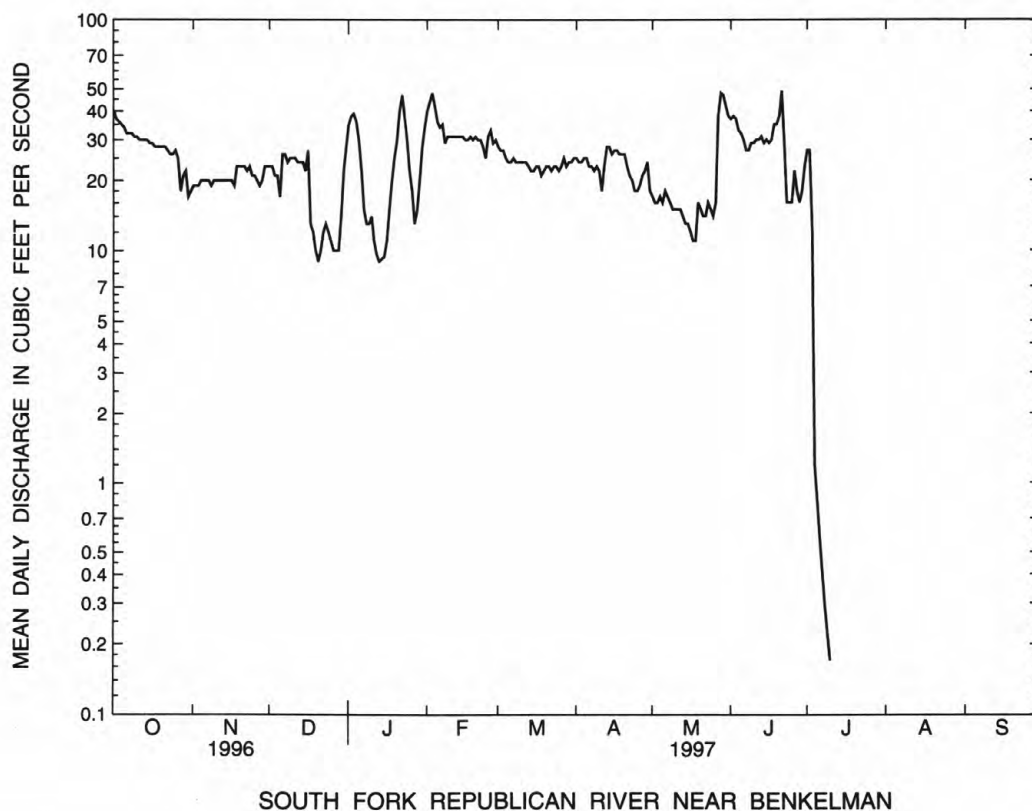
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.3	22.2	21.2	23.7	40.4	53.3	58.7	74.2	75.7	60.1	35.8	25.4
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1938 - 1997	
ANNUAL TOTAL	8038.3		6658.88			
ANNUAL MEAN	22.0		18.2		42.3	
HIGHEST ANNUAL MEAN					121	
LOWEST ANNUAL MEAN					9.79	
HIGHEST DAILY MEAN	656	Sep 19	49	Jun 21	6220	Aug 16 1958
LOWEST DAILY MEAN	1.7	Sep 6	.00	Jul 11	.00	Jul 3 1938
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 6	.00	Jul 11	.00	Aug 1 1938
INSTANTANEOUS PEAK FLOW			63	Jun 21	19600	Aug 16 1958
INSTANTANEOUS PEAK STAGE			*2.74	Jan 29	**8.70	Aug 16 1958
ANNUAL RUNOFF (AC-FT)	15940		13210		30650	
10 PERCENT EXCEEDS	30		32		88	
50 PERCENT EXCEEDS	17		21		20	
90 PERCENT EXCEEDS	3.9		.00		.00	

* Backwater from ice.

** May have been higher during flood of June 24, 1945, site and datum then in use.



KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	84	127	e190	e170	e130	105	82	59	5.5	.00	.00
2	66	84	123	e205	e190	e130	101	80	99	3.7	.00	.00
3	62	83	e115	e205	e210	e130	104	73	93	2.0	.00	.00
4	61	82	e105	e190	e200	e130	109	72	77	1.2	.00	.00
5	62	83	e100	e150	e180	131	110	72	72	.94	.00	.00
6	59	80	e130	e100	e160	126	103	70	67	.81	.00	.00
7	59	83	e135	e76	e150	126	93	60	60	.69	.00	.00
8	55	87	e135	e70	e140	125	89	59	53	.55	14	.00
9	49	83	e140	e70	e145	130	93	46	73	.42	23	.00
10	45	79	142	e72	e150	134	100	37	66	.31	18	.00
11	47	81	142	e58	e150	132	108	32	66	.17	13	.00
12	39	84	138	e50	e150	132	95	29	57	.10	10	.00
13	39	84	132	e47	e150	132	98	28	53	.00	5.0	.00
14	41	85	134	e48	e150	130	105	27	51	.00	2.1	.00
15	47	94	128	e50	e145	126	102	32	50	.00	.18	.00
16	47	95	126	e60	e155	128	100	28	41	.00	.00	.00
17	48	86	e84	e80	179	129	102	26	37	.00	.00	.00
18	50	95	e64	e110	176	129	103	24	36	.00	.00	.00
19	54	106	e49	e130	172	127	100	34	43	.00	.00	.00
20	58	108	e49	e160	170	123	100	42	38	.00	.00	.00
21	55	106	e49	e210	162	118	102	31	51	.00	.41	.00
22	60	107	e56	e240	161	111	95	20	45	.00	18	.00
23	61	107	e66	e190	146	112	94	27	30	.00	5.5	.00
24	64	99	e66	e160	e130	108	96	31	20	.00	2.5	.00
25	68	e95	e62	e120	e120	102	93	37	14	.00	.18	.00
26	69	e86	e56	e94	e120	103	90	48	17	.00	.00	.00
27	76	e88	e52	e74	e120	105	89	55	14	.00	.00	.00
28	77	e100	e54	e62	e125	103	85	58	11	.00	.00	.00
29	83	122	e70	e90	---	102	82	64	9.8	.00	.00	.00
30	82	127	e120	e125	---	102	82	70	7.6	.00	.00	.00
31	82	---	e160	e150	---	106	---	65	---	.00	.00	---
TOTAL	1836	2783	3109	3636	4376	3752	2928	1459	1410.4	16.39	111.87	0.00
MEAN	59.2	92.8	100	117	156	121	97.6	47.1	47.0	.53	3.61	.000
MAX	83	127	160	240	210	134	110	82	99	5.5	23	.00
MIN	39	79	49	47	120	102	82	20	7.6	.00	.00	.00
AC-FT	3640	5520	6170	7210	8680	7440	5810	2890	2800	33	222	.00

KANSAS RIVER BASIN

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06828500 REPUBLICAN RIVER AT STRATTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.3	92.1	92.5	103	147	184	175	181	150	92.9	68.7	55.4
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	103	75.6	37.9	26.5	.000	.000	.000
(WY)	1977	1979	1979	1979	1995	1989	1972	1992	1994	1954	1952	1952

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

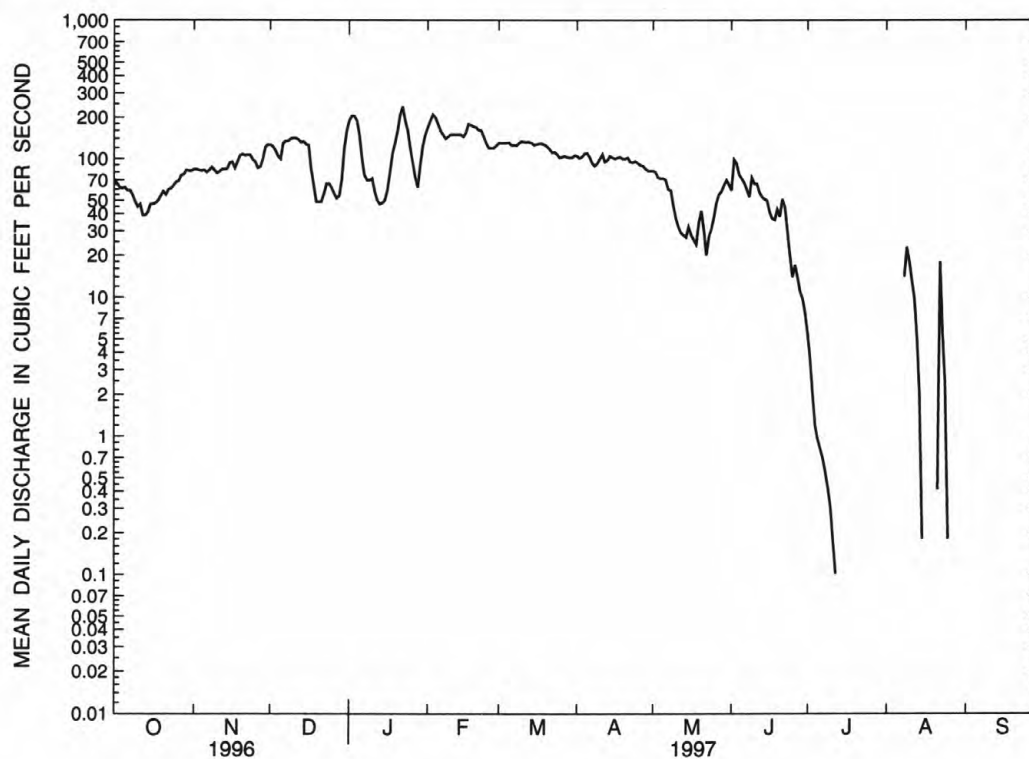
FOR 1997 WATER YEAR

WATER YEARS 1950 - 1997

ANNUAL TOTAL	29308.6	25417.66	
ANNUAL MEAN	80.1	69.6	115
MEDIAN OF ANNUAL MEANS			104
HIGHEST ANNUAL MEAN			304
LOWEST ANNUAL MEAN			61.1
HIGHEST DAILY MEAN	1030	Sep 20	240
LOWEST DAILY MEAN	8.1	Jul 7	.00
ANNUAL SEVEN-DAY MINIMUM	13	Jul 3	.00
INSTANTANEOUS PEAK FLOW			e270
INSTANTANEOUS PEAK STAGE			*8.23
ANNUAL RUNOFF (AC-FT)	58130	50420	83220
10 PERCENT EXCEEDS	126	141	223
50 PERCENT EXCEEDS	66	68	88
90 PERCENT EXCEEDS	33	.00	.00

e Estimated.

* Backwater from ice.



REPUBLICAN RIVER AT STRATTON

KANSAS RIVER BASIN

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 recorder. 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, 34,530 acre-ft June 20, elevation, 3,105.98 ft; minimum, 19,890 acre-ft Aug. 21, elevation, 3,094.18 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 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23320	24600	25830	27140	28530	29610	30550	31440	32320	32070	23860	20330
2	23370	24660	25900	27210	28530	29700	30610	31450	32430	31680	23780	20320
3	23460	24720	25910	27260	28520	29740	30650	31480	32470	31270	23670	20350
4	23570	24740	25960	27270	28570	29710	30710	31550	32520	31000	23420	20380
5	23670	24780	25990	27320	28590	29790	30760	31600	32580	30690	23200	20430
6	23700	24800	26030	27330	28640	29830	30690	31650	32620	30400	23050	20470
7	23780	24840	26080	27370	28700	29870	30690	31650	32650	30100	22930	20500
8	23830	24850	26130	27430	28750	29940	30690	31610	32690	29920	22860	20510
9	23850	24890	26190	27470	28790	29990	30720	31640	32690	29650	22740	20520
10	23880	24920	26230	27500	28850	30070	30760	31700	32750	29400	22560	20550
11	23960	24930	26280	27520	28890	30100	30800	31630	32800	29160	22430	20550
12	24030	24990	26330	27590	28910	30110	30830	31630	32790	28910	22340	20600
13	24070	25000	26350	27650	28980	30020	30900	31670	32800	28640	22230	20630
14	24100	25060	26390	27690	29030	30040	30920	31670	32830	28310	22050	20860
15	24120	25120	26430	27750	29240	30120	30960	31750	32860	27980	21920	20790
16	24120	25140	26470	27750	29170	30230	31000	31820	32920	27670	21650	20830
17	24130	25180	26450	27810	29230	30400	31060	31850	33850	27330	21400	20820
18	24160	25250	26450	27860	29260	30410	31120	31760	34220	27120	21050	20790
19	24220	25320	26500	27900	29320	30520	31180	31760	34400	26780	20530	20730
20	24240	25370	26570	27950	29340	30590	31190	31760	34450	26270	20180	20720
21	24250	25380	26630	28020	29380	30590	31190	31740	34420	26010	19910	20740
22	24290	25430	26680	28020	29370	30600	31060	31750	34290	25680	19950	20790
23	24320	25460	26690	28080	29400	30610	31080	31810	34120	25370	20020	20790
24	24380	25490	26750	28110	29410	30610	31230	31820	33940	25090	20070	20850
25	24410	25550	26800	28130	29450	30680	31250	31860	33680	24790	20140	20950
26	24420	25600	26840	28200	29520	30750	31290	31920	33470	24540	20160	21030
27	24460	25660	26890	28180	29540	30800	31310	31940	33280	24240	20210	21030
28	24500	25700	26940	28250	29570	30790	31370	31960	33040	23970	20220	21030
29	24530	25740	26980	28340	---	30780	31370	32010	32800	23820	20270	21060
30	24530	25800	27060	28400	---	30820	31400	32080	32510	23710	20290	21080
31	24550	---	27090	28500	---	30880	---	32140	---	23690	20330	---
MEAN	24070	25170	26450	27770	29050	30280	30980	31750	33170	27590	21590	20700
MAX	24550	25800	27090	28500	29570	30880	31400	32140	34450	32070	23860	21080
MIN	23320	24600	25830	27140	28520	29610	30550	31440	32320	23690	19910	20320
(*)	3098.36	3099.40	3100.44	3101.55	3102.37	3103.36	3103.74	3104.28	3104.55	3097.63	3094.60	3095.30
(**)	+1360	+1250	+1290	+1410	+1070	+1310	+520	+740	+370	-8820	-3360	+750
CAL YR 1996	MEAN	25950	MAX	31140	MIN	21320	(**)	+3640				
WTR YR 1997	MEAN	27370	MAX	34450	MIN	19910	(**)	-2110				

(*) Elevation, in feet, at end of month.

(**) Change in contents, in acre-feet.

KANSAS RIVER BASIN

257

06834000 FRENCHMAN CREEK AT PALISADE, NE

LOCATION.--Lat 40°21'12", long 101°07'35", 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	29	26	e30	e34	32	32	27	26	125	223	29
2	31	29	25	e32	e33	31	32	29	162	143	115	28
3	31	29	26	e32	e32	32	32	29	63	162	88	27
4	31	29	27	e32	e31	32	33	28	40	167	96	27
5	31	29	27	e30	31	33	33	28	33	158	111	26
6	31	28	28	e29	31	33	34	27	31	147	140	25
7	31	28	29	e28	32	33	35	27	29	150	137	23
8	32	28	27	e27	32	33	35	27	28	150	115	23
9	31	28	26	e26	30	32	35	26	28	166	92	22
10	30	28	25	e25	e29	32	e34	26	30	157	84	21
11	30	28	25	e25	e30	32	e34	26	30	146	95	21
12	30	27	25	e25	31	32	e34	26	29	127	98	21
13	30	28	25	e25	32	32	e35	26	27	120	96	20
14	30	27	25	e25	31	32	36	26	26	127	103	21
15	29	28	26	e25	31	33	36	25	26	138	103	21
16	29	e27	e25	e26	31	33	34	25	26	168	105	20
17	30	e27	e24	e27	31	33	32	25	25	167	108	19
18	29	e27	e23	e28	31	32	31	25	24	162	137	19
19	29	28	e23	e29	32	32	30	24	24	151	160	18
20	29	27	e23	e29	31	32	30	25	23	154	181	18
21	29	26	e24	e28	32	32	30	24	22	161	186	19
22	29	25	e23	e26	31	31	30	24	22	168	193	20
23	29	26	e22	e25	31	31	29	24	35	169	121	21
24	29	25	e22	e24	33	32	29	24	59	161	64	22
25	28	e25	e22	e24	32	32	29	24	74	153	52	22
26	28	e24	e22	e24	31	32	29	25	89	153	44	21
27	28	e23	e22	e28	32	32	29	27	123	151	40	20
28	29	e23	e22	e29	32	32	29	26	111	141	37	19
29	30	e23	e24	e31	---	32	28	26	107	135	35	19
30	28	24	e26	e33	---	32	28	27	111	148	32	19
31	28	---	e28	e34	---	32	---	27	---	110	30	---
TOTAL	922	803	767	861	880	996	957	805	1483	4635	3221	651
MEAN	29.7	26.8	24.7	27.8	31.4	32.1	31.9	26.0	49.4	150	104	21.7
MAX	33	29	29	34	34	33	36	29	162	169	223	29
MIN	28	23	22	24	29	31	28	24	22	110	30	18
AC-FT	1830	1590	1520	1710	1750	1980	1900	1600	2940	9190	6390	1290

e Estimated

KANSAS RIVER BASIN

06834000 FRENCHMAN CREEK AT PALISADE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.8	36.0	36.0	38.0	43.5	48.8	48.3	54.6	73.0	187	176	71.4
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

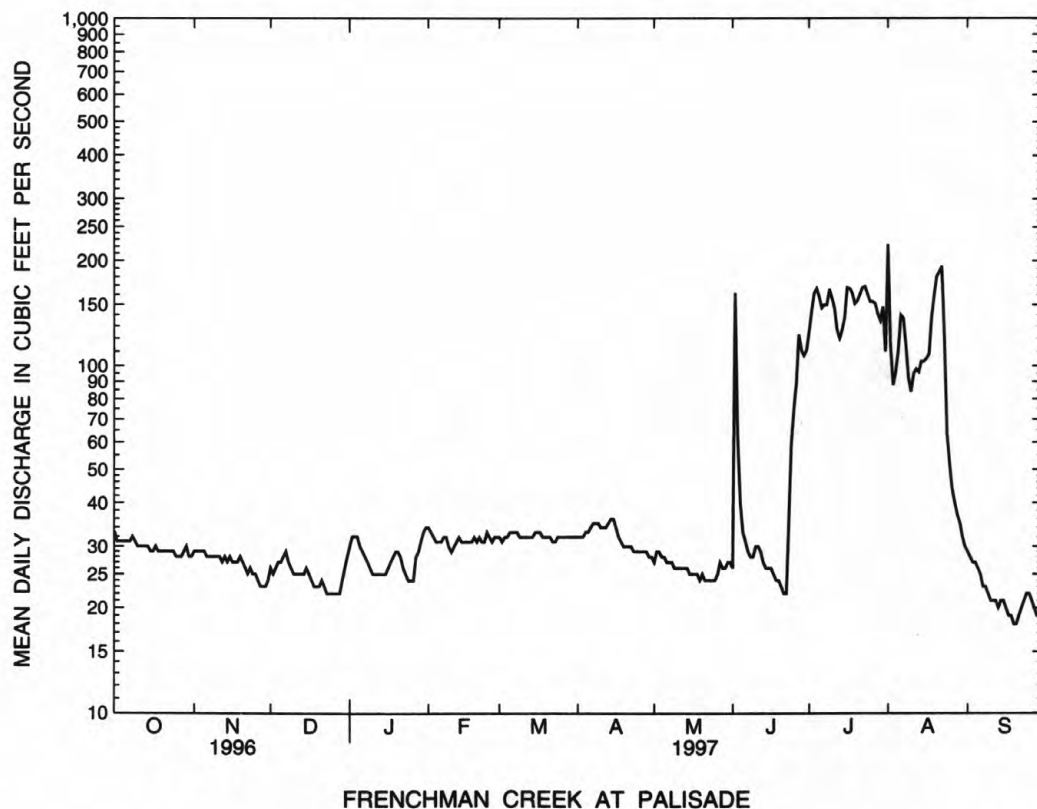
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1950 - 1997

ANNUAL TOTAL	17442	16981	
ANNUAL MEAN	47.7	46.5	71.7
HIGHEST ANNUAL MEAN			115
LOWEST ANNUAL MEAN			37.9
HIGHEST DAILY MEAN	567	May 31	223
LOWEST DAILY MEAN	20	Feb 2	18
ANNUAL SEVEN-DAY MINIMUM	21	Jan 30	19
INSTANTANEOUS PEAK FLOW			415
INSTANTANEOUS PEAK STAGE			6.45
ANNUAL RUNOFF (AC-FT)	34600	33680	51960
10 PERCENT EXCEEDS	111	127	168
50 PERCENT EXCEEDS	29	29	39
90 PERCENT EXCEEDS	24	23	23

* Site and datum then in use.



KANSAS RIVER BASIN

259

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	65	66	67	76	71	68	27	20	20	12	19
2	69	65	67	70	73	70	68	28	21	20	118	18
3	68	72	66	73	73	70	68	28	110	20	233	18
4	70	62	66	73	71	69	70	28	51	18	38	18
5	76	63	65	70	69	69	71	28	52	15	27	18
6	74	65	64	67	69	68	68	28	49	13	24	18
7	68	62	67	59	70	69	67	26	36	12	21	18
8	65	63	66	61	69	70	68	25	29	11	20	16
9	64	72	68	69	68	70	67	24	25	11	17	14
10	66	65	69	e60	66	70	69	24	21	11	16	14
11	66	64	68	e45	69	69	69	24	21	8.0	17	15
12	72	67	68	e47	69	70	70	23	20	6.4	15	17
13	66	64	68	e48	69	69	70	23	19	6.0	15	17
14	62	65	68	e49	69	68	71	22	18	5.5	13	19
15	63	66	66	e49	69	68	72	22	17	5.3	12	13
16	63	69	66	e50	69	69	45	22	17	4.9	11	18
17	63	67	66	e52	70	70	38	22	17	5.2	10	21
18	63	69	50	54	71	70	36	22	16	3.9	9.9	21
19	70	73	e49	56	71	70	36	21	15	3.4	11	21
20	67	72	e45	65	72	70	40	21	15	2.9	11	23
21	61	73	e50	64	72	70	40	21	14	2.4	10	23
22	63	72	e50	65	71	70	33	21	14	2.2	8.4	22
23	63	74	e48	66	71	69	32	21	14	1.8	10	23
24	63	71	e47	66	71	69	31	21	13	1.5	8.3	25
25	65	67	e47	65	71	68	30	21	14	2.4	7.4	26
26	72	68	e47	57	70	68	29	21	21	3.7	6.8	27
27	67	70	e48	57	70	69	29	21	22	3.1	6.6	30
28	67	69	e49	57	71	68	29	20	24	3.0	6.4	27
29	62	70	e50	66	---	68	28	20	22	1.6	10	24
30	64	68	e54	70	---	67	28	20	20	1.8	38	24
31	65	---	e60	75	---	67	---	20	---	21	21	---
TOTAL	2058	2032	1828	1892	1969	2142	1540	715	767	247.0	783.8	607
MEAN	66.4	67.7	59.0	61.0	70.3	69.1	51.3	23.1	25.6	7.97	25.3	20.2
MAX	76	74	69	75	76	71	72	28	110	21	233	30
MIN	61	62	45	45	66	67	28	20	13	1.5	6.4	13
AC-FT	4080	4030	3630	3750	3910	4250	3050	1420	1520	490	1550	1200

e Estimated

KANSAS RIVER BASIN

06835500 FRENCHMAN CREEK AT CULBERTSON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.6	84.0	82.6	83.0	102	115	81.9	68.5	81.8	51.4	39.2	59.1
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	13.9	2.90	2.25	1.70
(WY)	1991	1991	1984	1996	1996	1996	1972	1986	1994	1990	1986	1990

SUMMARY STATISTICS

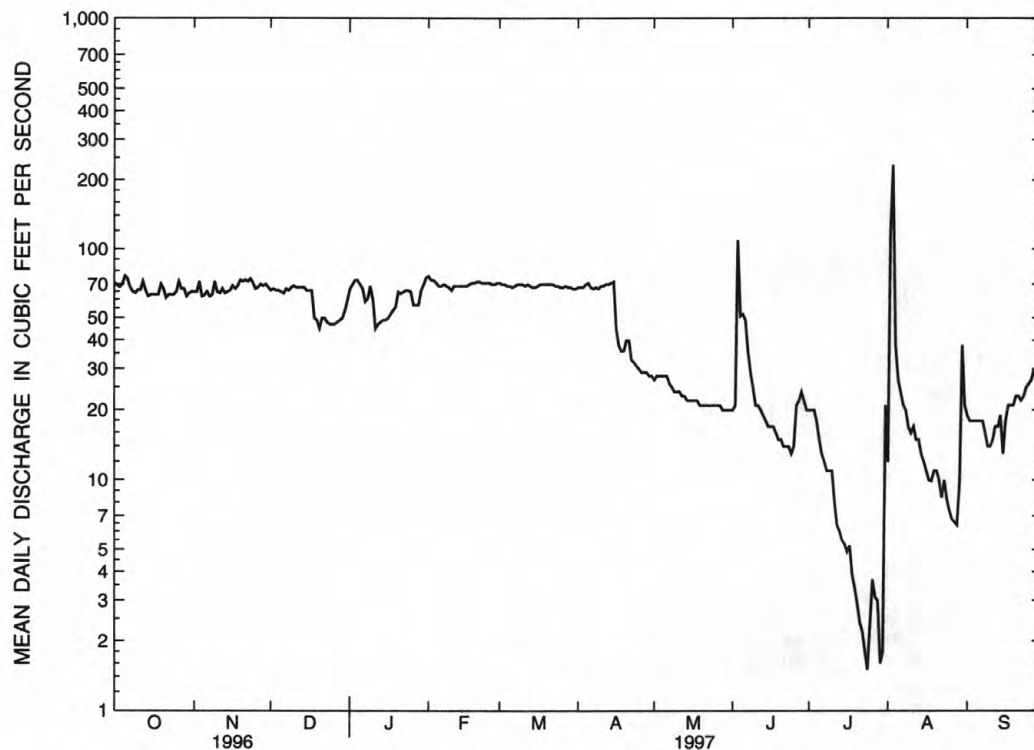
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1951 - 1997
(SINCE STORAGE IN ENDERS RESERVOIR)

ANNUAL TOTAL	19299.4	16580.8	
ANNUAL MEAN	52.7	45.4	76.6
HIGHEST ANNUAL MEAN			165
LOWEST ANNUAL MEAN			35.7
HIGHEST DAILY MEAN	465	233	3060
LOWEST DAILY MEAN	5.9	1.5	.00
ANNUAL SEVEN-DAY MINIMUM	8.1	2.4	.26
INSTANTANEOUS PEAK FLOW		298	15000
INSTANTANEOUS PEAK STAGE		6.17	*14.80
ANNUAL RUNOFF (AC-FT)	38280	32890	55510
10 PERCENT EXCEEDS	70	70	131
50 PERCENT EXCEEDS	53	52	66
90 PERCENT EXCEEDS	19	11	19

* From floodmark.



FRENCHMAN CREEK AT CULBERTSON

KANSAS RIVER BASIN

261

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	8.7	7.1	6.3	6.3	6.3	5.6	6.2	4.0	5.2	9.9	5.4
2	7.1	8.0	7.0	6.4	6.4	6.3	6.0	6.5	4.5	4.2	6.4	6.7
3	7.0	8.0	6.9	6.4	6.4	6.4	6.4	6.8	6.7	6.1	6.0	7.4
4	7.1	8.0	6.6	6.5	6.4	6.2	6.4	6.2	28	5.2	5.5	7.7
5	7.2	7.6	6.6	6.1	6.0	6.2	6.4	6.1	17	6.1	6.2	7.7
6	7.3	7.8	6.9	6.0	6.0	5.7	6.4	5.7	7.3	5.8	13	8.7
7	7.5	8.0	6.9	6.2	5.9	6.2	6.3	5.5	5.3	5.2	10	5.5
8	7.7	7.9	6.8	6.2	6.0	6.1	6.3	5.2	4.6	4.1	6.7	4.2
9	7.3	7.5	6.8	6.0	5.9	6.1	6.3	5.1	4.1	5.6	8.6	4.1
10	7.2	7.5	6.8	5.9	5.8	6.1	6.6	5.1	3.9	6.6	9.0	3.8
11	7.3	7.2	6.9	4.8	5.9	6.0	6.7	5.0	4.1	5.4	10	3.8
12	7.4	6.9	6.6	e4.4	6.0	6.0	7.0	4.9	4.1	5.9	8.3	3.5
13	7.1	7.1	6.5	e4.5	6.1	6.0	7.2	4.7	3.9	5.0	7.6	3.4
14	7.1	7.2	6.5	e4.8	6.1	5.9	7.3	4.4	3.7	5.0	6.8	4.9
15	7.1	7.5	6.8	e5.4	6.1	5.7	7.2	4.4	3.7	4.4	5.6	16
16	7.1	7.7	7.0	5.8	6.0	5.9	6.9	4.4	3.7	4.1	6.0	5.4
17	7.1	7.8	e7.0	5.8	6.1	6.0	7.0	4.2	3.6	4.2	6.9	6.3
18	7.0	7.6	e6.0	5.7	6.5	5.7	7.4	4.2	9.0	4.6	6.3	5.5
19	7.3	7.7	5.4	6.1	6.5	5.6	6.7	4.2	5.3	4.9	9.6	6.6
20	7.2	7.6	6.4	6.1	6.6	5.6	6.6	4.2	7.4	5.1	8.3	4.6
21	7.5	7.3	6.3	6.4	6.2	5.7	6.4	4.0	4.7	6.1	7.7	4.1
22	7.5	7.1	6.3	6.3	6.1	5.6	7.1	3.9	4.1	6.3	14	4.8
23	7.2	7.1	e6.0	6.0	5.6	5.6	6.2	4.2	4.1	5.2	13	4.4
24	7.0	6.7	e6.0	5.9	6.1	5.6	6.0	4.4	4.2	5.2	8.4	4.0
25	7.1	6.7	6.1	5.5	6.7	5.5	6.0	4.7	4.0	6.3	6.0	3.7
26	7.2	6.8	6.0	e5.0	6.3	5.4	6.1	4.8	7.5	7.0	7.2	3.5
27	7.3	6.7	6.0	e4.4	6.2	5.5	6.2	4.6	5.0	6.7	8.0	4.0
28	7.7	6.9	6.0	4.5	6.3	5.5	6.3	4.5	4.2	8.1	7.4	3.8
29	8.3	7.2	6.1	5.8	---	5.4	6.3	4.4	8.4	14	6.5	3.8
30	7.8	7.3	6.1	5.8	---	5.3	6.3	4.4	5.9	18	6.2	3.6
31	8.2	---	6.2	6.1	---	5.5	---	4.3	---	16	5.3	---
TOTAL	227.0	223.1	200.6	177.1	172.5	180.6	195.6	151.2	186.0	201.6	246.4	160.9
MEAN	7.32	7.44	6.47	5.71	6.16	5.83	6.52	4.88	6.20	6.50	7.95	5.36
MAX	8.3	8.7	7.1	6.5	6.7	6.4	7.4	6.8	28	18	14	16
MIN	7.0	6.7	5.4	4.4	5.6	5.3	5.6	3.9	3.6	4.1	5.3	3.4
AC-FT	450	443	398	351	342	358	388	300	369	400	489	319

e Estimated

KANSAS RIVER BASIN

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.28	3.59	3.53	3.51	5.81	8.05	4.25	9.92	18.4	20.7	17.1	14.0
MAX	137	7.44	7.44	7.96	31.4	209	13.3	112	85.8	100	156	302
(WY)	1947	1997	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

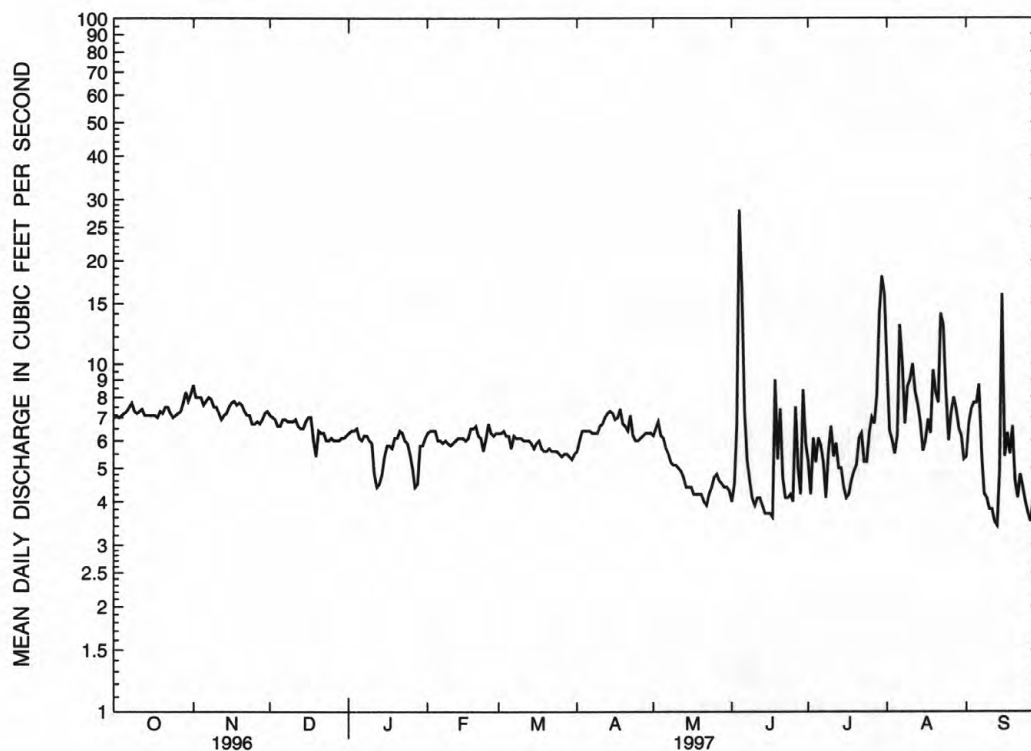
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1946 - 1997

ANNUAL TOTAL	3815.8	2322.6		
ANNUAL MEAN		10.4	6.36	9.72
MEDIAN OF ANNUAL MEANS				8.07
HIGHEST ANNUAL MEAN				35.0
LOWEST ANNUAL MEAN				1.12
HIGHEST DAILY MEAN		186 Jun 17	28 Jun 4	3950 Aug 7 1950
LOWEST DAILY MEAN		3.3 Jan 28	3.4 Sep 13	.00 Apr 25 1946
ANNUAL SEVEN-DAY MINIMUM		3.3 Jan 27	3.8 Sep 24	.00 Jun 12 1946
INSTANTANEOUS PEAK FLOW			35 Jun 18	4740 Aug 7 1950
INSTANTANEOUS PEAK STAGE			4.10 Jun 18	25.43 Aug 7 1950
ANNUAL RUNOFF (AC-FT)		7570	4610	7040
10 PERCENT EXCEEDS		15	7.7	11
50 PERCENT EXCEEDS		6.1	6.2	4.8
90 PERCENT EXCEEDS		4.1	4.2	.20



DRIFTWOOD CREEK NEAR MC COOK

KANSAS RIVER BASIN

263

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 poor. 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	98	e118	e150	190	110	92	56	46	130	159	93
2	111	101	e120	e180	168	109	92	62	54	123	146	87
3	109	103	e120	208	132	109	95	61	86	121	294	91
4	110	108	117	201	119	107	99	62	125	121	240	87
5	110	100	113	179	113	105	99	65	100	119	147	69
6	109	102	112	145	112	104	93	63	87	124	171	54
7	105	100	112	126	114	103	92	60	70	122	161	50
8	99	103	110	e120	107	103	93	57	54	119	144	45
9	98	109	112	e110	97	103	96	58	47	121	138	37
10	96	111	113	e100	97	103	97	57	47	121	137	36
11	101	101	114	e80	102	102	110	55	49	113	149	38
12	100	103	117	e76	105	102	103	55	48	111	134	38
13	106	108	117	e74	106	100	106	53	45	108	112	37
14	100	113	117	e68	107	97	107	52	43	103	103	48
15	93	118	114	e64	110	98	107	50	46	118	96	154
16	91	126	114	e70	112	101	95	48	41	141	92	63
17	99	118	e100	e80	112	100	78	45	38	142	92	51
18	94	116	e90	e90	113	101	72	43	38	144	88	47
19	104	121	e80	e100	111	102	69	43	58	142	93	43
20	100	127	e74	e120	111	101	69	44	111	142	93	42
21	103	118	e80	e140	110	99	69	43	141	142	92	49
22	93	111	e90	e150	108	96	65	42	176	141	106	53
23	100	e94	e100	171	104	95	59	47	180	141	100	51
24	96	e82	e90	166	112	95	58	45	179	134	94	53
25	103	e72	e80	150	106	95	57	44	171	125	88	53
26	102	e84	e76	133	105	96	59	43	222	132	83	51
27	102	e92	e76	e120	103	98	59	48	188	126	80	51
28	93	e100	e80	e100	106	96	56	46	167	156	78	52
29	100	e108	e90	e120	---	95	55	48	148	158	79	48
30	92	e114	e100	e150	---	94	55	50	140	164	119	42
31	96	---	e120	185	---	93	---	49	---	153	110	---
TOTAL	3130	3161	3166	3926	3192	3112	2456	1594	2945	4057	3818	1713
MEAN	101	105	102	127	114	100	81.9	51.4	98.2	131	123	57.1
MAX	115	127	120	208	190	110	110	65	222	164	294	154
MIN	91	72	74	64	97	93	55	42	38	103	78	36
AC-FT	6210	6270	6280	7790	6330	6170	4870	3160	5840	8050	7570	3400

e Estimated

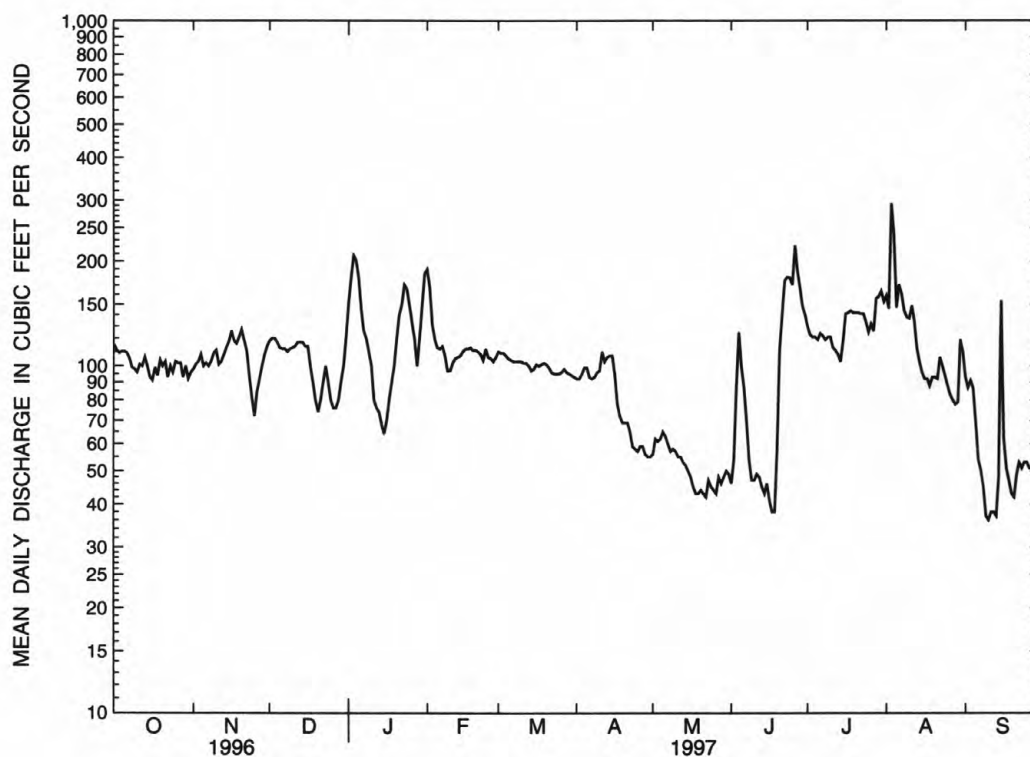
KANSAS RIVER BASIN

06837000 REPUBLICAN RIVER AT MCCOOK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	102	114	110	114	154	184	167	182	196	221	179	103
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	58.4	22.6	39.8	104	66.1	6.03
(WY)	1992	1991	1996	1979	1995	1996	1996	1956	1992	1980	1978	1991

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1955 - 1997	
ANNUAL TOTAL	38154		36270			
ANNUAL MEAN	104		99.4		152	
HIGHEST ANNUAL MEAN					383	
LOWEST ANNUAL MEAN					70.1	
HIGHEST DAILY MEAN	487		294		5020	
LOWEST DAILY MEAN	39		36		.99	
ANNUAL SEVEN-DAY MINIMUM	41		40		1.3	
INSTANTANEOUS PEAK FLOW			353		5890	
INSTANTANEOUS PEAK STAGE			4.92		9.14	
ANNUAL RUNOFF (AC-FT)	75680		71940		110300	
10 PERCENT EXCEEDS	165		144		271	
50 PERCENT EXCEEDS	94		100		110	
90 PERCENT EXCEEDS	54		49		59	



REPUBLICAN RIVER AT MCCOOK

KANSAS RIVER BASIN

265

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 (revised) 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, 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	13	12	15	13	10	10	9.9	8.9	21	7.8	15
2	7.3	13	12	14	12	11	10	11	9.4	16	7.1	8.7
3	7.8	14	13	14	12	11	10	9.7	9.2	14	6.6	9.0
4	8.0	14	13	14	12	10	10	10	8.3	16	4.5	8.7
5	8.4	14	16	12	11	10	10	9.8	8.5	13	5.9	12
6	8.3	15	13	9.0	12	10	9.8	9.7	8.7	12	14	9.0
7	8.5	14	13	e8.4	12	9.6	9.8	9.8	8.8	14	14	7.4
8	9.1	14	12	e8.4	11	9.7	10	9.8	8.5	15	15	6.6
9	8.9	14	13	e8.8	e10	9.3	11	10	8.5	15	11	6.2
10	8.7	15	13	e7.0	e9.4	9.5	11	9.4	8.5	16	11	6.0
11	9.0	14	13	e6.6	e8.6	9.5	12	8.9	7.8	13	20	5.8
12	9.6	14	13	e6.6	e9.0	9.5	11	9.0	1.5	12	16	5.9
13	9.3	13	13	e7.0	e9.6	9.3	11	9.1	6.8	11	9.5	6.5
14	9.5	13	13	e8.0	9.9	9.1	11	9.1	7.5	13	7.4	6.4
15	10	13	12	e8.6	11	9.5	11	9.0	8.3	26	6.0	11
16	9.8	13	12	e9.2	11	9.8	11	9.3	13	37	6.9	6.6
17	9.6	16	14	e10	11	9.5	12	9.3	1.5	24	7.1	13
18	10	14	8.1	e11	11	9.3	12	9.3	2.3	16	15	6.7
19	11	14	e7.4	e12	10	9.3	12	9.1	14	9.7	6.1	6.4
20	11	13	e7.0	e13	10	9.8	13	8.9	24	7.6	6.9	6.2
21	10	13	e7.8	e11	10	9.6	13	9.0	16	10	7.2	6.5
22	11	13	e8.4	e10	10	9.4	12	8.9	15	8.5	18	7.4
23	11	13	e8.4	e9.0	10	9.5	11	9.5	14	6.4	12	6.7
24	11	13	e8.0	e8.0	11	9.5	12	9.1	13	5.1	9.8	6.4
25	11	13	e7.2	6.4	11	9.5	11	8.6	20	9.1	8.1	6.5
26	12	e13	e8.0	e7.0	10	9.7	11	8.9	77	6.4	6.4	6.3
27	12	e13	e9.0	e6.6	10	10	11	11	42	5.4	25	6.1
28	12	13	e10	e9.0	11	10	11	8.6	25	9.8	25	5.5
29	13	13	e11	e11	---	9.7	10	9.0	24	8.9	29	5.8
30	12	13	e12	13	---	9.7	10	9.3	25	8.3	24	6.0
31	13	---	15	13	---	9.9	---	8.8	---	7.5	23	---
TOTAL	309.6	407	347.3	306.6	298.5	301.2	329.6	290.8	445.0	406.7	385.3	226.3
MEAN	9.99	13.6	11.2	9.89	10.7	9.72	11.0	9.38	14.8	13.1	12.4	7.54
MAX	13	16	16	15	13	11	13	11	77	37	29	15
MIN	7.3	13	7.0	6.4	8.6	9.1	9.8	8.6	1.5	5.1	4.5	5.5
AC-FT	614	807	689	608	592	597	654	577	883	807	764	449

e Estimated

KANSAS RIVER BASIN

06838000 RED WILLOW CREEK NEAR RED WILLOW, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.75	8.63	8.86	9.82	11.2	11.8	11.7	12.3	21.9	21.4	21.9	11.0
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

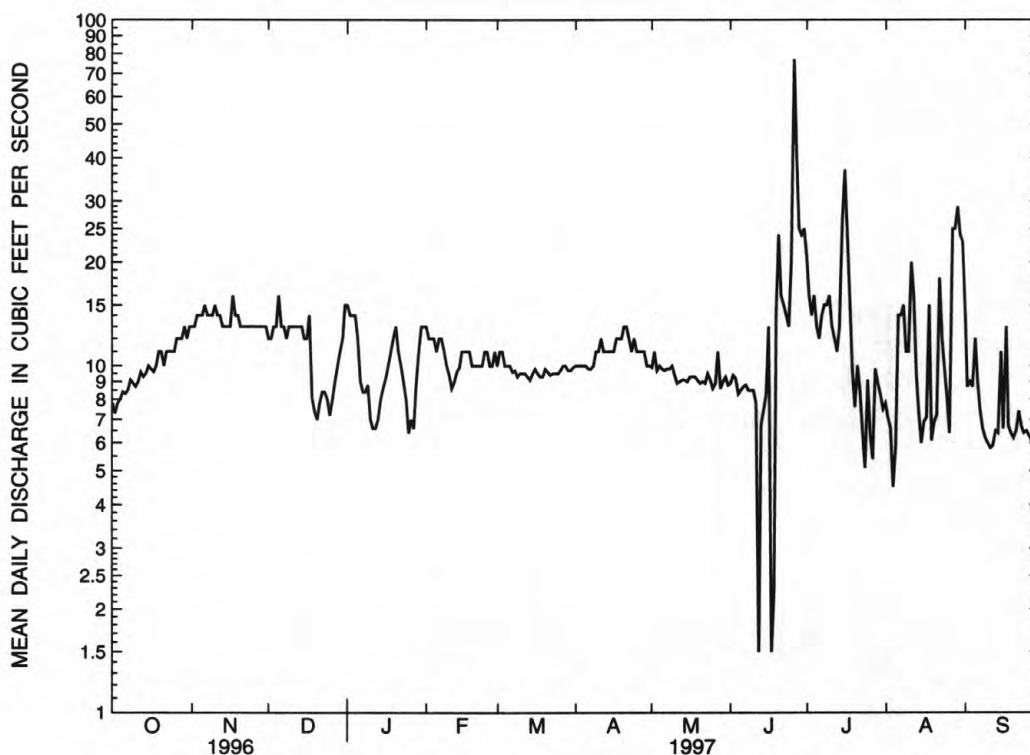
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1962 - 1997
(SINCE STORAGE IN HUGH BUTLER LAKE)

ANNUAL TOTAL	3767.4	4053.9	
ANNUAL MEAN	10.3	11.1	13.3
HIGHEST ANNUAL MEAN			25.5
LOWEST ANNUAL MEAN			7.90
HIGHEST DAILY MEAN	97	Jul 26	77
LOWEST DAILY MEAN	1.2	Jun 24	1.5
ANNUAL SEVEN-DAY MINIMUM	3.2	Jun 24	5.8
INSTANTANEOUS PEAK FLOW			164
INSTANTANEOUS PEAK STAGE			6.62
ANNUAL RUNOFF (AC-FT)	7470	8040	9630
10 PERCENT EXCEEDS	15	14	21
50 PERCENT EXCEEDS	9.1	10	9.4
90 PERCENT EXCEEDS	5.7	6.7	5.8



RED WILLOW CREEK NEAR RED WILLOW

KANSAS RIVER BASIN

267

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	184	189	e150	e230	220	170	101	130	272	276	207
2	340	183	186	e155	e230	225	175	104	132	277	244	139
3	334	178	192	e160	e230	227	173	104	151	338	251	146
4	325	177	192	e155	e225	226	173	103	177	329	333	146
5	253	173	191	e150	e225	222	171	100	206	332	300	99
6	242	168	191	e145	e225	218	166	94	192	326	381	78
7	247	164	192	e150	224	223	163	90	177	312	343	61
8	244	163	192	e150	226	221	163	88	173	290	262	50
9	190	166	193	e150	219	217	165	85	155	279	236	48
10	181	173	200	e145	201	215	172	83	131	277	224	43
11	181	178	197	e140	217	216	173	84	134	259	275	36
12	181	177	190	e135	223	197	176	89	136	247	210	31
13	184	177	185	e130	225	197	172	92	123	240	166	29
14	187	181	184	e130	229	187	170	93	120	326	137	27
15	187	187	183	e130	218	188	150	94	121	374	128	31
16	183	210	183	e135	216	186	148	94	121	366	109	90
17	176	202	172	e135	219	189	143	91	120	378	123	54
18	176	191	135	e150	221	188	130	89	109	340	168	45
19	179	189	e130	e165	224	190	120	89	116	301	260	36
20	175	188	e130	e180	222	194	113	88	118	307	212	33
21	173	185	e140	e200	220	195	110	87	147	313	237	38
22	169	186	e135	e195	215	187	109	86	170	312	226	48
23	171	191	e130	e195	212	183	109	99	198	304	229	52
24	175	184	e130	e190	213	181	104	101	175	275	218	51
25	180	177	e130	e190	217	179	103	110	218	255	291	49
26	183	179	e130	e180	218	174	98	122	331	266	336	47
27	179	189	e130	e180	218	174	97	122	422	273	353	47
28	179	190	e135	e185	217	171	96	144	380	291	309	44
29	180	191	e135	e190	---	169	99	138	350	291	269	45
30	174	192	e140	e210	---	167	106	140	320	316	215	43
31	183	---	e145	e225	---	166	---	137	---	334	217	---
TOTAL	6464	5473	5087	5080	6179	6092	4217	3141	5553	9400	7538	1893
MEAN	209	182	164	164	221	197	141	101	185	303	243	63.1
MAX	353	210	200	225	230	227	176	144	422	378	381	207
MIN	169	163	130	130	201	166	96	83	109	240	109	27
AC-FT	12820	10860	10090	10080	12260	12080	8360	6230	11010	18640	14950	3750

e Estimated

KANSAS RIVER BASIN

06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	125	157	152	159	246	304	269	317	358	375	302	163
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

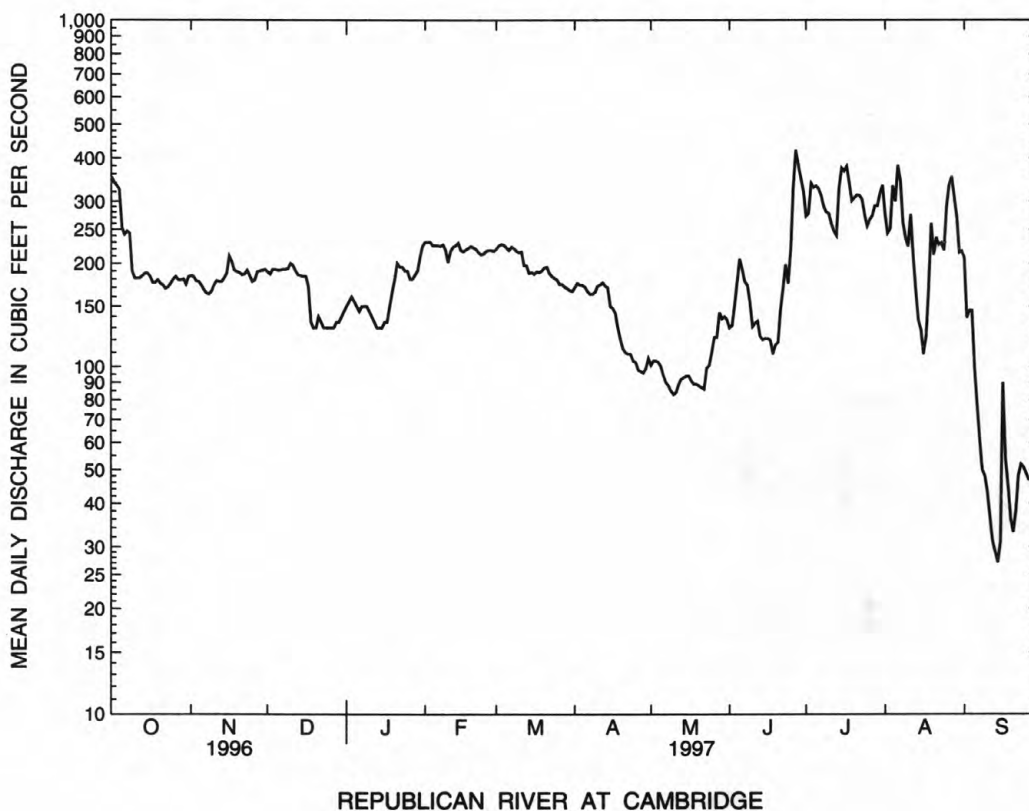
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1950 - 1997
(SINCE STORAGE IN HARRY STRUNK LAKE)

ANNUAL TOTAL	60714	66117	
ANNUAL MEAN	166	181	244
HIGHEST ANNUAL MEAN			686
LOWEST ANNUAL MEAN			110
HIGHEST DAILY MEAN	618 Sep 20	422 Jun 27	8610 Mar 22 1960
LOWEST DAILY MEAN	50 Jan 4	27 Sep 14	.07 Sep 27 1978
ANNUAL SEVEN-DAY MINIMUM	53 Jan 1	35 Sep 9	.11 Sep 21 1978
INSTANTANEOUS PEAK FLOW		439 Jun 27	160000 Jun 22 1947
INSTANTANEOUS PEAK STAGE		4.50 Jun 27	*16.70 Jun 22 1947
ANNUAL RUNOFF (AC-FT)	120400	131100	176900
10 PERCENT EXCEEDS	269	290	420
50 PERCENT EXCEEDS	155	180	171
90 PERCENT EXCEEDS	77	91	76

* From floodmark.



KANSAS RIVER BASIN

269

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	252	302	e210	e250	288	245	197	203	186	23	81
2	430	260	301	e210	e250	290	258	198	193	132	28	79
3	412	267	294	e210	e250	292	255	193	189	72	32	80
4	410	272	290	e210	e250	289	262	195	193	49	28	53
5	434	274	291	e210	e240	283	263	195	207	52	27	45
6	381	274	292	e205	e235	277	254	188	233	60	51	50
7	348	264	286	e200	e230	275	249	185	245	66	47	60
8	345	261	279	e190	e230	278	236	178	225	60	54	61
9	346	262	279	e180	e230	281	233	170	210	61	66	53
10	314	264	281	e175	e235	282	239	165	197	56	49	45
11	292	264	283	e170	e240	282	249	163	164	65	55	43
12	291	263	281	e170	e240	283	246	159	185	83	70	40
13	297	263	281	e170	e235	272	261	157	190	85	102	41
14	296	260	277	e175	e230	254	269	156	131	67	105	39
15	294	268	274	e185	e240	249	270	156	122	56	92	37
16	291	326	267	e195	e260	251	258	146	117	59	84	35
17	277	339	e240	e205	e280	257	240	138	112	62	62	33
18	266	306	e215	e215	e290	253	237	139	121	55	45	56
19	268	300	e200	e230	e290	253	229	138	113	50	53	56
20	269	298	e190	e245	297	256	227	131	85	56	50	45
21	268	299	e190	e260	291	256	218	118	79	57	76	42
22	270	302	e195	e260	290	254	209	120	75	52	64	46
23	271	299	e195	e250	285	254	202	153	81	43	63	92
24	267	291	e190	e230	286	251	197	166	103	40	54	81
25	269	282	e180	e210	279	247	190	162	106	40	45	77
26	269	310	e180	e185	287	248	188	165	87	35	42	72
27	259	281	e180	e180	287	249	191	182	104	30	40	66
28	257	288	e190	e190	283	246	193	180	425	30	38	63
29	262	301	e195	e205	---	244	193	184	295	30	46	60
30	257	300	e205	e225	---	246	199	208	231	30	53	57
31	250	---	e210	e240	---	245	---	206	---	24	71	---
TOTAL	9610	8490	7513	6395	7290	8185	6960	5191	5021	1843	1715	1688
MEAN	310	283	242	206	260	264	232	167	167	59.5	55.3	56.3
MAX	450	339	302	260	297	292	270	208	425	186	105	92
MIN	250	252	180	170	230	244	188	118	75	24	23	33
AC-FT	19060	16840	14900	12680	14460	16230	13810	10300	9960	3660	3400	3350

e Estimated

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	133	173	172	172	299	389	336	404	490	272	185	155
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

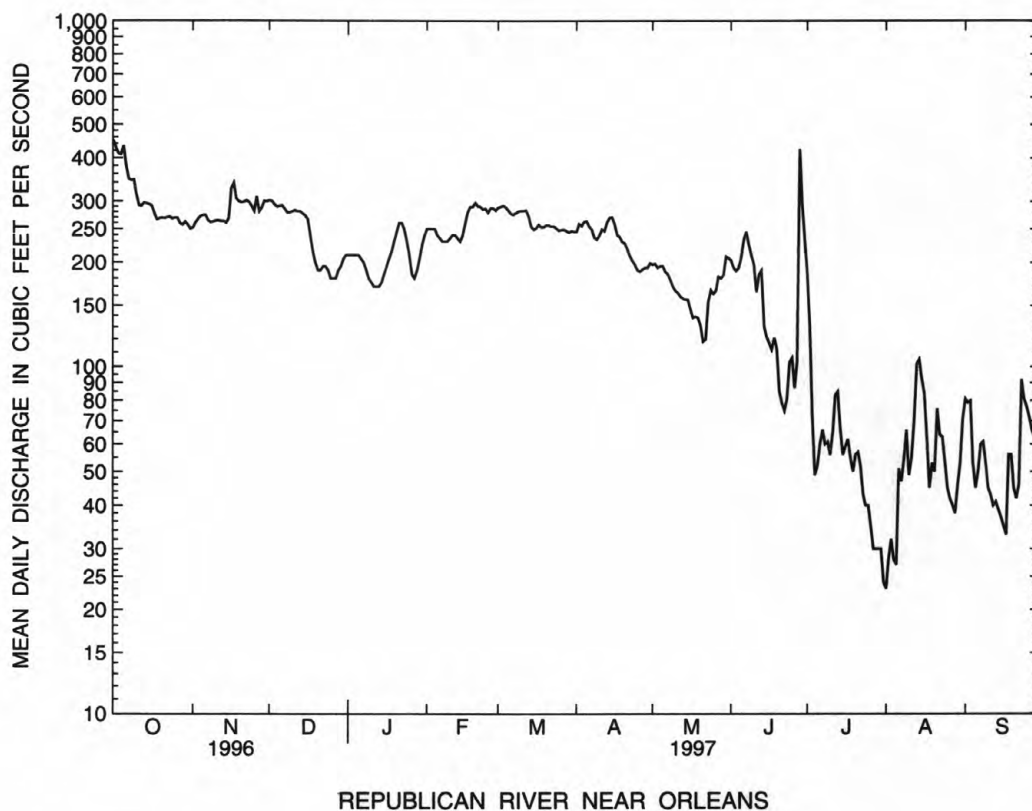
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1948 - 1997

ANNUAL TOTAL	94398	69901	
ANNUAL MEAN	258	192	265
HIGHEST ANNUAL MEAN			746
LOWEST ANNUAL MEAN			78.4
HIGHEST DAILY MEAN	2250	Jun 17	450
LOWEST DAILY MEAN	64	Feb 3	23
ANNUAL SEVEN-DAY MINIMUM	66	Jan 31	27
INSTANTANEOUS PEAK FLOW (STAGE)			593
INSTANTANEOUS PEAK STAGE			4.12
ANNUAL RUNOFF (AC-FT)	187200	138600	191600
10 PERCENT EXCEEDS	432	291	496
50 PERCENT EXCEEDS	212	209	167
90 PERCENT EXCEEDS	97	50	47

* Backwater from ice.



PLATTE RIVER BASIN

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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 1996 TO SEPTEMBER 1997

DATE	TIME	DISCHARGE, 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)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT							
21	1230	224	820	7.5	10.5	10.5	710
FEB							
20	1330	299	751	8.3	8.0	7.5	710
APR							
08	1300	235	782	8.6	3.0	7.0	720
AUG							
20	1130	43	620	8.5	24.0	24.5	620
SEP							
03	1930	71	513	8.3	21.5	25.0	720

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY LAB (MG/L AS CaCO ₃) (90410)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
OCT								
21	10.6	302	49	17	26	0.8	45	2.4
FEB								
20	12.8	281	42	16	23	0.8	43	--
APR								
08	11.6	294	44	16	25	0.8	39	--
AUG								
20	10.2	215	43	18	22	0.7	31	0.40
SEP								
03	8.6	185	28	16	13	0.7	27	--

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- 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)
OCT								
21	0.02	2.4	0.02	0.14	0.20	150	<3.0	4.0
FEB								
20	<0.01	2.6	<0.02	0.06	0.10	120	<3.0	6.0
APR								
08	<0.01	2.2	0.02	0.10	0.10	130	<3.0	5.0
AUG								
20	0.01	0.05	<0.02	<0.01	<0.01	140	3.0	<1.0
SEP								
03	<0.01	0.09	<0.02	<0.01	<0.01	120	<3.0	2.0

KANSAS RIVER BASIN

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 294 mi² is probably noncontributing.

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)
June 3	1300	*42	4.53	No peak greater than base discharge.			

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	19	13	e13	e12	e13	e13	12	18	11	8.1	e.00	.00
2	17	12	e13	e12	e12	e12	12	16	11	6.5	e.00	.00
3	17	11	e13	e12	e12	e13	12	15	24	5.3	e.00	.00
4	16	12	e13	e12	e12	e13	13	15	21	5.1	e.00	.00
5	16	12	e15	e12	e11	e13	13	14	25	4.5	e.00	.00
6	16	13	e14	e12	e11	e14	13	14	25	4.2	1.4	.00
7	15	13	e12	e12	e11	e14	13	14	22	4.2	4.0	.00
8	15	13	e11	e11	e12	e14	12	13	18	3.7	.55	.00
9	15	14	e11	e11	e9.0	e14	11	13	16	3.6	.24	.00
10	15	14	11	e10	e10	e14	11	13	14	3.3	.13	.00
11	14	14	e11	e10	e11	e14	10	12	14	3.0	.14	.00
12	14	14	e11	e10	e12	14	9.6	12	15	2.6	.16	.00
13	14	14	e11	e10	e12	14	11	11	15	2.2	.14	.00
14	14	14	e11	e10	e12	14	13	11	14	1.8	.10	.11
15	14	15	e11	e10	e13	14	13	11	13	1.8	e.04	1.1
16	14	17	e10	e10	e13	13	12	11	13	1.2	e.02	.14
17	12	15	e11	e10	e13	14	12	11	12	.88	e.00	.05
18	12	18	e10	e10	e13	14	13	10	11	.88	e.00	.02
19	11	18	e10	e11	e13	13	15	10	11	.95	e.00	.01
20	12	19	e9.5	e12	e13	13	16	10	11	.72	e.00	.00
21	12	19	e11	e12	e13	14	16	9.9	9.3	.40	.04	.00
22	12	18	e12	e12	e12	14	16	9.8	9.2	.34	.04	.00
23	11	18	e11	e12	e12	14	16	10	9.4	.35	.09	.00
24	11	17	e10	e11	e11	14	16	11	9.5	.28	.07	.00
25	11	e16	e11	e10	e10	13	15	11	9.9	.19	e.00	.00
26	11	16	e10	e10	e10	13	15	11	13	.12	.02	.00
27	11	e15	e11	e10	e10	13	14	11	12	.07	.00	.00
28	11	e14	e13	10	e10	13	14	11	9.4	e.04	.00	.00
29	12	e13	e12	e10	---	13	15	11	9.1	e.02	.00	.00
30	13	e15	e12	e12	---	13	15	11	8.7	e.00	.00	.00
31	14	---	e12	e13	---	13	---	11	---	e.00	.00	---
MEAN	13.6	14.9	11.5	11.0	11.6	13.5	13.3	12.0	13.9	2.14	.23	.048
MAX	19	19	15	13	13	14	16	18	25	8.1	4.0	1.1
MIN	11	11	9.5	10	9.0	12	9.6	9.8	8.7	.00	.00	.00
AC-FT	835	885	707	676	647	829	791	737	824	132	14	2.8

KANSAS RIVER BASIN

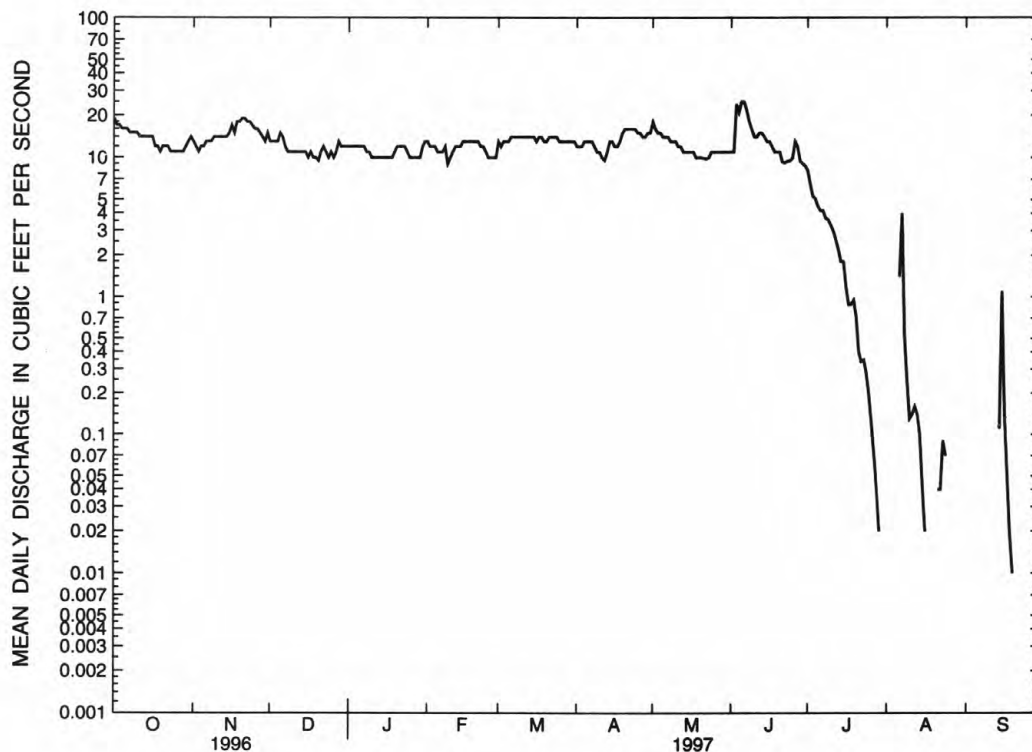
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06846500 BEAVER CREEK AT CEDAR BLUFFS, KS--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.34	3.08	2.63	2.25	3.96	12.3	7.39	24.6	40.6	31.0	16.1	16.9
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL MEAN	20.9		9.78		14.2	
HIGHEST ANNUAL MEAN					106	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	519	Aug 11	25	Jun 5	4560	Jun 11 1960
LOWEST DAILY MEAN	.00	Jan 1	.00	Jul 30	.00	Sep 3 1946
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Jul 30	.00	Sep 23 1947
INSTANTANEOUS PEAK FLOW			42	Jun 3	7940	Jun 11 1960
INSTANTANEOUS PEAK STAGE			4.53	Jun 3	18.71	Jun 11 1960
ANNUAL RUNOFF (AC-FT)	15210		7080		10320	
10 PERCENT EXCEEDS	40		15		24	
50 PERCENT EXCEEDS	9.6		11		.01	
90 PERCENT EXCEEDS	.00		.00		.00	



BEAVER CREEK AT CEDAR BLUFFS, KS

KANSAS RIVER BASIN

06847500 SAPPA 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	51	65	54	54	68	57	57	54	39	5.0	4.6
2	94	50	65	56	52	68	58	57	52	32	3.4	4.6
3	85	51	68	59	58	66	59	55	50	29	2.8	5.4
4	81	53	64	60	57	64	60	55	50	27	2.9	6.6
5	79	52	59	55	57	63	61	56	50	25	3.2	6.8
6	77	53	60	52	54	62	59	56	49	23	4.8	5.8
7	75	54	63	60	56	62	57	56	48	22	3.7	4.8
8	73	53	64	55	52	62	56	55	47	19	2.9	5.0
9	72	52	63	56	53	62	55	55	45	18	3.4	5.6
10	74	52	63	e50	49	62	55	54	51	16	5.4	5.4
11	71	52	65	e40	57	62	55	54	63	15	6.8	5.4
12	70	51	62	e35	52	62	49	53	58	15	9.5	5.4
13	69	51	62	e32	50	63	60	52	57	13	9.2	6.2
14	69	52	63	e33	55	61	62	51	56	11	9.7	6.6
15	68	53	60	e33	57	60	61	51	53	11	9.0	7.8
16	66	68	59	e40	63	61	59	50	51	9.7	8.2	6.8
17	63	80	40	e35	63	62	59	50	50	9.0	8.0	5.8
18	61	80	e37	e40	66	61	58	49	49	7.5	6.4	6.0
19	61	78	e35	e44	65	60	58	47	48	6.0	8.7	5.6
20	62	73	e40	48	67	61	59	44	45	4.4	9.7	5.0
21	61	70	e45	51	66	61	61	43	42	4.0	8.7	20
22	61	68	e44	53	64	60	61	44	40	3.5	7.1	16
23	61	68	e41	55	62	59	60	48	38	4.4	6.0	22
24	61	61	e38	55	52	59	59	53	36	2.8	5.8	17
25	61	49	e35	56	51	58	58	54	35	2.6	5.6	11
26	58	56	e39	62	65	57	58	54	34	3.7	4.4	16
27	55	69	e45	61	66	58	57	53	250	2.8	4.6	18
28	54	58	51	59	68	58	58	55	146	3.7	3.7	13
29	54	69	50	50	---	57	58	56	70	3.7	3.4	18
30	52	70	50	49	---	57	58	56	47	3.2	3.9	13
31	51	---	51	50	---	57	---	55	---	4.0	4.4	---
TOTAL	2113	1797	1646	1538	1631	1893	1745	1628	1764	390.0	180.3	279.2
MEAN	68.2	59.9	53.1	49.6	58.3	61.1	58.2	52.5	58.8	12.6	5.82	9.31
MAX	114	80	68	62	68	68	62	57	250	39	9.7	22
MIN	51	49	35	32	49	57	49	43	34	2.6	2.8	4.6
AC-FT	4190	3560	3260	3050	3240	3750	3460	3230	3500	774	358	554

e Estimated

KANSAS RIVER BASIN

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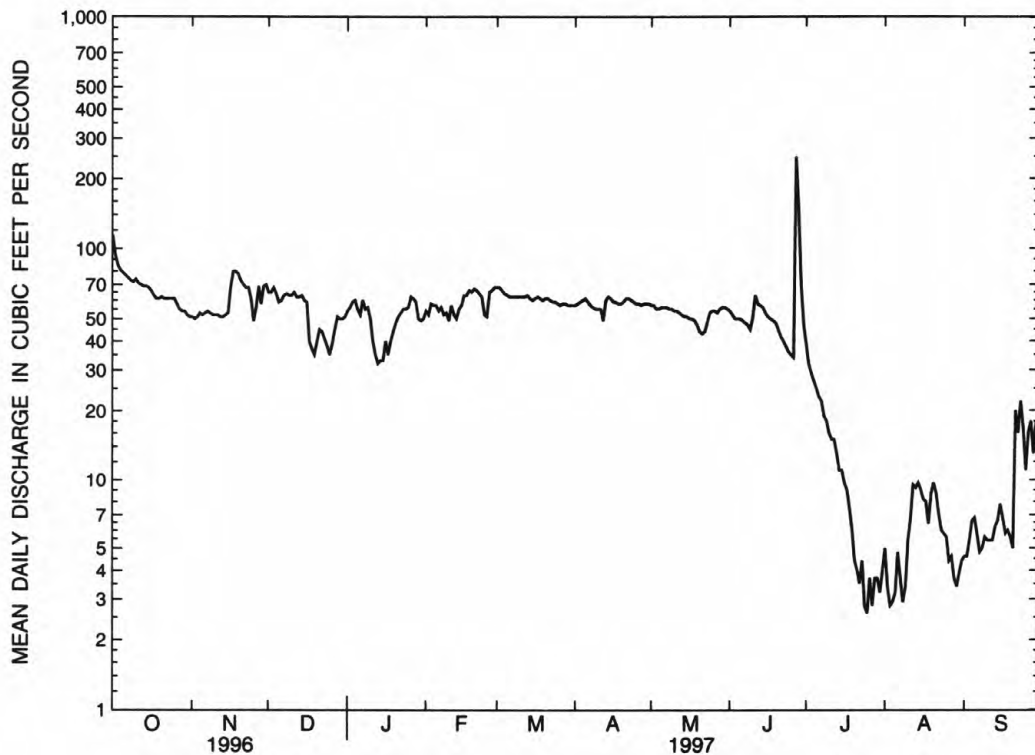
06847500 SAPPA CREEK NEAR STAMFORD, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.9	13.0	10.4	8.80	19.0	35.1	24.4	58.6	155	93.6	59.7	43.1
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1946 - 1997	
ANNUAL TOTAL	29221.0		16604.5			
ANNUAL MEAN	79.8		45.5		47.1	
MEDIAN OF ANNUAL MEANS					20.4	
HIGHEST ANNUAL MEAN					229	
LOWEST ANNUAL MEAN					.59	
HIGHEST DAILY MEAN	872	Aug 7	250	Jun 27	16700	Jun 24 1966
LOWEST DAILY MEAN	8.0	Jan 29	2.6	Jul 25	.00	Sep 12 1953
ANNUAL SEVEN-DAY MINIMUM	8.7	Jan 27	3.2	Jul 24	.00	Sep 12 1953
INSTANTANEOUS PEAK FLOW			371	Jun 27	43400	Jun 24 1966
INSTANTANEOUS PEAK STAGE			7.94	Jun 27	*22.13	Jun 24 1966
ANNUAL RUNOFF (AC-FT)	57960		32940		34110	
10 PERCENT EXCEEDS	181		66		86	
50 PERCENT EXCEEDS	52		53		6.1	
90 PERCENT EXCEEDS	14		5.4		.00	

* From floodmark.



SAPPA CREEK NEAR STAMFORD

KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	16	27	23	22	29	25	27	12	27	8.1	21
2	16	16	27	23	21	28	25	28	12	32	5.4	16
3	16	16	22	23	21	28	23	26	12	31	5.6	8.3
4	16	19	22	24	21	28	23	22	11	28	5.5	7.6
5	16	18	22	23	20	27	25	20	11	25	19	8.2
6	16	18	21	23	20	26	25	19	11	24	27	8.0
7	16	18	21	22	20	27	25	18	11	19	28	7.7
8	19	18	21	23	20	27	24	17	10	23	26	9.6
9	20	18	21	22	19	27	23	16	10	24	25	10
10	22	18	21	22	21	28	23	16	10	21	25	32
11	20	18	21	21	19	28	24	16	12	19	26	33
12	19	18	21	21	19	28	26	15	28	18	27	17
13	18	18	21	21	19	28	27	15	14	19	26	16
14	20	18	21	21	19	27	28	15	13	15	23	16
15	20	19	21	23	20	27	28	15	13	12	20	17
16	20	31	21	23	21	27	27	15	12	19	16	18
17	19	41	22	23	30	27	26	15	11	17	11	18
18	19	38	22	23	31	28	25	15	10	25	12	18
19	19	38	21	24	28	27	25	14	12	26	14	16
20	19	33	22	24	29	27	25	14	12	20	14	15
21	19	24	22	23	28	28	25	14	11	15	15	14
22	18	21	22	18	27	27	26	14	10	9.2	10	16
23	18	21	22	23	27	22	27	14	12	3.7	7.2	19
24	17	20	23	24	27	16	25	15	12	2.2	5.5	16
25	17	20	23	21	29	15	25	15	27	3.9	4.5	5.2
26	17	19	23	20	23	23	25	15	99	4.0	5.0	15
27	16	18	23	20	24	23	25	18	947	4.0	5.9	25
28	16	19	23	19	30	19	25	16	158	16	6.1	22
29	16	20	23	20	---	22	25	14	34	10	6.2	19
30	16	20	23	20	---	25	26	13	28	33	6.4	17
31	17	---	23	21	---	25	---	13	---	25	6.4	---
MEAN	17.9	21.6	22.2	22.0	23.4	25.6	25.2	16.7	52.8	18.4	14.3	16.0
MAX	22	41	27	24	31	29	28	28	947	33	28	33
MIN	16	16	21	18	19	15	23	13	10	2.2	4.5	5.2
AC-FT	1100	1290	1360	1350	1300	1570	1500	1030	3140	1130	876	953

KANSAS RIVER BASIN

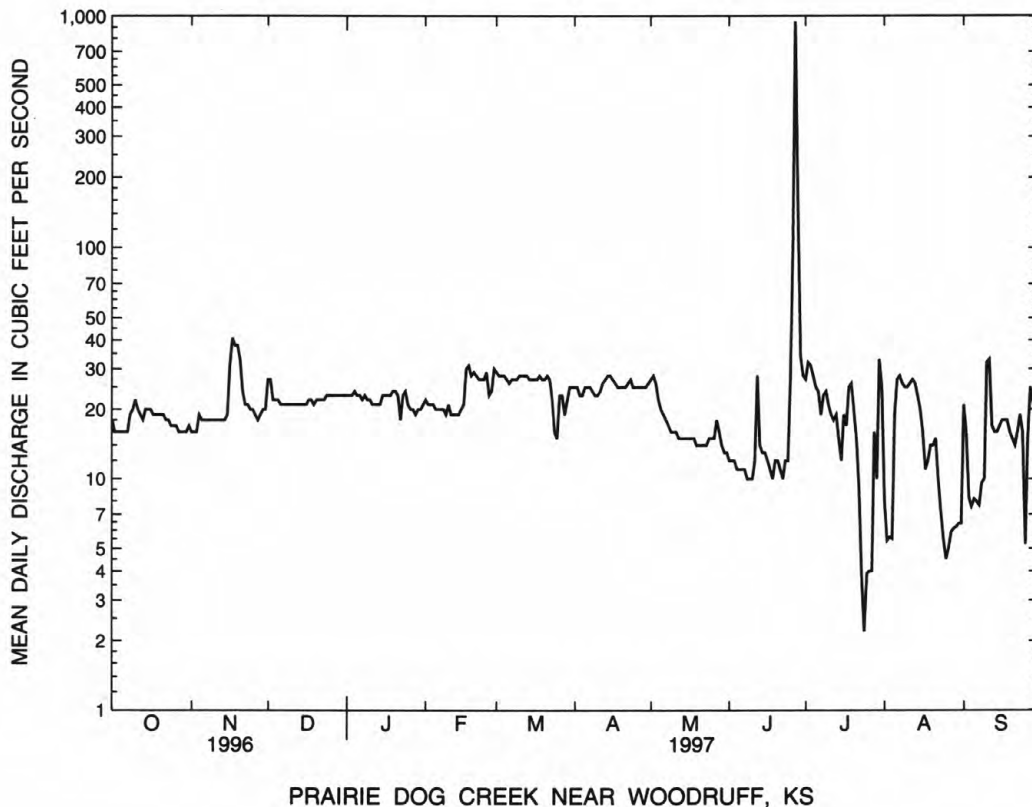
277

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.1	6.26	5.03	4.97	16.2	17.7	9.90	44.8	92.0	64.0	36.5	24.4
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1929 - 1997	
ANNUAL MEAN	40.9		22.9		27.8	
HIGHEST ANNUAL MEAN					208	1951
LOWEST ANNUAL MEAN					.051	1991
HIGHEST DAILY MEAN	1740	Aug 7	947	Jun 27	9700	Jun 23 1947
LOWEST DAILY MEAN	3.5	May 22	2.2	Jul 24	.00	Oct 29 1945
ANNUAL SEVEN-DAY MINIMUM	3.9	May 19	5.7	Aug 24	.00	Oct 5 1948
INSTANTANEOUS PEAK FLOW			1140	Jun 27	15000	Jun 23 1947
INSTANTANEOUS PEAK STAGE			15.31	Jun 27	21.04	Jun 23 1947
ANNUAL RUNOFF (AC-FT)	29670		16610		20130	
10 PERCENT EXCEEDS	48		28		30	
50 PERCENT EXCEEDS	17		20		4.0	
90 PERCENT EXCEEDS	7.0		11		.00	



KANSAS RIVER BASIN

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. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

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	1530	27	29	27	19	19	19	321	195	568	534	221
2	1400	26	30	24	20	19	22	322	196	619	573	201
3	1290	26	29	23	20	18	194	325	197	623	571	80
4	1300	26	29	21	20	19	780	327	194	621	571	17
5	1300	26	28	21	21	19	1040	329	194	623	584	13
6	1290	26	28	21	21	19	1040	327	194	623	596	13
7	1310	25	27	e21	21	19	1040	329	194	623	559	13
8	1280	25	27	21	22	19	1040	329	194	605	522	13
9	1290	25	27	21	21	19	1040	322	194	588	522	13
10	1290	24	27	e21	23	19	1040	321	194	551	520	13
11	1280	23	27	e21	22	19	1050	320	199	515	504	13
12	1280	23	27	e21	24	19	1050	314	200	512	400	13
13	1280	23	27	e21	21	21	1050	312	200	556	394	14
14	1280	23	27	e21	20	24	1050	312	201	606	303	14
15	1280	24	28	e21	20	23	1050	313	204	616	204	13
16	1270	95	28	e21	20	21	1050	263	202	615	203	13
17	1060	84	29	e21	19	20	1050	201	227	612	203	14
18	841	33	680	e21	19	21	1050	201	284	615	207	14
19	842	126	1540	e21	20	21	1050	202	336	634	212	14
20	839	858	1060	e21	19	20	1050	205	359	674	206	13
21	833	1250	549	21	20	20	1050	205	417	674	206	13
22	831	1250	517	21	19	21	1050	206	460	673	200	14
23	631	1260	545	21	19	21	1060	208	476	655	200	18
24	476	1260	646	21	19	20	949	203	258	632	202	21
25	236	1250	640	e21	19	21	708	205	88	631	200	16
26	35	1100	563	e21	19	20	590	204	71	640	210	14
27	32	395	492	e21	20	19	589	203	111	653	216	14
28	30	37	491	e21	19	19	467	200	275	607	216	13
29	29	33	488	e20	---	21	325	200	428	506	214	13
30	27	31	487	e19	---	21	320	197	510	497	213	13
31	27	---	250	20	---	20	---	196	---	489	215	---
TOTAL	27719	9434	9422	658	566	621	24863	8122	7452	18656	10680	881
MEAN	894	314	304	21.2	20.2	20.0	829	262	248	602	345	29.4
MAX	1530	1260	1540	27	24	24	1060	329	510	674	596	221
MIN	27	23	27	19	19	18	19	196	71	489	200	13
AC-FT	54980	18710	18690	1310	1120	1230	49320	16110	14780	37000	21180	1750

e Estimated

KANSAS RIVER BASIN

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06849500 REPUBLICAN RIVER BELOW HARLAN COUNTY DAM, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	132	79.7	64.3	57.9	123	134	207	214	386	735	434	139
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

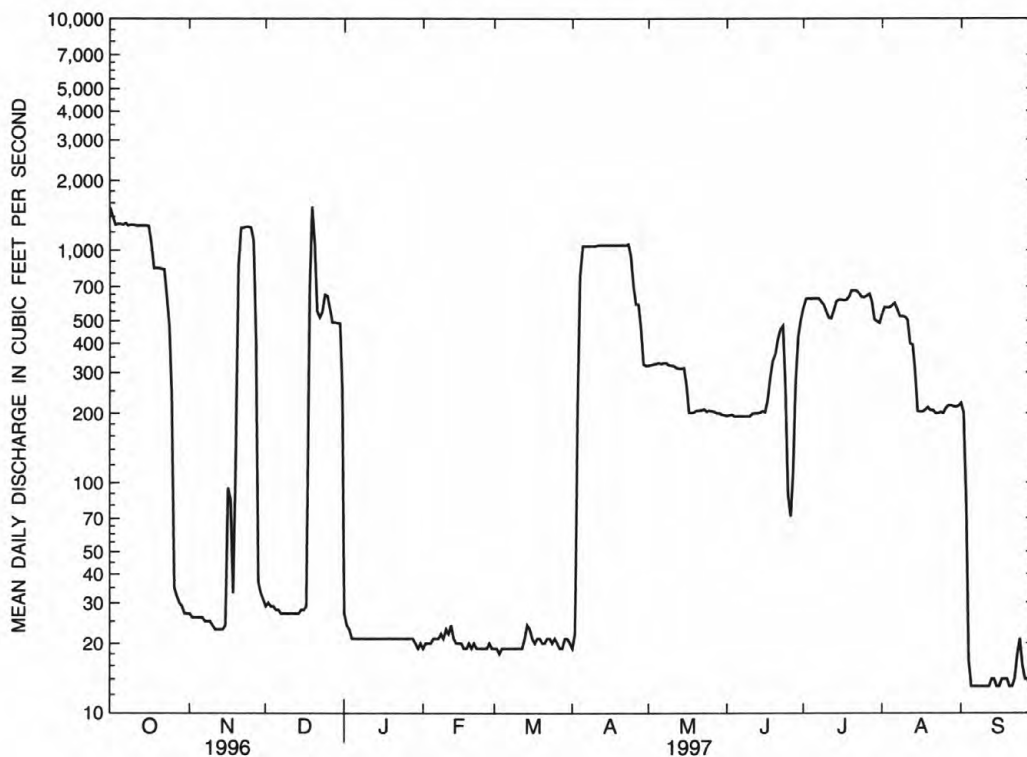
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1953 - 1997

ANNUAL TOTAL	140915.32	119074	
ANNUAL MEAN	385	326	229
HIGHEST ANNUAL MEAN			690
LOWEST ANNUAL MEAN			37.4
HIGHEST DAILY MEAN	1590 Sep 23	1540 Dec 19	4210 Nov 2 1965
LOWEST DAILY MEAN	.29 Jun 3	13 Sep 5	.29 Jun 3 1996
ANNUAL SEVEN-DAY MINIMUM	.38 Jun 1	13 Sep 5	.38 Jun 1 1996
INSTANTANEOUS PEAK FLOW		1640 Dec 19	4320 Jun 25 1957
INSTANTANEOUS PEAK STAGE		4.59 Dec 19	8.65 Jun 25 1957
ANNUAL RUNOFF (AC-FT)	279500	236200	165600
10 PERCENT EXCEEDS	1160	1050	662
50 PERCENT EXCEEDS	27	200	15
90 PERCENT EXCEEDS	3.4	19	4.4



REPUBLICAN RIVER BELOW HARLAN COUNTY DAM

KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
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	e190	e263	353	147
2	.00	.00	.00	.00	.00	.00	.00	.00	e190	e342	352	148
3	.00	.00	.00	.00	.00	.00	.00	.00	206	368	352	154
4	.00	.00	.00	.00	.00	.00	.00	.00	190	384	348	157
5	.00	.00	.00	.00	.00	.00	.00	.00	145	378	344	164
6	.00	.00	.00	.00	.00	.00	.00	.00	118	379	345	157
7	.00	.00	.00	.00	.00	.00	.00	.00	98	380	352	153
8	.00	.00	.00	.00	.00	.00	.00	.00	97	377	355	152
9	.00	.00	.00	.00	.00	.00	.00	.00	100	374	360	153
10	.00	.00	.00	.00	.00	.00	.00	.00	88	344	366	173
11	.00	.00	.00	.00	.00	.00	.00	.00	83	339	380	174
12	.00	.00	.00	.00	.00	.00	.00	.00	97	338	384	110
13	.00	.00	.00	.00	.00	.00	.00	.00	101	312	348	95
14	.00	.00	.00	.00	.00	.00	.00	.00	101	326	281	94
15	.00	.00	.00	.00	.00	.00	.00	.00	100	351	217	94
16	.00	.00	.00	.00	.00	.00	.00	.00	106	355	191	85
17	.00	.00	.00	.00	.00	.00	.00	.00	139	347	189	79
18	.00	.00	.00	.00	.00	.00	.00	.00	142	335	183	76
19	.00	.00	.00	.00	.00	.00	.00	.00	169	336	183	64
20	.00	.00	.00	.00	.00	.00	.00	.00	186	336	183	9.5
21	.00	.00	.00	.00	.00	.00	.00	e60	229	346	178	.00
22	.00	.00	.00	.00	.00	.00	.00	e133	278	348	184	.00
23	.00	.00	.00	.00	.00	.00	.00	e174	306	346	187	.00
24	.00	.00	.00	.00	.00	.00	.00	e174	226	343	187	.00
25	.00	.00	.00	.00	.00	.00	.00	e174	107	343	185	.00
26	.00	.00	.00	.00	.00	.00	.00	e174	86	326	183	.00
27	.00	.00	.00	.00	.00	.00	.00	e176	70	312	180	.00
28	.00	.00	.00	.00	.00	.00	.00	e193	13	325	158	.00
29	.00	.00	.00	.00	---	.00	.00	e193	e125	335	151	.00
30	.00	.00	.00	.00	---	.00	.00	e192	e135	330	151	.00
31	.00	---	.00	.00	---	.00	---	e190	---	334	149	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1833.00	4221	10652	7959	2438.50
MEAN	.000	.000	.000	.000	.000	.000	.000	59.1	141	344	257	81.3
MAX	.00	.00	.00	.00	.00	.00	.00	193	306	384	384	174
MIN	.00	.00	.00	.00	.00	.00	.00	.00	13	263	149	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	3640	8370	21130	15790	4840

e Estimated

KANSAS RIVER BASIN

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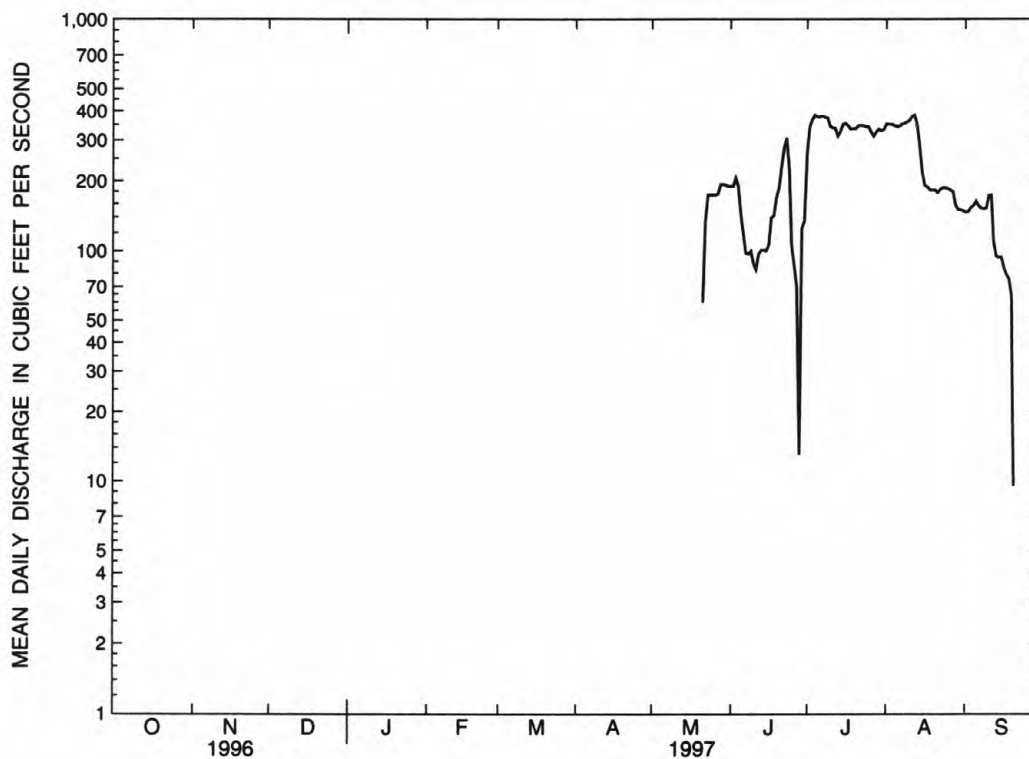
06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.3	10.1	2.81	3.47	3.60	6.50	11.7	54.0	109	348	280	62.7
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1955 - 1997	
ANNUAL TOTAL	33875.20		27103.50			
ANNUAL MEAN	92.6		74.3		77.6	
HIGHEST ANNUAL MEAN					138	
LOWEST ANNUAL MEAN					19.5	
HIGHEST DAILY MEAN	415	Jul 15	384	Jul 4, Aug 12	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)	67190		53760		56210	
10 PERCENT EXCEEDS	369		334		286	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

* No flow for many days each year.



COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

KANSAS RIVER BASIN

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 (REVISED).--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-94-1: 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	192	316	e200	e250	207	152	507	150	131	40	74
2	1470	187	285	e250	e245	213	157	508	133	94	38	122
3	1440	182	263	e290	e230	211	172	480	118	80	54	158
4	1290	178	253	e300	e205	208	177	453	215	61	42	150
5	1280	174	248	e300	e200	203	424	440	329	64	28	92
6	1270	171	231	e310	e195	197	969	423	249	72	37	45
7	1260	167	227	e300	e190	193	1020	417	231	70	66	36
8	1290	163	222	e230	e185	193	1050	404	225	345	58	32
9	1290	158	219	e190	e180	196	1070	393	225	229	28	29
10	1270	158	222	e165	e180	191	1130	393	223	249	43	29
11	1250	158	224	e160	e175	198	1160	388	226	214	99	27
12	1250	159	224	e165	e170	205	1170	379	259	166	170	25
13	1250	144	223	e180	e175	202	1180	377	288	153	145	24
14	1240	131	222	e205	e180	193	1220	378	244	133	250	23
15	1230	134	217	e205	e190	195	1220	368	231	98	450	22
16	1230	795	216	e185	e200	202	1210	354	213	64	204	24
17	1220	2230	e205	e185	214	205	1210	360	186	46	164	23
18	1140	920	e150	e205	213	202	1220	305	153	37	153	22
19	880	516	e110	e220	216	198	1220	276	120	14	165	41
20	844	382	e125	e235	213	196	1230	242	119	6.6	160	65
21	814	500	e140	e230	e210	187	1240	173	160	40	139	64
22	801	1140	e150	e220	e195	178	1230	107	142	40	130	67
23	800	1220	e145	e215	e190	170	1220	100	160	33	128	100
24	742	1220	e115	e200	e180	168	1220	109	438	23	104	137
25	536	1230	e100	e200	e180	164	1160	110	795	15	83	155
26	485	1220	e108	e180	e185	162	961	153	380	20	54	144
27	307	1190	e120	e155	e190	161	781	352	270	27	39	134
28	247	789	e140	e160	202	156	741	280	224	90	34	122
29	230	443	e160	e195	---	155	699	172	127	140	38	115
30	210	364	e175	e215	---	157	557	169	166	103	48	100
31	199	---	e185	e240	---	156	---	161	---	68	59	---
TOTAL	30195	16615	5940	6690	5538	5822	28170	9731	6999	2925.6	3250	2201
MEAN	974	554	192	216	198	188	939	314	233	94.4	105	73.4
MAX	1470	2230	316	310	250	213	1240	508	795	345	450	158
MIN	199	131	100	155	170	155	152	100	118	6.6	28	22
AC-FT	59890	32960	11780	13270	10980	11550	55880	19300	13880	5800	6450	4370

e Estimated

KANSAS RIVER BASIN

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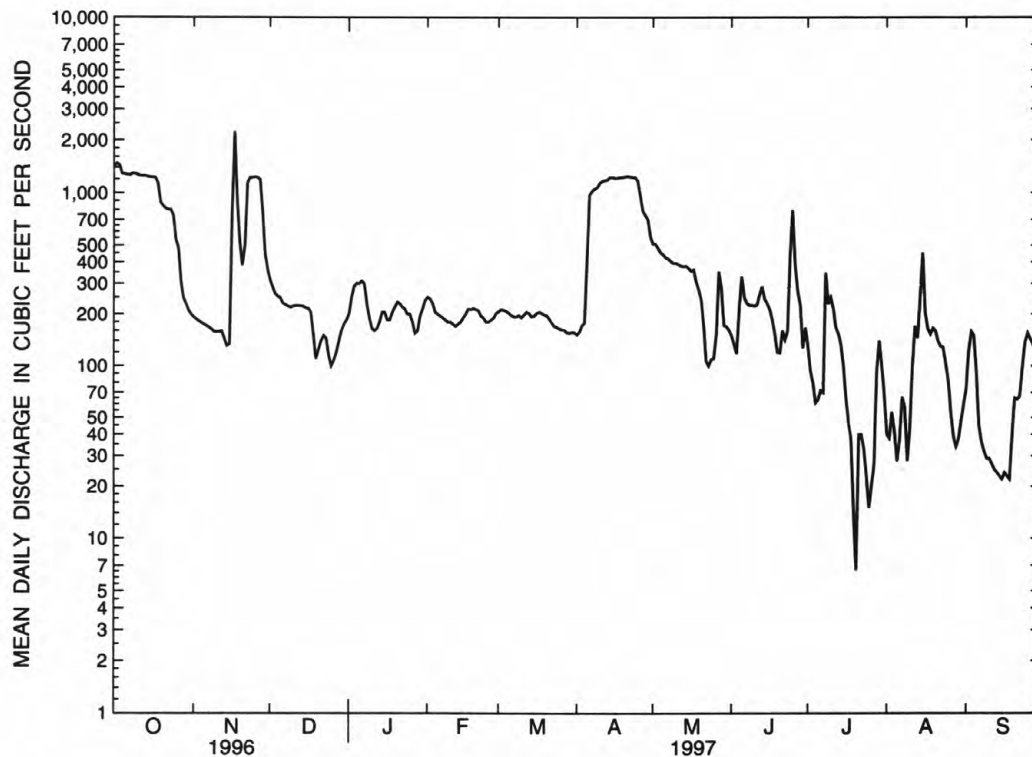
06853020 REPUBLICAN RIVER AT GUIDE ROCK, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	217	189	163	157	259	323	371	417	502	539	253	299
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1950 - 1997	
ANNUAL TOTAL	167685.4		124076.6		306	
ANNUAL MEAN	458		340		1495	
HIGHEST ANNUAL MEAN					52.1	
LOWEST ANNUAL MEAN					1991	
HIGHEST DAILY MEAN	3700	Jul 23	2230	Nov 17	20900	Jun 16 1957
LOWEST DAILY MEAN	2.4	Jul 4	6.6	Jul 20	.10	May 26 1964
ANNUAL SEVEN-DAY MINIMUM	25	May 16	23	Sep 12	.62	Oct 25 1976
INSTANTANEOUS PEAK FLOW			2660	Nov 17	29200	Jun 16 1957
INSTANTANEOUS PEAK STAGE			9.87	Nov 17	*20.73	Jun 16 1957
ANNUAL RUNOFF (AC-FT)	332600		246100		222000	
10 PERCENT EXCEEDS	1230		1160		712	
50 PERCENT EXCEEDS	158		196		119	
90 PERCENT EXCEEDS	66		52		24	

* Site and datum then in use.



REPUBLICAN RIVER AT GUIDE ROCK

KANSAS RIVER BASIN

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 7,500 mi² does not contribute 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	310	512	e500	472	243	202	e895	231	289	182	124
2	1590	295	463	e460	445	251	210	e870	218	267	150	138
3	1590	287	425	e440	411	249	222	e810	214	198	128	168
4	1510	285	400	e420	381	247	232	e740	202	197	138	209
5	1410	279	383	e400	353	240	245	e660	316	169	119	195
6	1400	273	372	e340	337	234	e260	e600	379	166	104	145
7	1390	265	359	e300	e300	233	e300	543	312	163	106	98
8	1400	258	344	e280	e270	231	e650	521	287	283	130	79
9	1440	251	329	e240	e290	279	e860	509	278	317	136	72
10	1390	247	314	e230	e300	301	e900	501	278	313	115	69
11	1380	242	311	e220	e320	251	e950	499	276	303	165	68
12	1390	238	304	e220	e300	240	e1000	496	292	291	220	65
13	1380	235	299	e220	e270	237	e1000	495	311	234	274	63
14	1380	235	292	e220	e270	228	e1100	492	320	199	269	e60
15	1370	245	283	e230	e290	221	e1150	486	281	187	358	e56
16	1380	3190	277	e240	e300	222	e1200	485	271	171	410	e58
17	1370	4660	265	e250	310	228	e1080	470	253	139	279	e60
18	1360	2350	189	e250	283	229	e1050	471	230	119	221	e62
19	1170	1050	e160	e260	270	222	e1030	411	222	112	199	64
20	998	728	e140	e260	259	216	e1010	388	207	116	209	63
21	961	585	e230	e260	251	217	e1000	351	215	123	211	89
22	940	903	e270	e260	243	213	e980	270	257	139	221	114
23	934	1370	e360	e260	236	211	e1120	217	236	153	220	120
24	925	1370	e320	e280	235	207	e1150	218	547	136	189	141
25	817	1380	e300	e300	230	206	e1150	219	376	123	170	150
26	675	1380	e280	e340	235	203	e1140	231	391	99	145	156
27	585	1380	e280	e360	243	201	e1090	299	403	91	121	146
28	433	1230	e320	405	238	203	e1000	573	405	219	102	133
29	385	827	e400	e425	---	203	e920	378	375	295	93	125
30	351	589	e550	447	---	201	e890	284	297	290	96	118
31	328	---	e530	479	---	201	---	252	---	213	104	---
MEAN	1137	898	331	316	298	228	836	472	296	197	180	107
MAX	1600	4660	550	500	472	301	1200	895	547	317	410	209
MIN	328	235	140	220	230	201	202	217	202	91	93	56
AC-FT	69880	53430	20350	19430	16550	14020	49770	29030	17610	12130	11080	6360

e Estimated

KANSAS RIVER BASIN

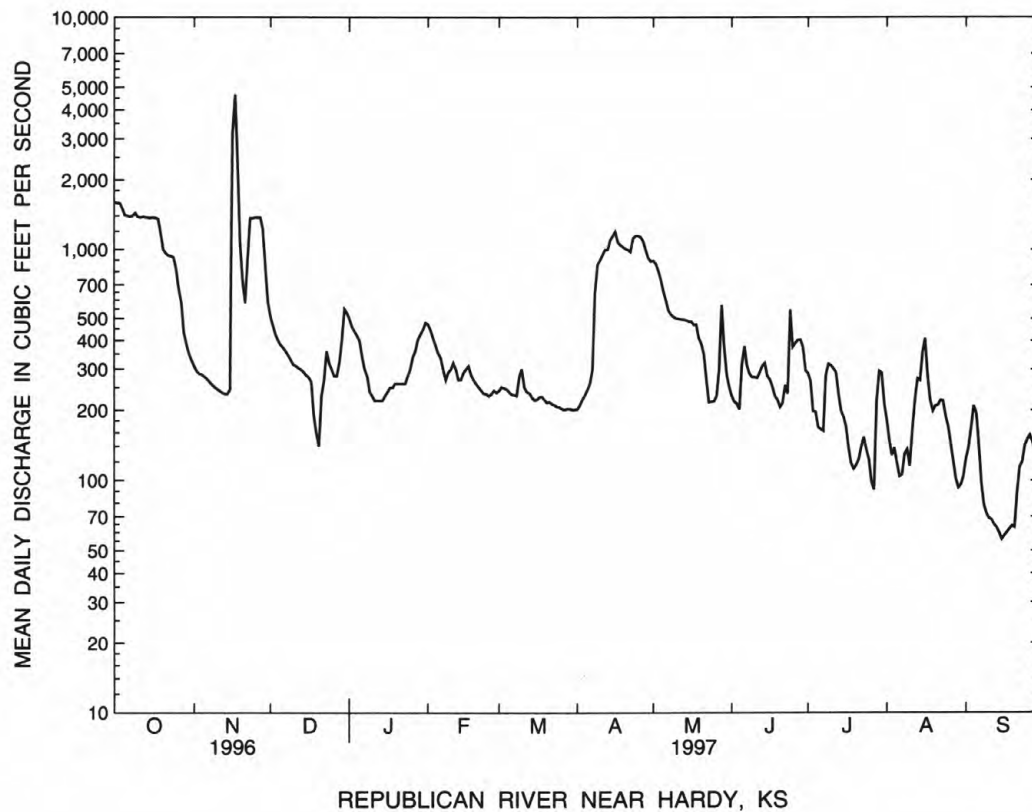
285

06853500 REPUBLICAN RIVER NEAR HARDY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	298	237	203	191	312	435	453	489	520	542	332	342
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATERYEARS 1958 - 1997	
ANNUAL MEAN	544		441		363	
HIGHEST ANNUAL MEAN					800	1960
LOWEST ANNUAL MEAN					72.5	1991
HIGHEST DAILY MEAN	4660	Nov 17	4660	Nov 17	15000	Oct 1 1983
LOWEST DAILY MEAN	47	May 22	56	Sep 15	4.8	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	63	May 16	60	Sep 13	9.0	Jun 26 1992
INSTANTANEOUS PEAK FLOW			6320	Nov 16	225000	Jun 2 1935
INSTANTANEOUS PEAK STAGE			10.92	Nov 16	19.40	Jun 2 1935
ANNUAL RUNOFF (AC-FT)	395100		319600		263000	
10 PERCENT EXCEEDS	1390		1080		818	
50 PERCENT EXCEEDS	262		279		171	
90 PERCENT EXCEEDS	109		127		67	



KANSAS RIVER BASIN

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, Hydrologic Unit 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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	77	e120	e82	e70	e110	e92	e102	194	274	215	103
2	76	77	e116	e88	e80	110	e90	e106	151	176	694	102
3	75	75	114	e92	e88	110	e88	e108	127	154	1150	100
4	74	77	110	e90	e90	107	e92	e106	116	141	427	98
5	74	76	109	e84	e88	104	e90	e104	107	131	284	96
6	74	76	106	e78	e84	105	e88	e102	102	125	164	94
7	74	76	106	e76	e80	104	e86	e100	98	122	131	94
8	74	76	105	e70	e76	102	e90	e150	95	117	125	93
9	74	76	107	e60	e74	117	e94	e120	93	116	117	93
10	74	74	106	e60	e74	105	e96	e114	91	1150	113	93
11	74	74	108	e56	e76	108	e100	e100	90	4790	138	98
12	74	75	108	e62	e74	104	e102	e94	95	1350	463	92
13	74	74	107	e66	e72	e102	e100	e90	213	406	668	94
14	74	75	105	e70	e72	e100	e98	e88	207	298	495	91
15	74	78	115	e72	e70	e98	e96	e88	191	252	351	88
16	73	157	105	e74	e76	e86	e100	85	207	229	266	88
17	73	569	e100	e76	e90	e94	e110	83	161	225	189	85
18	74	803	e90	e80	e110	e94	e120	81	116	221	148	84
19	75	871	e72	e84	e150	e92	e114	81	104	213	155	83
20	76	904	e84	e88	237	e92	e110	81	103	215	329	82
21	75	727	e82	e92	275	e92	e108	81	106	247	715	82
22	73	366	e80	e90	273	e92	e106	79	e195	254	604	84
23	74	241	e78	e88	243	e90	e104	77	e410	203	488	90
24	76	e150	e68	e86	173	e90	e102	81	e470	192	352	102
25	77	e140	e72	e84	137	e92	e100	88	e600	178	245	127
26	76	e135	e74	e74	e120	e92	e98	99	e600	174	210	236
27	74	e130	e80	e66	e116	e90	e98	106	e540	188	195	185
28	73	e130	e82	e64	e112	e92	e94	192	418	213	154	202
29	74	128	e84	e62	---	e90	e90	300	255	500	128	197
30	74	124	e82	e60	---	e88	e94	294	198	505	116	141
31	73	---	e80	e64	---	e90	---	245	---	307	108	---
TOTAL	2306	6711	2955	2338	3280	3042	2950	3625	6453	13666	9937	3297
MEAN	74.4	224	95.3	75.4	117	98.1	98.3	117	215	441	321	110
MAX	77	904	120	92	275	117	120	300	600	4790	1150	236
MIN	73	74	68	56	70	86	86	77	90	116	108	82
AC-FT	4570	13310	5860	4640	6510	6030	5850	7190	12800	27110	19710	6540

e Estimated

KANSAS RIVER BASIN

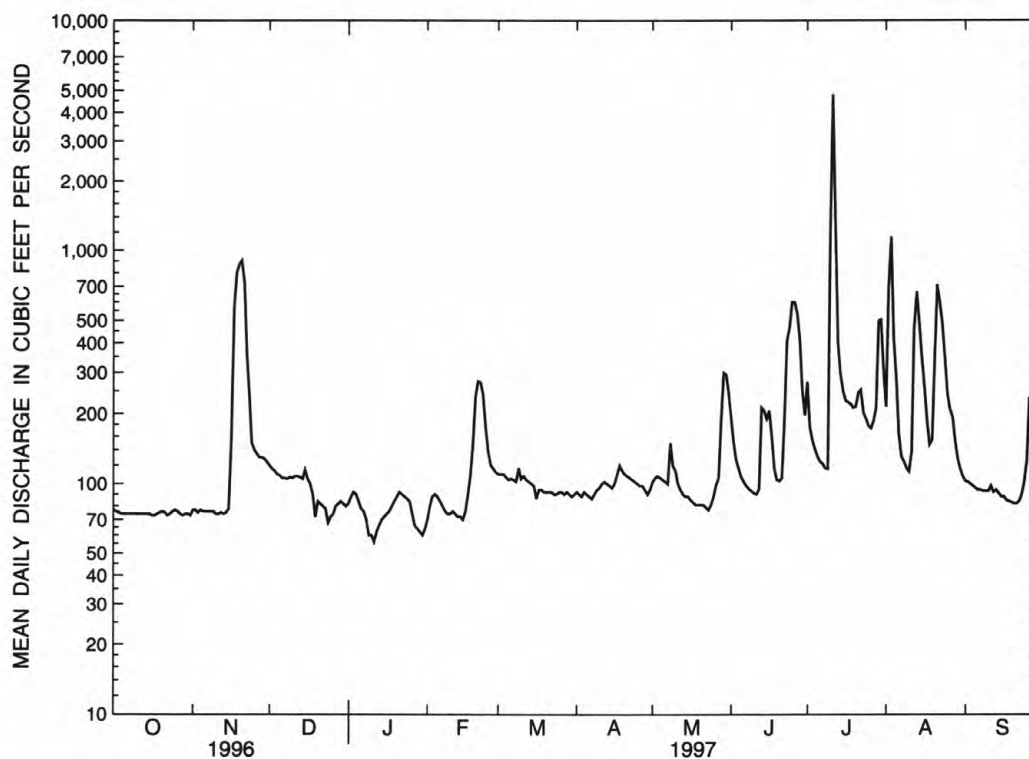
287

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	120	76.6	63.9	71.8	146	318	176	270	342	329	191	157
MAX	812	224	104	377	671	1762	887	1147	1749	1395	480	855
(WY)	1974	1997	1995	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 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1958 - 1997
ANNUAL TOTAL	72506	60560	
ANNUAL MEAN	198	166	188
HIGHEST ANNUAL MEAN			441
LOWEST ANNUAL MEAN			54.4
HIGHEST DAILY MEAN	3890 May 28	4790 Jul 11	11100 Mar 11 1993
LOWEST DAILY MEAN	34 Feb 4	56 Jan 11	12 Dec 31 1976
ANNUAL SEVEN-DAY MINIMUM	45 Jan 5	63 Jan 8	17 Jul 11 1976
INSTANTANEOUS PEAK FLOW (STAGE)		5880 Jul 11	12400 (21.71) Mar 11 1993
INSTANTANEOUS PEAK STAGE		19.42 Jul 11	22.62 Jul 1 1986
ANNUAL RUNOFF (AC-FT)	143800	120100	136400
10 PERCENT EXCEEDS	386	274	314
50 PERCENT EXCEEDS	88	99	81
90 PERCENT EXCEEDS	64	74	46



WEST FORK BIG BLUE RIVER NEAR DORCHESTER

KANSAS RIVER BASIN
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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	152	243	e145	208	e275	203	231	441	460	302	135
2	188	152	250	e150	223	270	204	244	336	578	232	133
3	185	155	227	e175	237	264	211	227	285	406	1140	138
4	180	172	225	e180	245	257	216	233	256	365	1510	140
5	174	157	200	e190	252	250	206	230	236	335	582	139
6	172	152	197	e185	256	241	189	215	226	285	316	139
7	175	155	199	e180	243	235	202	218	219	251	184	138
8	164	157	201	e195	238	231	209	397	211	236	139	142
9	159	159	203	e185	224	269	205	564	202	223	125	150
10	154	160	204	e170	224	364	222	330	197	663	121	144
11	156	160	204	e160	230	417	223	240	195	3590	139	145
12	156	161	207	e150	e225	290	217	220	194	6360	262	155
13	157	161	211	e155	228	264	208	213	199	1640	1150	146
14	154	164	237	e150	209	251	201	204	354	672	1180	148
15	153	185	218	e160	209	242	211	199	333	501	876	149
16	155	255	216	e170	212	230	249	195	286	412	632	145
17	148	625	200	e155	231	231	277	194	296	356	439	140
18	150	1240	e150	e170	349	227	284	192	256	322	333	137
19	150	1330	e145	e180	525	214	262	189	217	296	317	136
20	149	1230	e160	184	742	222	245	184	207	278	312	131
21	149	1160	e165	192	697	221	242	180	212	280	494	128
22	157	957	e150	201	514	219	222	178	199	294	717	132
23	149	603	e160	e210	e450	215	224	178	303	282	555	145
24	150	441	e165	e195	e400	214	217	176	435	228	467	173
25	151	e330	e170	e180	e350	210	221	176	1570	213	337	169
26	152	e300	e175	e165	e320	210	218	209	1880	190	255	200
27	153	e380	e180	e145	e285	212	211	288	1140	175	222	323
28	154	e340	e180	e130	e280	210	207	287	711	205	206	283
29	164	316	e185	e160	---	209	204	382	526	241	173	284
30	149	278	e180	e190	---	206	233	486	363	524	155	280
31	152	---	e165	204	---	205	---	482	---	455	142	---
TOTAL	4957	12187	5972	5361	8806	7575	6643	7941	12485	21316	14014	4947
MEAN	160	406	193	173	315	244	221	256	416	688	452	165
MAX	198	1330	250	210	742	417	284	564	1880	6360	1510	323
MIN	148	152	145	130	208	205	189	176	194	175	121	128
AC-FT	9830	24170	11850	10630	17470	15030	13180	15750	24760	42280	27800	9810

e Estimated

KANSAS RIVER BASIN

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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	242	149	124	138	313	720	403	551	907	676	346	326
MAX	1864	439	239	865	1576	3968	2257	2339	5808	4739	1048	2065
(WY)	1974	1974	1987	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

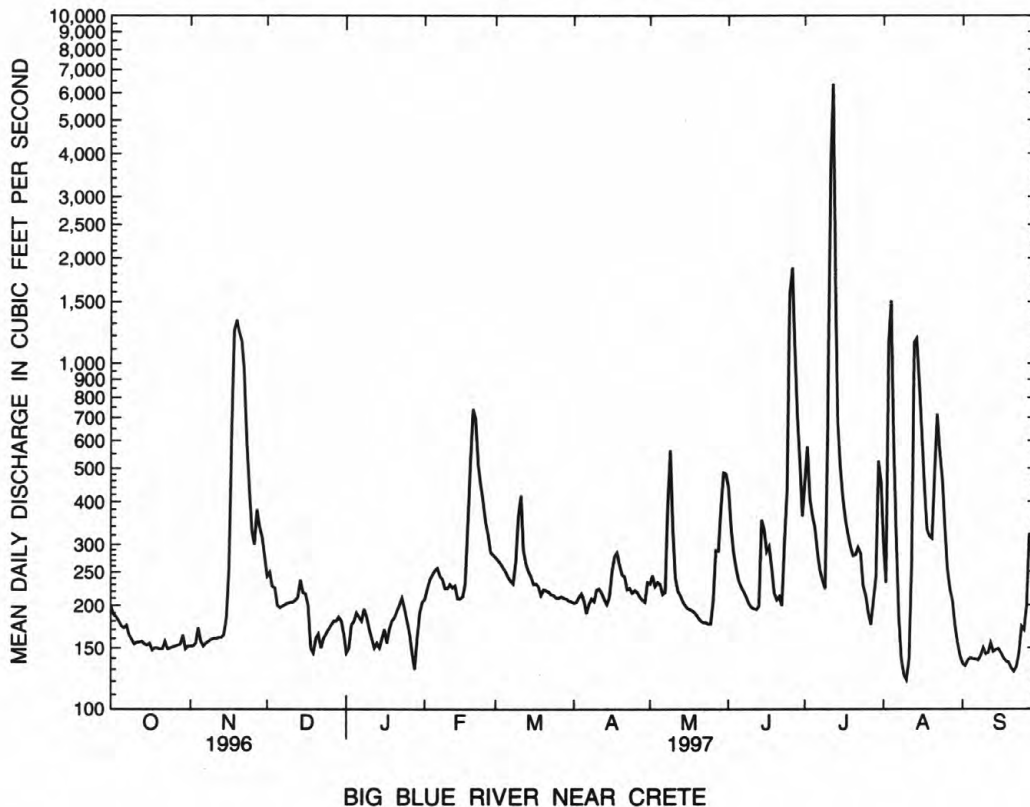
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1954 - 1997

ANNUAL TOTAL	176866	112204	
ANNUAL MEAN	483	307	408
HIGHEST ANNUAL MEAN			1030
LOWEST ANNUAL MEAN			96.6
HIGHEST DAILY MEAN	8890 May 29	6360 Jul 12	21400 Jun 19 1957
LOWEST DAILY MEAN	92 Feb 4	121 Aug 10	6.0 Aug 1 1980
ANNUAL SEVEN-DAY MINIMUM	105 Jan 31	136 Sep 16	11 Jul 12 1976
INSTANTANEOUS PEAK FLOW (STAGE)		7260 Jul 12	27600 (28.74) Jul 10 1950
INSTANTANEOUS PEAK STAGE		22.29 Jul 12	*29.86 Jul 3 1986
ANNUAL RUNOFF (AC-FT)	350800	222600	295800
10 PERCENT EXCEEDS	991	484	745
50 PERCENT EXCEEDS	202	211	151
90 PERCENT EXCEEDS	150	150	77

* From floodmark.



KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	250	852	e400	e470	1150	369	1460	980	1120	1050	266
2	298	241	713	e450	e460	1190	374	1270	882	951	769	252
3	274	241	642	e500	e450	882	387	1010	759	1010	563	231
4	269	258	595	e450	e430	735	412	788	643	896	577	210
5	260	263	563	e400	e400	643	441	658	569	704	1440	206
6	255	264	541	e370	e380	582	425	571	520	637	1100	211
7	639	259	517	e340	e360	562	392	548	475	568	668	214
8	722	255	489	e320	e340	536	381	608	447	506	443	209
9	401	252	474	e350	e370	579	374	572	427	455	334	196
10	328	249	477	e300	e400	667	410	849	413	2660	284	188
11	307	250	473	e270	e380	642	449	744	456	10100	258	191
12	295	251	474	e220	e350	1080	441	521	1210	4920	249	190
13	285	256	469	e230	e370	1010	505	451	1340	5070	274	194
14	277	258	e420	e220	e400	705	854	438	756	3540	621	199
15	270	275	e400	e240	e450	577	1960	413	747	1460	1230	203
16	e260	3020	e370	e250	e450	540	1730	399	1320	1020	1120	205
17	e250	10500	e320	e200	528	512	1290	394	740	765	959	198
18	e240	7180	e270	e220	620	486	1030	388	596	587	694	195
19	e230	5020	e280	e240	891	466	846	367	561	509	721	191
20	e220	3760	e300	e260	999	456	708	356	509	459	717	173
21	222	2540	e350	e270	1220	450	622	352	501	426	490	171
22	227	1990	e400	e370	1240	434	594	344	586	389	465	187
23	277	1640	e300	e450	1110	424	535	346	541	371	953	267
24	319	1200	e280	e420	1010	420	484	358	989	356	945	617
25	292	866	e300	e380	898	417	457	752	12300	331	738	557
26	e270	656	e310	e350	807	402	443	689	8660	280	645	380
27	e250	618	e320	e330	732	397	427	1650	5610	279	487	311
28	235	591	e350	e300	711	397	410	1630	3590	527	394	311
29	284	673	e360	e350	---	383	394	1380	2360	1110	348	403
30	291	946	e340	e400	---	381	517	1130	1530	1540	324	370
31	264	---	e370	e440	---	370	---	1040	---	1000	293	---
TOTAL	9341	45022	13319	10290	17226	18475	18661	22476	51017	44546	20153	7696
MEAN	301	1501	430	332	615	596	622	725	1701	1437	650	257
MAX	722	10500	852	500	1240	1190	1960	1650	12300	10100	1440	617
MIN	220	241	270	200	340	370	369	344	413	279	249	171
AC-FT	18530	89300	26420	20410	34170	36650	37010	44580	101200	88360	39970	15270

e Estimated

KANSAS RIVER BASIN

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06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	559	289	228	287	648	1393	850	1254	2065	1360	715	721
MAX	7451	1501	721	1596	2876	10560	5280	5207	10460	12270	5227	3420
(WY)	1974	1997	1987	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

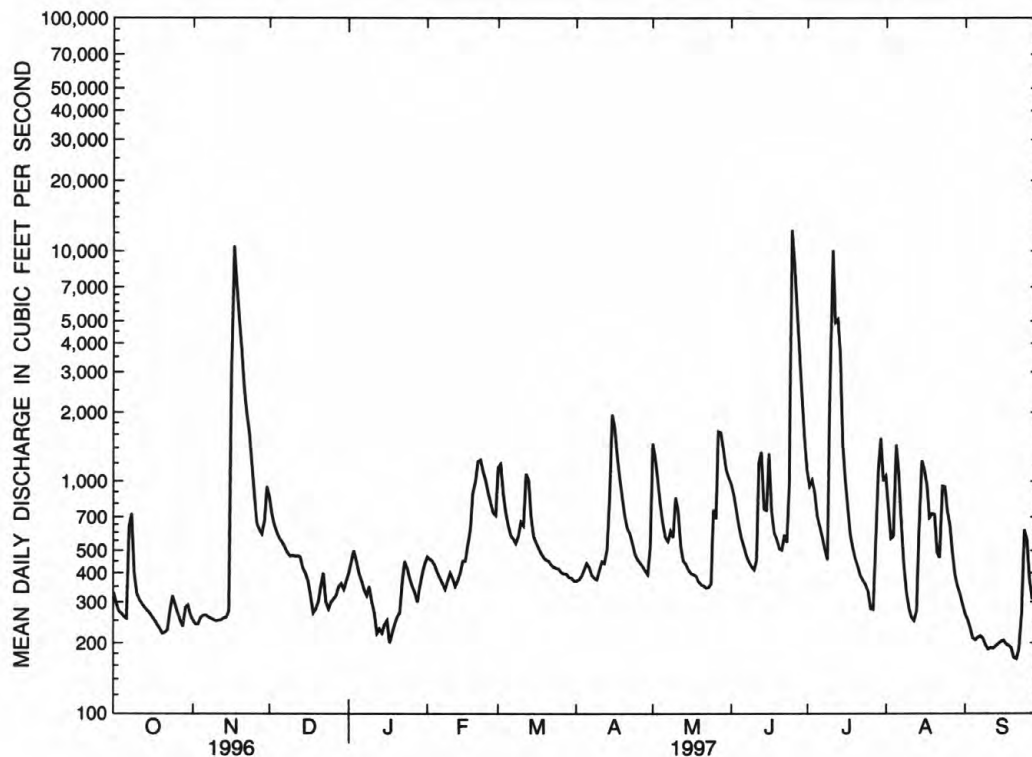
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1933 - 1997

ANNUAL TOTAL	389009	278222	
ANNUAL MEAN	1063	762	864
HIGHEST ANNUAL MEAN			2781
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	15500 May 27	12300 Jun 25	50000 Jun 9 1941
LOWEST DAILY MEAN	125 Feb 3	171 Sep 21	1.0 Nov 30 1945
ANNUAL SEVEN-DAY MINIMUM	156 Jan 30	189 Sep 16	15 Aug 3 1934
INSTANTANEOUS PEAK FLOW		15100 Jun 25	57700 Jun 9 1941
INSTANTANEOUS PEAK STAGE		19.29 Jun 25	34.30 Jun 9 1941
ANNUAL RUNOFF (AC-FT)	771600	551900	626200
10 PERCENT EXCEEDS	2240	1200	1770
50 PERCENT EXCEEDS	373	443	270
90 PERCENT EXCEEDS	230	249	101



BIG BLUE RIVER AT BARNESTON

KANSAS RIVER BASIN

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 (REVISED).--984 mi².

PERIOD OF RECORD.--February 1953 to September 1972, October 1974 to current year.

REVISED RECORDS.--WSP 1919: 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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	67	98	e80	e76	92	80	84	120	84	26	50
2	61	67	81	e82	78	90	84	89	115	75	24	48
3	58	68	86	e84	80	94	83	84	111	63	22	46
4	64	69	81	e80	81	92	85	83	111	60	20	45
5	67	69	83	76	78	85	86	86	131	56	17	46
6	70	69	87	81	79	84	80	84	169	51	17	49
7	71	68	80	84	82	85	76	89	119	48	19	53
8	68	67	80	79	81	87	75	86	105	239	16	52
9	67	68	79	77	80	91	73	83	100	344	13	52
10	65	69	79	e72	81	88	78	83	98	278	11	51
11	66	68	80	e70	82	88	81	84	98	140	19	52
12	69	68	79	e68	82	88	78	80	99	93	71	53
13	71	68	78	e64	85	90	79	80	97	76	37	55
14	71	69	79	e70	84	81	81	81	93	64	30	56
15	69	75	79	e72	84	79	85	79	94	53	34	58
16	70	682	78	e76	88	83	86	80	94	54	40	59
17	68	1410	e78	e78	96	85	84	83	93	52	40	58
18	65	638	e74	e82	106	83	82	86	94	50	32	60
19	66	400	e70	e90	101	82	83	82	93	48	324	60
20	69	255	e72	e88	100	85	84	77	95	44	207	57
21	67	197	e74	e80	100	88	83	76	101	39	268	58
22	66	165	e76	e72	91	84	82	78	91	35	587	62
23	66	154	e70	e68	90	83	81	82	86	34	303	81
24	66	150	e68	e66	88	84	80	96	157	31	134	386
25	70	142	e66	e66	86	83	77	106	297	30	93	562
26	72	133	e66	e62	91	82	77	186	197	30	71	419
27	69	123	e66	e60	90	84	79	360	118	29	60	261
28	67	110	e68	e64	88	85	81	441	102	49	56	168
29	72	98	e70	e70	---	82	84	280	98	40	55	125
30	69	99	e72	e72	---	82	94	167	90	29	52	98
31	66	---	e74	e74	---	80	---	132	---	24	50	---
TOTAL	2087	5785	2371	2307	2428	2649	2441	3667	3466	2342	2748	3280
MEAN	67.3	193	76.5	74.4	86.7	85.5	81.4	118	116	75.5	88.6	109
MAX	72	1410	98	90	106	94	94	441	297	344	587	562
MIN	58	67	66	60	76	79	73	76	86	24	11	45
AC-FT	4140	11470	4700	4580	4820	5250	4840	7270	6870	4650	5450	6510

e Estimated

KANSAS RIVER BASIN

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06883000 LITTLE BLUE RIVER NEAR DEWEESE, 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	82.1	66.3	63.4	68.2	95.2	195	131	258	267	256	154	137
MAX	347	193	102	207	245	1140	762	1348	1145	2655	883	911
(WY)	1966	1997	1986	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

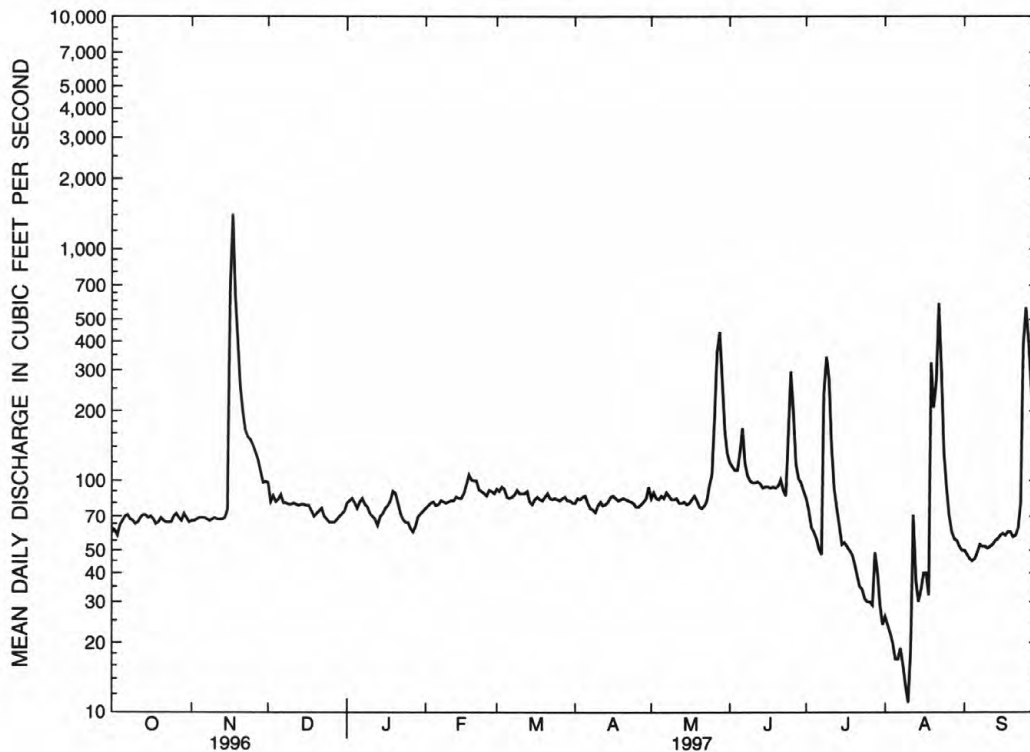
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1954 - 1997

ANNUAL TOTAL	49461	35571		
ANNUAL MEAN		135	97.5	148
MEDIAN OF ANNUAL MEANS			124	
HIGHEST ANNUAL MEAN			464	1993
LOWEST ANNUAL MEAN			64.0	1976
HIGHEST DAILY MEAN	2040	May 27	1410	Nov 17
LOWEST DAILY MEAN	36	Feb 3	11	Aug 10
ANNUAL SEVEN-DAY MINIMUM	40	Jan 29	16	Aug 5
INSTANTANEOUS PEAK FLOW			2130	Nov 17
INSTANTANEOUS PEAK STAGE			6.51	Nov 17
ANNUAL RUNOFF (AC-FT)	98110	70560	107300	
10 PERCENT EXCEEDS	276	131	195	
50 PERCENT EXCEEDS	77	80	70	
90 PERCENT EXCEEDS	48	50	43	



LITTLE BLUE RIVER NEAR DEWEESE

KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	130	e160	e130	150	189	175	345	335	343	255	153
2	131	129	e150	e130	165	189	181	297	299	289	229	147
3	131	129	e140	e135	172	198	189	267	258	242	218	141
4	129	132	e135	e130	171	199	199	241	238	226	188	134
5	129	133	e130	e130	174	195	195	227	213	208	167	132
6	130	131	e130	e135	173	193	189	215	199	244	158	129
7	143	129	e125	e140	166	190	185	211	190	236	153	127
8	141	127	e125	e145	175	188	181	206	218	e215	152	128
9	142	125	e120	e140	178	197	176	198	194	221	152	180
10	137	123	e120	e140	167	314	190	193	171	614	150	170
11	134	121	e118	e130	174	369	203	190	193	577	163	120
12	132	119	e118	e125	177	253	208	187	192	475	178	105
13	130	117	e118	e120	181	215	208	185	181	347	178	99
14	129	115	e116	e125	179	207	214	183	180	291	178	98
15	127	115	e114	e130	181	195	232	179	187	231	181	97
16	127	2160	e112	e130	176	189	240	178	177	194	165	96
17	127	9480	e108	e135	190	187	237	179	169	189	152	93
18	134	5740	e104	e140	230	188	238	179	166	e175	147	92
19	125	2450	e100	e145	246	177	225	173	163	e165	171	89
20	124	1330	e106	e150	225	180	216	170	160	e155	691	85
21	124	917	e110	e160	208	176	207	168	202	e155	634	84
22	125	696	e116	e150	195	173	204	168	189	e155	461	93
23	113	572	e120	e150	183	173	198	173	199	154	479	124
24	120	e300	e116	e140	178	174	193	306	3300	142	642	190
25	122	e210	e110	e140	169	175	186	269	12600	144	378	210
26	124	e190	e110	e140	181	174	182	290	6490	145	280	314
27	126	e170	e110	e140	182	175	183	507	1840	e175	231	425
28	125	e160	e114	e135	181	176	182	889	958	1470	207	335
29	139	e160	e120	e140	---	177	180	967	621	2460	184	266
30	132	e165	e120	e140	---	178	384	650	436	693	170	208
31	130	---	e125	145	---	177	---	448	---	351	160	---
TOTAL	4015	26575	3720	4265	5127	6140	6180	9038	30918	11681	7852	4664
MEAN	130	886	120	138	183	198	206	292	1031	377	253	155
MAX	143	9480	160	160	246	369	384	967	12600	2460	691	425
MIN	113	115	100	120	150	173	175	168	160	142	147	84
AC-FT	7960	52710	7380	8460	10170	12180	12260	17930	61330	23170	15570	9250

e Estimated

KANSAS RIVER BASIN

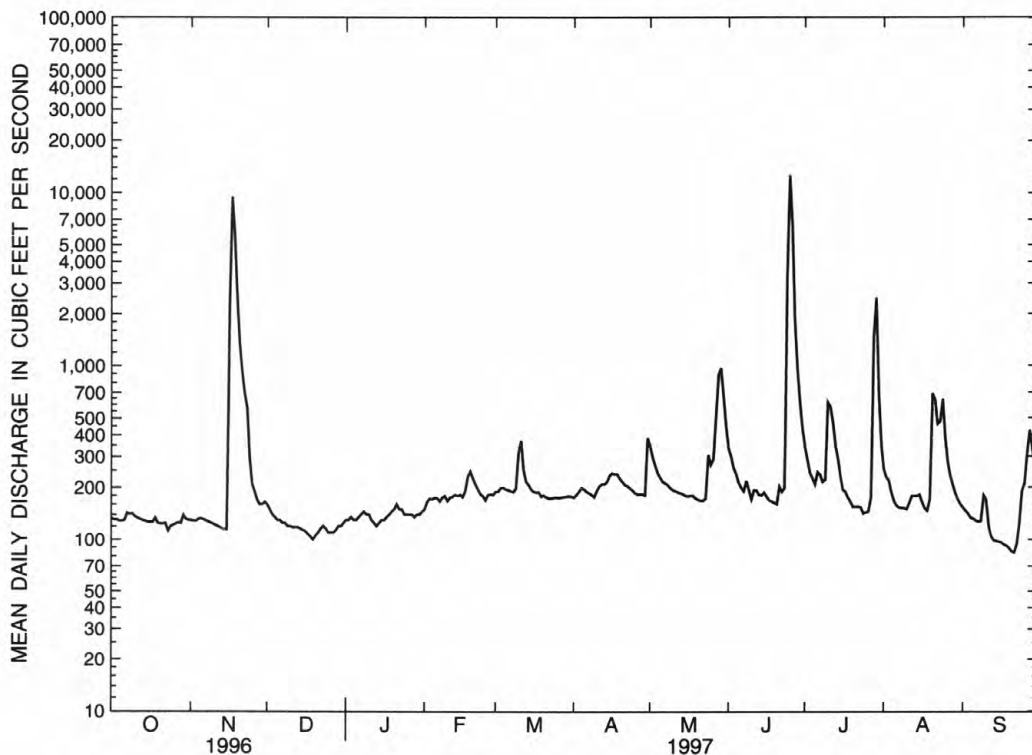
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06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	281	173	140	157	270	504	330	558	887	596	355	362
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1910 - 1997	
ANNUAL TOTAL	133512		120175			
ANNUAL MEAN	365		329		388	
HIGHEST ANNUAL MEAN					1239	
LOWEST ANNUAL MEAN					107	
HIGHEST DAILY MEAN	10700	May 27	12600	Jun 25	36400	Jul 26 1992
LOWEST DAILY MEAN	60	Feb 3	84	Sep 21	14	Nov 22 1929
ANNUAL SEVEN-DAY MINIMUM	75	Jan 30	90	Sep 16	24	Sep 14 1991
INSTANTANEOUS PEAK FLOW			14100	Jun 25	54000	Jul 25 1992
INSTANTANEOUS PEAK STAGE			18.35	Jun 25	24.33	Jul 25 1992
ANNUAL RUNOFF (AC-FT)	264800		238400		281100	
10 PERCENT EXCEEDS	493		349		584	
50 PERCENT EXCEEDS	160		175		160	
90 PERCENT EXCEEDS	105		120		91	



LITTLE BLUE RIVER NEAR FAIRBURY

KANSAS RIVER BASIN

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 1996 TO SEPTEMBER 1997
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	150	e180	e165	e200	353	181	563	373	566	330	156
2	143	148	e170	e170	e210	310	192	408	333	492	226	152
3	139	149	e165	e180	e230	302	205	359	310	441	229	149
4	139	156	e155	e170	e230	300	216	316	298	404	196	143
5	138	159	e150	e160	e250	284	212	294	294	378	166	135
6	136	157	e145	e170	e250	273	198	277	271	361	151	130
7	158	153	e145	e180	e240	268	190	271	257	342	145	133
8	175	150	e140	e190	e240	266	185	262	278	347	141	141
9	161	149	e140	e200	e250	298	183	253	272	306	144	150
10	150	151	e135	e190	e240	305	213	245	245	462	144	369
11	144	149	e135	e185	e230	506	237	238	347	481	154	181
12	141	150	e135	e170	e240	389	237	231	313	421	176	140
13	139	150	e135	e160	e250	326	265	230	258	339	186	125
14	139	155	e130	e165	e260	285	337	226	247	278	176	120
15	139	161	e130	e165	e270	263	368	218	243	235	192	116
16	139	2990	e130	e170	e270	253	338	217	278	213	175	114
17	e140	10400	e125	e170	e330	247	325	215	240	194	162	112
18	e145	7900	e120	e175	e290	240	309	214	226	181	152	110
19	e145	3410	e125	e180	425	236	292	204	225	171	177	105
20	e140	1820	e130	e180	481	233	275	198	220	166	552	100
21	139	1260	e135	e190	391	227	261	195	334	169	781	100
22	145	949	e145	e185	353	219	252	193	295	165	596	112
23	143	753	e135	e185	320	215	245	197	294	156	571	157
24	135	e400	e130	e180	296	214	238	249	2330	153	763	286
25	144	e250	e125	e180	281	206	226	373	13200	144	570	466
26	145	e220	e135	e175	298	199	217	294	8410	144	395	328
27	143	e200	e140	e170	298	199	216	450	2650	154	295	511
28	144	e185	e145	e180	313	192	215	779	1300	1080	228	444
29	163	e180	e150	e185	---	188	211	860	848	3050	191	357
30	157	e185	e150	e190	---	186	413	678	710	868	176	280
31	151	---	e160	e195	---	181	---	488	---	450	162	---
TOTAL	4507	33389	4370	5510	7936	8163	7452	10195	35899	13311	8702	5922
MEAN	145	1113	141	178	283	263	248	329	1197	429	281	197
MAX	175	10400	180	200	481	506	413	860	13200	3050	781	511
MIN	135	148	120	160	200	181	181	193	220	144	141	100
AC-FT	8940	66230	8670	10930	15740	16190	14780	20220	71210	26400	17260	11750

e Estimated

KANSAS RIVER BASIN

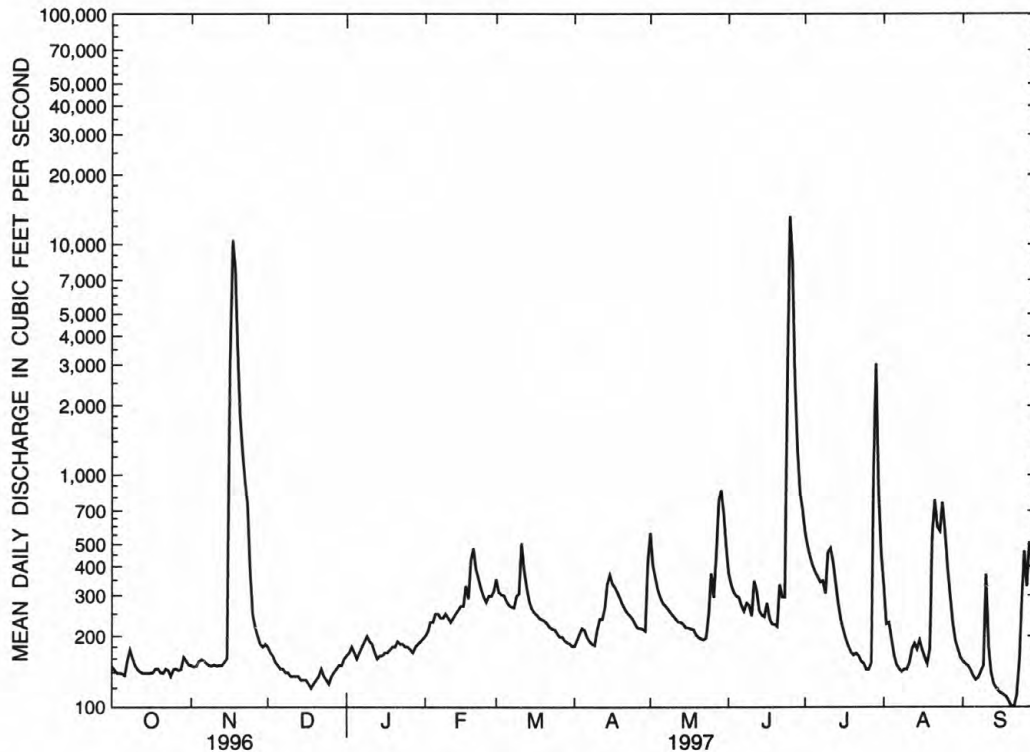
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06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	339	242	183	178	347	859	568	804	993	1131	565	409
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 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1975 - 1997	
ANNUAL TOTAL	163252		145356			
ANNUAL MEAN	446		398		553	
HIGHEST ANNUAL MEAN					1891	1993
LOWEST ANNUAL MEAN					195	1991
HIGHEST DAILY MEAN	10400	May 27	13200	Jun 25	39300	Jul 26 1992
LOWEST DAILY MEAN	82	Jan 8	100	Sep 20	26	Oct 1 1991
ANNUAL SEVEN-DAY MINIMUM	91	Jan 30	108	Sep 16	27	Sep 27 1991
INSTANTANEOUS PEAK FLOW			14400	Jun 25	47800	Jul 26 1992
INSTANTANEOUS PEAK STAGE			13.74	Jun 25	21.21	Jul 26 1992
ANNUAL RUNOFF (AC-FT)	323800		288300		400800	
10 PERCENT EXCEEDS	609		464		923	
50 PERCENT EXCEEDS	194		205		209	
90 PERCENT EXCEEDS	126		139		107	



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 1997

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Platte River basin						
Sheep Creek (06677995)	North Platte River	Lat 41° 58' 14", long 103° 57' 14", in SE1/4 SE1/2 sec.8, T.23 N., R.57 W., Scotts Bluff County, at county road bridge, 1.5 mi northwest of Morrill.	---	1996	10-07-96	91
					11-25-96	75
					12-30-96	70
					01-29-97	63
					02-26-97	63
					05-20-97	45
					06-18-97	56
					09-23-97	93
North Platte (06678500)	Platte River	Lat 41° 56' 12", long 103° 55' 44", in SW1/4 NW1/4 sec.27, T.23 N., R.57W., Scotts Bluff County, at highway bridge, 2 mi south of Morrill.	24,100	1917-23 1996-	10-07-96	704
					11-25-96	445
					12-30-96	410
					01-29-97	352
					02-26-97	320
					05-20-97	1630
Akers Draw (06678610)	North Platte River	Lat 41° 58' 33", long 103° 53' 29", in NW1/4 SW1/4 sec.12, T.23 N., R.57W., Scotts Bluff County, at county road bridge, 2 mi northeast of Morrill.	---	1949-64 1996	10-06-96	9.2
					11-25-96	10
					12-30-96	11
					02-26-97	8.7
					04-24-97	9.3
					05-21-97	9.7
					06-17-97	9.0
					09-22-97	12
*Dane Creek (06788495)	North Loup River	Lat 41° 36' 31", long 98° 56' 36", in NE1/4 NE1/4 sec.20, T.19 N., R.14 W. Valley County, at bridge on State Highway 11 at northwest edge of Ord.	---	1962 1977-96	11-04-96	1.5
					05-20-97	0.90
*Mira Creek (06788990)	North Loup River	Lat 41° 29 '54", long 98° 46' 46", in SE1/4 SW1/4 sec.26, T.18 N.,R.13 W., Valley County, at bridge on State Highway 11 at west edge of North Loup.	---	1977-96	11-04-96	2.5
					05-20-97	2.9

* Also published with additional data elsewhere in this report.

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 1997

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	06-25-97	10.23	8,360
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	1961-97		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	1961-97		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 ^a 1954-61 ^b 1962-77 ^a 1978-89 1991-97		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. Highway 77 at north edge of Beatrice.	74.7	1960-89, 1991-97	11-17-96	13.60	2,440

* 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

PLATTE RIVER BASIN

WAHOO CREEK BASIN

Discharge measurements were made during water year 1997 at numerous locations within the Wahoo Creek basin in Saunders County, Nebraska near the Nebraska Ordnance Plant (NOP) to determine ground-water/surface-water relationships.

<i>Location</i>	<i>Discharge in cubic feet per second on indicated dates</i>		
	<i>10-22-96</i>	<i>5-20-97</i>	<i>9-11-97</i>
Wahoo Creek at SW corner of NOP NW1/4 NW1/4 sec. 2, T.13 N., R.8 E.	36.6	39.6	26.0
Wahoo Cr below confluence with Silver Creek NE1/4 NW1/4 sec. 20, T.13 N., R.9 E.	53.6	54.8	35.4
Wahoo Creek at Ashland (Gage site 06804700) SE1/4 NE1/4 sec. 35, T.13 N., R.9 E.	50.3	57.5	36.9
Silver Creek near Ithaca SW 1/4 NW 1/2 sec. 35, T.14 N, R. 8 E.	7.9	7.7	4.7
Silver Creek near Ashland NW1/4 NE1/4 sec. 35, T.13 N., R.9 E.	0	e1.4	<1
Johnson Creek north of NOP SW1/4 SW1/4 sec. 5, T.14 N., R.9 E.	0.35	0.35	0.36
Johnson Creek below dam outlet SW1/4 SE1/4 sec. 16, T.14 N., R.9 E.	.36	.23	0.69
Johnson Creek near Memphis (1 mi above Clear Creek) (Gage site 06804900) NW1/4 NW1/4 4 sec. 35, T.14 N., R.9 E.	8.1	1.4	2.7
Clear Creek near Memphis NW1/4 NW1/4 sec. 14, T.13 N., R.9 E.	17.3	12.9	10.5
Clear Creek near Ashland NE 1/2 NE 1/4 sec. 35, T.13 N., R. 9 E.	12.3	12.1	10.7

e Estimated.

LOW-FLOW INVESTIGATIONS

301

KANSAS RIVER BASIN

Low-flow investigations made in the Big Blue and Little Blue River basins in Nebraska during water year 1997 to obtain data on ground-water/surface-water relationships.

BIG BLUE RIVER BASIN

Location

**Observation of zero flow
or measured discharge in
cubic feet per second
November 6, 1996**

Big Blue River 1.5 miles north of DeWitt in SW1/4 NE1/4 sec. 12, T.5 N., R.4 E. -----	175
Clatonia Creek 1 mile northeast of DeWitt in NW1/4 NW1/4 sec. 17, T.5 N., R.5 E. -----	1.7
Turkey Creek 1.5 miles west of DeWitt in SE1/4 NW1/4 sec. 15, T.5 N., R.4 E. -----	26.6
Turkey Creek 0.5 miles south of DeWitt in SE1/4 NW1/4 sec. 24, T.5 N., R.4 E. -----	28.0
Turkey Creek 1.5 miles southeast of DeWitt in NW1/4 SW1/4 sec. 29, T.5 N., R.5 E. -----	29.5
Big Blue River 2.5 miles southeast of DeWitt in NW1/4 NE1/4 sec. 33, T.5 N., R.5 E. -----	215
Soap Creek 3.5 miles southeast of DeWitt in SE1/4 SW1/4 sec. 27, T.5 N., R.5 E. -----	0.45
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. -----	.09
Big Blue River 1 mile east of Hoag in NE1/4 NW1/4 sec. 13, T.4 N., R.5 E. -----	213
Cub Creek 2 miles south of Hoag in SW1/4 SW1/4 sec. 24, T.4 N., R.5 E. -----	3.0
Bottle Creek 1.5 miles northwest of Beatrice in NW1/4 SW1/4 sec. 30, T.4 N., R.6 E. -----	.39
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. -----	.56
Indian Creek at Beatrice in SE1/4 SE1/4 sec. 28, T.4 N., R.6 E. -----	3.8
Big Blue River at Beatrice in SW1/4 NW1/4 sec. 3, T.3 N., R.6 E. (Gage) -----	228

LITTLE BLUE RIVER BASIN

November 5, 1996

Little Blue River 2.7 miles south of Alexandria in SE1/4 SE1/4 sec. 23, T.3 N., R.1 W. -----	96.9
Big Sandy Creek 0.8 miles south of Alexandria in SE1/4 SE1/4 sec. 11, T.3 N., R.1 W. -----	23.1
Big Sandy Creek 1.2 miles west of Powell in SE1/4 SE1/4 sec. 16, T.3 N., R.1 E. -----	28.4
Little Blue River 1.2 miles southwest of Powell in SE1/4 SE1/4 sec. 22, T.3 N., R.1 E. -----	126
Little Sandy Creek 2.0 miles east of Powell in NW1/4 NE1/4 sec. 19, T.3 N., R.2 E. -----	1.8
Whiskey Creek 2.1 miles northwest of Fairbury in SW1/4 SE1/4 sec. 33, T.3 N., R.2 E. -----	.46
Little Blue River 1.3 miles northwest of Fairbury in NW1/4 NE1/4 sec. 9, T.2 N., R.2 E. -----	130
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) -----	133
Brawner Creek 0.4 miles southeast of Fairbury in SE1/4 NE1/4 sec. 23, T.2 N., R.2 E. -----	.07
Rose Creek 4.0 miles southwest of Endicott in NW1/4 NW1/4 sec. 12, T.1 N., R.2 E. -----	10.8
Smith Creek 0.2 miles northwest of Endicott in NW1/4 SE1/4 sec. 5, T.1 N., R.3 E. -----	.17
Little Blue River 0.3 miles south of Endicott in SE1/4 SW1/4 sec. 4, T.1 N., R.3 E. -----	146
Rock Creek 0.3 miles southeast of Endicott in SE1/4 SE1/4 sec. 4, T.1 N., R.3 E. -----	.85
Coon Creek 2.6 miles northwest of Steele City in NW1/4 NE1/4 sec. 15, T.1 N., R.3 E. -----	.46
Little Blue River 0.5 miles south of Steele City in NW1/4 NW1/4 sec. 30, T.1 N., R.4 E. -----	161
Little Blue River 0.6 miles west of Hollenberg in NE1/4 SW1/4 sec. 8, T.1 S., R.4 E. (Gage) -----	161

302 ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

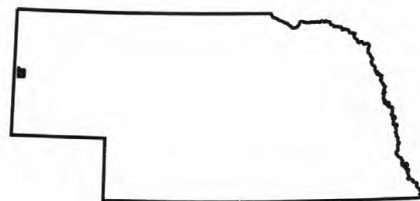
WATER DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)	ALKA- LITY LAB (MG/L AS CaCO ₃) (90410)			
06788495 DANE C AT ORD, NEBR. (LAT 41 36 31N LONG 098 56 36W)												
NOV	4...0900	1.5	1000	8.0	7.5	7.0	22	470	417			
MAY	20...0835	0.90	931	8.3	9.0	12.5	20	430	401			
06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)												
NOV	4...1100	2.5	838	8.2	16.0	7.5	12	380	396			
MAY	20...1040	2.9	749	8.2	17.0	13.0	25	330	343			
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)	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)
06788495 DANE C AT ORD, NEBR. (LAT 41 36 31N LONG 098 56 36W)												
NOV	4	654	2.60	0.89	140	29	26	0.5	20	120	14	0.30
MAY	20	611	1.48	0.83	130	28	27	0.6	21	98	15	0.28
06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)												
NOV	4	536	3.65	0.73	110	26	29	0.6	15	63	11	0.30
MAY	20	483	3.81	0.66	93	25	27	0.6	19	64	12	0.26
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	4	41	2.7	0.09	2.8	0.14	0.35	0.36	87	15	280	
MAY	20	37	3.1	0.11	3.2	0.17	0.77	0.68	88	3.5	740	
06788990 MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54N LONG 098 46 46W)												
NOV	4	39	0.74	0.03	0.77	0.07	0.40	0.42	102	9.0	770	
MAY	20	34	0.26	0.04	0.31	0.20	0.67	0.60	96	3.7	1060	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

**DUTCH FLATS GROUND-WATER/SURFACE-WATER
INTERACTION STUDY
(Surface-water Sites)**

COUNTIES: Scotts Bluff, Sioux



STATION NUMBER	STATION NAME	LATITUDE	LONGITUDE	DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)
SCOTTS BLUFF COUNTY							
06674500	N PLATTE R AT WYO-NEBR STATE LINE	41 59 25 N	104 02 57 W	10-07-96	1045	4020	450
				11-25-96	0830	4020	294
				11-25-96	0840	4020	--
				12-30-96	0900	4020	254
				01-29-97	0830	4020	254
				02-26-97	0830	4020	231
				04-23-97	1400	4020	3410
				05-20-97	0900	4020	1990
				06-17-97	1300	4020	5290
				07-15-97	0930	4020	1880
				08-26-97	0900	4020	1030
				09-23-97	0830	4020	890
				05-20-97	1430	--	--
				07-15-97	1130	--	--
				08-26-97	1000	--	--
				09-22-97	1600	--	--
06675100	TRI-STATE CANAL 2 MI W OF MORRILL, NE	41 58 08 N	103 58 04 W	05-20-97	1430	--	--
				07-15-97	1130	--	--
				08-26-97	1000	--	--
				09-22-97	1600	--	--
				01-29-97	1130	4008	62.8
				02-26-97	1130	4008	63.4
				02-26-97	1400	4008	9.50
				04-23-97	1130	4008	61.1
				05-20-97	1300	4008	--
				06-18-97	0830	4008	56
06677995	SHEEP CR, N OF TRI-STATE CANAL	41 58 14 N	103 57 14 W	07-15-97	1400	4008	68.9
				08-26-97	1300	4008	7.23
				09-23-97	1100	4008	93.2
				10-07-96	1330	--	704
				11-25-96	1000	--	--
				12-30-96	0930	--	--
				01-29-97	0930	--	352
				02-26-97	0930	--	320
				04-23-97	1530	--	3490
				05-20-97	1030	--	--
06678500	NORTH PLATTE RIVER AT MORRILL, NE	41 56 12 N	103 55 44 W	06-17-97	1445	--	5450
				07-16-97	1130	--	658
				08-27-97	1000	--	265
				09-23-97	1000	--	1200
				10-07-96	1630	--	9.20
				11-25-96	1300	--	--
				12-30-96	1130	--	--
				01-29-97	1300	--	9.60
				02-26-97	1600	--	8.79
				02-26-97	1605	--	8.79
06678610	AKERS DRAW NEAR MORRILL, NE	41 58 33 N	103 53 29 W	04-24-97	0900	--	9.27
				05-21-97	0800	--	--
				05-21-97	0805	--	--
				06-17-97	1530	--	--
				07-16-97	0830	--	12.3
				08-26-97	1630	--	12.1
				09-22-97	1400	--	12.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Surface-water Sites)

DATE	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	ALKA- LINITY LAB (MG/L AS CaCO ₃) (90410)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)
SCOTTS BLUFF COUNTY											
10-07-96	2.62	846	7.8	15.0	13.0	300	236	746	0.84	603	614
11-25-96	2.38	686	8.2	-3.0	5.0	--	--	--	--	--	--
11-25-96	--	--	--	--	--	290	--	--	--	--	--
12-30-96	2.31	1010	8.4	9.0	6.5	290	--	--	--	--	--
01-29-97	2.28	827	8.1	-0.5	1.5	320	--	--	--	--	--
02-26-97	--	988	8.5	-3.0	6.0	290	--	--	--	--	--
04-23-97	4.59	710	7.8	15.0	13.0	250	--	--	--	--	--
05-20-97	3.84	667	8.5	--	14.0	240	--	--	--	--	--
06-17-97	5.54	580	8.4	23.0	18.5	--	--	--	--	--	--
07-15-97	3.79	575	8.2	22.5	20.0	210	--	--	--	--	--
08-26-97	--	640	8.7	22.5	21.0	210	--	--	--	--	--
09-23-97	3.1	670	8.1	9.5	12.0	230	--	--	--	--	--
05-20-97	--	682	8.5	20.0	17.0	230	--	--	--	--	--
07-15-97	--	525	8.1	23.0	20.5	210	--	--	--	--	--
08-26-97	--	645	8.7	26.5	21.5	220	--	--	--	--	--
09-22-97	--	757	7.7	12.0	13.0	260	--	--	--	--	--
01-29-97	--	856	8.1	4.0	8.5	310	--	--	--	--	--
02-26-97	--	862	8.4	1.5	8.0	320	--	--	--	--	--
02-26-97	--	837	8.4	2.0	10.5	300	--	--	--	--	--
04-23-97	--	850	7.5	13.0	12.0	300	--	--	--	--	--
05-20-97	--	860	8.5	20.0	18.0	300	--	--	--	--	--
06-18-97	--	830	8.2	20.0	14.5	350	--	--	--	--	--
07-15-97	--	774	8.5	35.0	21.0	310	--	--	--	--	--
08-26-97	--	861	7.9	30.0	19.0	290	--	--	--	--	--
09-23-97	--	864	8.1	12.0	12.0	300	--	--	--	--	--
10-07-96	--	900	7.8	17.0	14.5	270	254	1270	0.91	645	668
11-25-96	--	792	8.3	1.0	4.5	270	--	--	--	--	--
12-30-96	--	820	8.4	9.0	6.5	280	--	--	--	--	--
01-29-97	--	994	7.5	-3.0	5.0	280	--	--	--	--	--
02-26-97	--	1000	8.5	-2.0	5.5	280	--	--	--	--	--
04-23-97	--	735	8.0	15.0	13.0	250	--	--	--	--	--
05-20-97	--	693	8.4	19.0	15.0	230	--	--	--	--	--
06-17-97	--	600	8.5	26.0	19.5	220	--	--	--	--	--
07-16-97	--	570	8.6	31.5	22.5	220	--	--	--	--	--
08-27-97	--	944	8.0	23.0	18.5	230	--	--	--	--	--
09-23-97	--	750	7.4	12.0	10.0	220	--	--	--	--	--
10-07-96	1.46	950	7.7	16.5	14.5	380	238	17.5	0.96	699	705
11-25-96	1.52	984	8.5	4.0	11.5	380	--	--	--	--	--
12-30-96	--	1030	8.0	12.0	12.0	350	--	--	--	--	--
01-29-97	1.38	980	7.9	8.0	13.0	380	--	--	--	--	--
02-26-97	--	997	7.8	-2.0	10.5	350	--	--	--	--	--
02-26-97	--	997	7.8	-2.0	10.5	370	--	--	--	--	--
04-24-97	1.43	970	8.2	5.5	10.5	370	--	--	--	--	--
05-21-97	--	992	8.0	15.0	12.5	380	--	--	--	--	--
05-21-97	--	992	8.0	15.0	12.5	390	--	--	--	--	--
06-17-97	--	--	8.0	--	--	--	--	--	--	--	--
07-16-97	--	930	7.8	23.5	13.5	390	--	--	--	--	--
08-26-97	--	977	7.5	25.5	16.5	360	--	--	--	--	--
09-22-97	1.5	987	7.6	13.0	12.0	380	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Surface-water Sites)

DATE	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)	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)
SCOTTS BLUFF COUNTY										
10-07-96	83	23	86	38	2	7.1	210	19	0.50	23
11-25-96	--	--	--	--	--	--	--	--	--	--
11-25-96	80	22	96	--	2	--	220	19	--	--
12-30-96	83	21	95	--	2	--	230	20	--	--
01-29-97	90	22	96	--	2	--	220	20	--	--
02-26-97	82	20	90	--	2	--	230	20	--	--
04-23-97	63	22	56	--	2	--	200	13	--	--
05-20-97	63	19	49	--	1	--	170	12	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	56	16	41	--	1	--	130	8.9	--	--
08-26-97	57	17	48	--	1	--	140	11	--	--
09-23-97	63	18	54	--	2	--	170	12	--	--
05-20-97	62	19	49	--	1	--	170	12	--	--
07-15-97	56	16	40	--	1	--	130	8.9	--	--
08-26-97	58	17	49	--	1	--	140	11	--	--
09-22-97	71	19	64	--	2	--	190	15	--	--
01-29-97	88	22	62	--	2	--	200	15	--	--
02-26-97	92	21	61	--	1	--	200	14	--	--
02-26-97	89	20	52	--	1	--	200	14	--	--
04-23-97	83	22	61	--	2	--	200	14	--	--
05-20-97	86	21	58	--	1	--	200	14	--	--
06-18-97	100	22	62	--	1	--	190	15	--	--
07-15-97	88	22	62	--	2	--	200	14	--	--
08-26-97	80	22	64	--	2	--	200	14	--	--
09-23-97	86	20	65	--	2	--	220	16	--	--
10-07-96	76	20	98	43	3	8.5	230	20	0.50	28
11-25-96	77	20	100	--	3	--	230	20	--	--
12-30-96	79	20	100	--	3	--	230	21	--	--
01-29-97	78	21	100	--	3	--	230	20	--	--
02-26-97	79	20	100	--	3	--	230	20	--	--
04-23-97	64	22	59	--	2	--	200	14	--	--
05-20-97	60	19	53	--	2	--	170	13	--	--
06-17-97	60	17	44	--	1	--	140	11	--	--
07-16-97	61	17	60	--	2	--	150	11	--	--
08-27-97	61	18	110	--	3	--	210	18	--	--
09-23-97	60	17	75	--	2	--	180	14	--	--
10-07-96	110	26	63	25	1	16	230	20	0.50	46
11-25-96	110	25	60	--	1	--	230	18	--	--
12-30-96	100	25	59	--	1	--	230	18	--	--
01-29-97	110	26	61	--	1	--	230	18	--	--
02-26-97	100	24	58	--	1	--	230	18	--	--
02-26-97	110	24	60	--	1	--	230	18	--	--
04-24-97	100	25	60	--	1	--	230	19	--	--
05-21-97	110	25	58	--	1	--	230	18	--	--
05-21-97	120	25	57	--	1	--	230	18	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-16-97	110	25	59	--	1	--	220	18	--	--
08-26-97	100	25	59	--	1	--	220	18	--	--
09-22-97	110	25	61	--	1	--	250	19	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Surface-water Sites)

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO ₂) (71856)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO ₃) (71851)	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)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA+ ORGANIC DIS. (MG/L AS N) (00623)
SCOTTS BLUFF COUNTY										
10-07-96	0.02	0.07	2.18	9.6	2.2	0.040	0.05	0.26	--	0.30
11-25-96	0.04	0.13	2.36	10	2.4	--	--	--	--	--
11-25-96	--	--	--	--	--	--	--	--	--	--
12-30-96	0.04	0.13	2.56	11	2.6	--	--	--	--	--
01-29-97	--	--	--	--	--	--	--	--	--	--
02-26-97	0.04	0.13	2.46	11	2.5	--	--	--	--	--
04-23-97	<0.01	--	--	--	0.20	--	--	--	--	--
05-20-97	<0.01	--	--	--	0.21	--	--	--	--	--
06-17-97	<0.01	--	--	--	0.11	--	--	--	--	--
07-15-97	<0.01	--	--	--	0.40	--	--	--	--	--
08-26-97	0.01	0.03	0.518	2.3	0.53	--	--	--	--	--
09-23-97	<0.01	--	--	--	0.61	--	--	--	--	--
05-20-97	<0.01	--	--	--	0.23	--	--	--	--	--
07-15-97	<0.01	--	--	--	0.41	--	--	--	--	--
08-26-97	0.01	0.03	0.599	2.7	0.61	--	--	--	--	--
09-22-97	<0.01	--	--	--	1.1	--	--	--	--	--
01-29-97	0.03	0.10	4.47	20	4.5	--	--	--	--	--
02-26-97	0.02	0.07	4.78	21	4.8	--	--	--	--	--
02-26-97	0.04	0.13	3.56	16	3.6	--	--	--	--	--
04-23-97	<0.01	--	--	--	7.6	--	--	--	--	--
05-20-97	0.03	0.09	4.23	19	4.3	--	--	--	--	--
06-18-97	0.02	0.08	4.16	18	4.2	--	--	--	--	--
07-15-97	0.02	0.08	4.11	18	4.1	--	--	--	--	--
08-26-97	0.04	0.13	4.49	20	4.5	--	--	--	--	--
09-23-97	0.01	0.04	4.19	19	4.2	--	--	--	--	--
10-07-96	0.02	0.07	2.58	11	2.6	<0.015	--	--	--	0.20
11-25-96	0.05	0.16	2.75	12	2.8	--	--	--	--	--
12-30-96	0.03	0.10	2.87	13	2.9	--	--	--	--	--
01-29-97	0.03	0.10	2.87	13	2.9	--	--	--	--	--
02-26-97	0.03	0.10	2.97	13	3.0	--	--	--	--	--
04-23-97	<0.01	--	--	--	0.26	--	--	--	--	--
05-20-97	<0.01	--	--	--	0.38	--	--	--	--	--
06-17-97	<0.01	--	--	--	0.11	--	--	--	--	--
07-16-97	0.01	0.03	0.763	3.4	0.77	--	--	--	--	--
08-27-97	0.02	0.07	1.75	7.8	1.8	--	--	--	--	--
09-23-97	<0.01	--	--	--	1.0	--	--	--	--	--
10-07-96	0.03	0.10	9.97	44	10	0.040	0.05	0.26	--	0.30
11-25-96	0.05	0.16	11.0	48	11	--	--	--	--	--
12-30-96	0.03	0.10	9.97	44	10	--	--	--	--	--
01-29-97	0.02	0.07	9.48	42	9.5	--	--	--	--	--
02-26-97	0.02	0.07	11.0	49	11	--	--	--	--	--
02-26-97	0.02	0.07	11.0	49	11	--	--	--	--	--
04-24-97	0.01	0.04	9.85	44	9.86	--	--	--	--	--
05-21-97	0.02	0.06	9.58	42	9.6	--	--	--	--	--
05-21-97	0.02	0.06	9.19	41	9.2	--	--	--	--	--
06-17-97	0.02	0.07	9.20	41	9.2	--	--	--	--	--
07-16-97	0.05	0.15	9.51	42	9.6	--	--	--	--	--
08-26-97	0.04	0.12	9.56	42	9.6	--	--	--	--	--
09-22-97	0.02	0.08	10.2	45	10	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Surface-water Sites)

STATION NUMBER	STATION NAME	LATITUDE	LONGITUDE	DATE	TIME	ELEV.	DIS-
						OF LAND	CHARGE,
						SURFACE	INST.
						DATUM	CUBIC
						(FT.	FEET
						ABOVE	PER
						NGVD)	SECOND
						(72000)	(00061)
SCOTTS BLUFF COUNTY							
415830103551701	WETLAND 0.75 MI NORTH OF MORRILL, NE	41 58 30 N	103 55 17 W	10-08-96	0800	3980	--
				11-25-96	1400	3980	--
				12-30-96	1300	3980	--
				02-26-97	1730	3980	--
				04-24-97	1000	3980	--
				05-20-97	1830	3980	--
				06-18-97	1100	3980	--
				07-15-97	1630	3980	--
				08-26-97	1500	3980	--
				09-22-97	1500	3980	--
SIOUX COUNTY							
06656630	INTERSTATE C 6 MI NW OF MORRILL, NE	42 03 26 N	103 57 06 W	05-20-97	1730	--	--
				07-08-97	1050	--	--
				07-15-97	1230	--	--
				07-21-97	1140	--	--
				08-04-97	1130	--	--
				08-26-97	1100	--	--
				09-08-97	1145	--	--
				09-23-97	1330	--	--
06677985	DRY SHEEP CR NR MORRILL, NE	42 00 58 N	103 58 23 W	04-23-97	1700	4060	8.45
				05-20-97	1600	4060	--
				06-18-97	1000	4060	6.0
				07-15-97	1530	4060	6.08
				08-26-97	1200	4060	--
				09-23-97	1230	4060	11.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Surface-water Sites)

DATE	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	ALKA- LINITY LAB (MG/L AS CaCO ₃) (90410)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 °C DIS- SOLVED (MG/L) (70300)
SCOTTS BLUFF COUNTY											
10-08-96	--	940	7.1	5.0	6.5	220	266	--	0.93	671	684
11-25-96	--	949	8.5	2.0	7.0	360	--	--	--	--	--
12-30-96	--	877	8.1	10.0	7.5	270	--	--	--	--	--
02-26-97	--	1090	8.0	-2.0	4.5	360	--	--	--	--	--
04-24-97	--	1030	8.8	4.0	7.0	290	--	--	--	--	--
05-20-97	--	1110	8.8	15.5	20.5	300	--	--	--	--	--
06-18-97	--	830	9.4	23.0	21.0	170	--	--	--	--	--
07-15-97	--	1140	8.4	34.0	35.0	210	--	--	--	--	--
08-26-97	--	994	9.4	29.0	28.5	220	--	--	--	--	--
09-22-97	--	1170	7.4	12.0	13.5	300	--	--	--	--	--
SIOUX COUNTY											
05-20-97	--	634	8.8	16.0	16.5	220	--	--	--	--	--
07-08-97	--	444	8.2	--	--	190	--	--	--	--	--
07-15-97	--	465	8.0	30.0	21.0	190	--	--	--	--	--
07-21-97	--	427	7.9	--	21.0	180	--	--	--	--	--
08-04-97	--	429	8.2	--	23.0	180	--	--	--	--	--
08-26-97	--	510	8.0	27.5	22.5	180	--	--	--	--	--
09-08-97	--	457	8.1	--	20.5	190	--	--	--	--	--
09-23-97	--	560	7.9	10.5	14.0	200	--	--	--	--	--
04-23-97	--	783	8.2	15.0	16.0	280	--	--	--	--	--
05-20-97	--	846	8.5	18.0	20.0	300	--	--	--	--	--
06-18-97	--	805	8.4	22.0	17.0	320	--	--	--	--	--
07-15-97	--	795	8.5	35.0	25.0	290	--	--	--	--	--
08-26-97	--	830	7.8	27.5	19.5	300	--	--	--	--	--
09-23-97	--	840	8.0	12.0	12.5	320	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Surface-water Sites)

DATE	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)	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)
SCOTTS BLUFF COUNTY										
10-08-96	59	18	130	54	4	12	230	19	0.50	41
11-25-96	89	34	100	--	2	--	300	21	--	--
12-30-96	73	21	70	--	2	--	180	15	--	--
02-26-97	98	29	89	--	2	--	240	19	--	--
04-24-97	59	34	110	--	3	--	330	23	--	--
05-20-97	64	33	110	--	3	--	360	23	--	--
06-18-97	29	23	110	--	4	--	250	20	--	--
07-15-97	52	20	120	--	3	--	260	17	--	--
08-26-97	40	30	120	--	3	--	270	22	--	--
09-22-97	71	29	140	--	4	--	300	26	--	--
SIOUX COUNTY										
05-20-97	58	18	43	--	1	--	160	11	--	--
07-08-97	50	15	34	--	1	--	120	7.7	--	--
07-15-97	50	15	32	--	1	--	110	7.1	--	--
07-21-97	48	15	31	--	1	--	110	7.0	--	--
08-04-97	47	15	30	--	1	--	110	7.1	--	--
08-26-97	48	15	33	--	1	--	110	7.7	--	--
09-08-97	50	16	34	--	1	--	120	8.0	--	--
09-23-97	55	17	38	--	1	--	140	9.1	--	--
04-23-97	77	22	56	--	1	--	210	14	--	--
05-20-97	88	21	51	--	1	--	200	14	--	--
06-18-97	91	22	55	--	1	--	190	14	--	--
07-15-97	83	21	54	--	1	--	200	14	--	--
08-26-97	85	21	54	--	1	--	200	14	--	--
09-23-97	91	21	56	--	1	--	220	16	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Surface-water Sites)

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO ₂) (71856)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO ₃) (71851)	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)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA+ ORGANIC DIS. (MG/L AS N) (00623)
SCOTTS BLUFF COUNTY										
10-08-96	0.04	0.13	0.230	1.0	0.27	0.110	0.14	0.29	--	0.40
11-25-96	0.09	0.30	3.01	13	3.1	--	--	--	--	--
12-30-96	0.17	0.56	1.93	8.5	2.1	--	--	--	--	--
02-26-97	0.08	0.26	2.02	8.9	2.1	--	--	--	--	--
04-24-97	0.02	0.06	0.319	1.4	0.34	--	--	--	--	--
05-20-97	<0.01	--	--	--	0.05	--	--	--	--	--
06-18-97	<0.01	--	--	--	0.55	--	--	--	--	--
07-15-97	<0.01	--	--	--	0.06	--	--	--	--	--
08-26-97	0.01	0.03	0.045	0.20	0.05	--	--	--	--	--
09-22-97	0.05	0.15	0.225	1.0	0.27	--	--	--	--	--
SIOUX COUNTY										
05-20-97	<0.01	--	--	--	<0.05	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-15-97	<0.01	--	--	--	0.09	--	--	--	--	--
07-21-97	--	--	--	--	0.15	--	--	--	--	--
08-04-97	--	--	--	--	0.06	--	--	--	--	--
08-26-97	<0.01	--	--	--	0.06	--	--	--	--	--
09-08-97	--	--	--	--	<0.05	--	--	--	--	--
09-23-97	<0.01	--	--	--	<0.05	--	--	--	--	--
04-23-97	0.05	0.16	2.60	11	2.6	--	--	--	--	--
05-20-97	0.04	0.14	2.40	11	2.4	--	--	--	--	--
06-18-97	0.04	0.13	2.51	11	2.5	--	--	--	--	--
07-15-97	0.05	0.16	2.30	10	2.4	--	--	--	--	--
08-26-97	0.02	0.08	2.50	11	2.5	--	--	--	--	--
09-23-97	0.01	0.04	2.95	13	3.0	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Surface-water Sites)

[illegible]**SIoux COUNTY**[illegible]

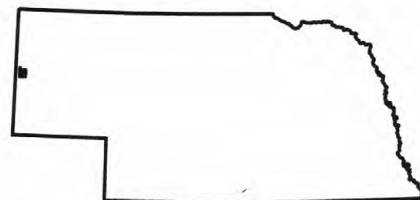
ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

**DUTCH FLATS GROUND-WATER/SURFACE-WATER
INTERACTION STUDY
(Ground-water Sites)**

COUNTY: Scotts Bluff, Sioux



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SCOTTS BLUFF COUNTY						
415907103555301	23N 57W 9AAAA1	41 59 07 N	103 55 53 W	02-26-97	1605	112SDGV
				03-26-97	1110	112SDGV
				04-22-97	1230	112SDGV
				05-19-97	1545	112SDGV
				06-16-97	1555	112SDGV
				07-15-97	0905	112SDGV
				08-26-97	1445	112SDGV
				09-22-97	0855	112SDGV
415854103561101	23N 57W 9ACAA1	41 58 54 N	103 56 11 W	10-08-96	0920	112SDGV
				02-26-97	1350	112SDGV
				03-26-97	1230	112SDGV
				03-26-97	1235	112SDGV
				04-23-97	1150	112SDGV
				04-23-97	1155	112SDGV
				05-20-97	1320	112SDGV
				05-20-97	1325	112SDGV
				06-16-97	1540	112SDGV
				07-15-97	0840	112SDGV
				07-15-97	0845	112SDGV
				08-26-97	1315	112SDGV
				09-22-97	0920	112SDGV
				09-22-97	0920	112SDGV
415845103555201	23N 57W 9ADDA1	41 58 45 N	103 55 52 W	10-08-96	0945	112SDGV
				02-26-97	1415	112SDGV
				03-26-97	1300	112SDGV
				04-21-97	1645	112SDGV
				05-20-97	1355	112SDGV
				06-17-97	0800	112SDGV
				06-17-97	0805	112SDGV
				07-14-97	1600	112SDGV
				08-26-97	1340	112SDGV
				09-22-97	0945	112SDGV
415845103555202	23N 57W 9ADDA2			02-26-97	1435	112SDGV
				03-26-97	1315	112SDGV
				04-21-97	1705	112SDGV
				05-20-97	1415	112SDGV
				06-17-97	0820	112SDGV
				07-14-97	1615	112SDGV
				08-26-97	1400	112SDGV
				09-22-97	1000	112SDGV
415845103555203	23N 57W 9ADDA3			02-26-97	1455	112SDGV
				03-26-97	1335	112SDGV
				04-21-97	1720	112SDGV
				05-20-97	1435	112SDGV
				06-17-97	0840	112SDGV
				07-14-97	1635	112SDGV
				08-26-97	1415	112SDGV
				09-22-97	1020	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SCOTTS BLUFF COUNTY										
02-26-97	--	35	4080	877	7.6	--	12.5	--	350	91
03-26-97	--	35	4080	828	7.8	--	14.0	--	--	--
04-22-97	--	35	4080	828	7.5	--	13.5	8.1	290	72
05-19-97	--	35	4080	831	7.6	--	14.0	--	300	76
06-16-97	--	35	4080	840	7.4	--	14.5	--	330	91
07-15-97	--	35	4080	918	7.2	--	13.0	8.9	390	110
08-26-97	--	35	4080	876	7.1	--	13.0	10	360	100
09-22-97	20.6	35	4080	844	7.1	--	13.0	--	340	97
10-08-96	--	55	4075	854	7.1	--	19.0	1.4	--	--
02-26-97	--	55	4075	824	7.2	--	15.0	--	340	100
03-26-97	--	55	4075	847	7.2	--	15.0	--	--	--
03-26-97	--	55	4075	--	--	--	--	--	--	--
04-23-97	--	55	4075	872	7.2	--	14.5	--	370	110
04-23-97	--	55	4075	--	--	--	--	--	370	110
05-20-97	--	55	4075	882	7.2	--	14.0	--	400	120
05-20-97	--	55	4075	882	7.2	--	14.0	--	410	120
06-16-97	--	55	4075	889	7.1	--	14.0	--	400	120
07-15-97	--	55	4075	850	7.1	--	13.5	6.3	360	110
07-15-97	--	55	4075	850	7.1	--	13.5	6.3	360	110
08-26-97	--	55	4075	723	6.7	--	16.5	5.3	280	77
09-22-97	14.3	55	4075	752	6.7	--	17.0	--	310	90
09-22-97	14.3	55	4075	752	6.7	--	17.0	--	310	90
10-08-96	--	71	4016	972	7.3	--	13.5	6.8	--	--
02-26-97	--	71	4016	923	7.3	--	13.5	--	430	120
03-26-97	--	71	4016	924	7.3	--	14.0	--	--	--
04-21-97	--	71	4016	923	7.4	--	13.5	--	390	110
05-20-97	--	71	4016	922	7.4	--	11.5	--	400	110
06-17-97	--	71	4016	919	7.1	--	13.5	--	410	110
06-17-97	--	71	4016	919	7.1	--	13.5	--	410	110
07-14-97	--	71	4016	917	7.2	--	14.0	6.5	370	99
08-26-97	--	71	4016	906	7.0	--	14.0	8.4	410	110
09-22-97	4.22	71	4016	902	7.1	--	13.5	--	380	100
02-26-97	--	51	4016	912	7.3	--	13.0	--	410	110
03-26-97	--	51	4016	912	7.4	--	14.0	--	--	--
04-21-97	--	51	4016	915	7.4	--	13.5	--	380	100
05-20-97	--	51	4016	923	7.3	--	14.0	--	410	110
06-17-97	--	51	4016	917	7.1	--	13.5	--	430	120
07-14-97	--	51	4016	919	7.2	--	14.0	6.5	370	98
08-26-97	--	51	4016	923	7.0	--	14.0	9.5	410	110
09-22-97	3.62	51	4016	922	7.1	--	13.5	--	390	100
02-26-97	--	30	4016	924	7.4	--	11.5	--	430	120
03-26-97	--	30	4016	926	7.4	--	11.5	--	--	--
04-21-97	--	30	4016	928	7.5	--	11.0	--	430	120
05-20-97	--	30	4016	922	7.4	--	11.5	--	410	110
06-17-97	--	30	4016	922	7.2	--	11.0	--	450	130
07-14-97	--	30	4016	915	7.3	--	12.0	5.2	390	110
08-26-97	--	30	4016	914	7.0	--	12.5	6.8	410	120
09-22-97	3.62	30	4016	913	7.2	--	12.5	--	390	110

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SCOTTS BLUFF COUNTY										
02-26-97	29	78	--	2	--	--	220	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	26	75	--	2	--	--	200	14	--	--
05-19-97	26	69	--	2	--	--	200	15	--	--
06-16-97	26	64	--	2	--	--	220	16	--	--
07-15-97	29	64	--	1	--	--	220	14	--	--
08-26-97	26	60	--	1	--	--	210	14	--	--
09-22-97	24	62	--	1	--	--	200	12	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-26-97	23	61	--	1	--	--	200	14	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-23-97	24	61	--	1	--	--	230	16	--	--
04-23-97	25	63	--	1	--	--	230	17	--	--
05-20-97	24	61	--	1	--	--	230	17	--	--
05-20-97	27	67	--	1	--	--	220	17	--	--
06-16-97	25	62	--	1	--	--	230	17	--	--
07-15-97	23	59	--	1	--	--	210	15	--	--
07-15-97	23	57	--	1	--	--	210	15	--	--
08-26-97	21	63	--	2	--	--	200	15	--	--
09-22-97	20	59	--	1	--	--	170	11	--	--
09-22-97	21	59	--	1	--	--	170	11	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-26-97	32	63	--	1	--	--	230	16	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	31	63	--	1	--	--	230	16	--	--
05-20-97	30	64	--	1	--	--	230	16	--	--
06-17-97	32	65	--	1	--	--	230	15	--	--
06-17-97	31	65	--	1	--	--	230	16	--	--
07-14-97	30	64	--	1	--	--	230	16	--	--
08-26-97	30	63	--	1	--	--	220	15	--	--
09-22-97	29	63	--	1	--	--	230	15	--	--
02-26-97	32	67	--	1	--	--	230	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	31	65	--	1	--	--	230	16	--	--
05-20-97	31	64	--	1	--	--	230	15	--	--
06-17-97	33	69	--	1	--	--	220	16	--	--
07-14-97	31	67	--	2	--	--	230	16	--	--
08-26-97	32	65	--	1	--	--	230	16	--	--
09-22-97	32	67	--	1	--	--	250	17	--	--
02-26-97	31	63	--	1	--	--	240	16	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	30	63	--	1	--	--	240	17	--	--
05-20-97	30	64	--	1	--	--	240	16	--	--
06-17-97	31	65	--	1	--	--	230	16	--	--
07-14-97	30	62	--	1	--	--	230	16	--	--
08-26-97	29	62	--	1	--	--	230	15	--	--
09-22-97	30	64	--	1	--	--	250	16	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SCOTTS BLUFF COUNTY										
02-26-97	--	--	--	--	11	--	--	--	--	--
03-26-97	--	--	--	--	11	--	--	--	--	--
04-22-97	--	--	--	--	11	--	--	--	--	--
05-19-97	--	--	--	--	10	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	7.1	--	--	--	--	--
08-26-97	--	--	--	--	22	--	--	--	--	--
09-22-97	--	--	--	--	25	--	--	--	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-26-97	--	--	--	--	5.0	--	--	--	--	--
03-26-97	--	--	--	--	6.5	--	--	--	--	--
03-26-97	--	--	--	--	6.5	--	--	--	--	--
04-23-97	--	--	--	--	7.2	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	7.1	--	--	--	--	--
05-20-97	--	--	--	--	7.3	--	--	--	--	--
06-16-97	--	--	--	--	7.8	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	1.5	--	--	--	--	--
09-22-97	--	--	--	--	1.7	--	--	--	--	--
09-22-97	--	--	--	--	1.7	--	--	--	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-26-97	--	--	--	--	11	--	--	--	--	--
03-26-97	--	--	--	--	9.6	--	--	--	--	--
04-21-97	--	--	--	--	9.4	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--	--	--	--
06-17-97	--	--	--	--	7.8	--	--	--	--	--
06-17-97	--	--	--	--	8.3	--	--	--	--	--
07-14-97	--	--	--	--	7.4	--	--	--	--	--
08-26-97	--	--	--	--	7.9	--	--	--	--	--
09-22-97	--	--	--	--	8.6	--	--	--	--	--
02-26-97	--	--	--	--	10	--	--	--	--	--
03-26-97	--	--	--	--	9.6	--	--	--	--	--
04-21-97	--	--	--	--	9.9	--	--	--	--	--
05-20-97	--	--	--	--	8.8	--	--	--	--	--
06-17-97	--	--	--	--	10	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	9.9	--	--	--	--	--
09-22-97	--	--	--	--	9.0	--	--	--	--	--
02-26-97	--	--	--	--	8.4	--	--	--	--	--
03-26-97	--	--	--	--	8.5	--	--	--	--	--
04-21-97	--	--	--	--	8.4	--	--	--	--	--
05-20-97	--	--	--	--	7.7	--	--	--	--	--
06-17-97	--	--	--	--	7.9	--	--	--	--	--
07-14-97	--	--	--	--	7.8	--	--	--	--	--
08-26-97	--	--	--	--	8.9	--	--	--	--	--
09-22-97	--	--	--	--	8.8	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SCOTTS BLUFF COUNTY						
415823103561601	23N 57W 9DCC 1	41 58 23 N	103 56 16 W	02-26-97	1525	112SDGV
				03-26-97	1355	112SDGV
				04-23-97	1105	112SDGV
				05-20-97	1145	112SDGV
				05-20-97	1150	112SDGV
				06-17-97	0715	112SDGV
				07-15-97	0745	112SDGV
				08-26-97	1135	112SDGV
				09-22-97	1045	112SDGV
415823103561602	23N 57W 9DCC2	41 58 24 N	103 56 16 W	02-26-97	1545	112SDGV
				03-26-97	1415	112SDGV
				04-23-97	1125	112SDGV
				04-23-97	1130	112SDGV
				05-20-97	1200	112SDGV
				06-17-97	0730	112SDGV
				07-15-97	0805	112SDGV
				08-26-97	1155	112SDGV
				09-22-97	1100	112SDGV
415738103554701	23N 57W 15CBCB1	41 57 38 N	103 55 47 W	10-08-96	0815	112SDGV
				02-24-97	1310	112SDGV
				03-26-97	1600	112SDGV
				03-26-97	1605	112SDGV
				04-22-97	1500	112SDGV
				04-22-97	1505	112SDGV
				05-19-97	1425	112SDGV
				06-16-97	1140	112SDGV
				06-16-97	1145	112SDGV
				07-14-97	1305	112SDGV
415738103554702	23N 57W 15CBCB2			08-25-97	1315	112SDGV
				02-24-97	1330	112SDGV
				03-26-97	1620	112SDGV
				04-22-97	1520	112SDGV
				05-19-97	1645	112SDGV
				06-16-97	1200	112SDGV
				07-14-97	1320	112SDGV
				08-25-97	1335	112SDGV
415738103554703	23N 57W 15CBCB3			02-24-97	1350	112SDGV
				03-26-97	1640	112SDGV
				04-22-97	1540	112SDGV
				05-19-97	1700	112SDGV
				06-16-97	1220	112SDGV
				07-14-97	1335	112SDGV
				08-25-97	1350	112SDGV
415811103555801	23N 57W 16AAAC1	41 58 11 N	103 55 58 W	02- 24-97	1425	112SDGV
				03-26-97	1500	112SDGV
				04-22-97	1330	112SDGV
				05-20-97	1035	112SDGV
				06-16-97	1435	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SCOTTS BLUFF COUNTY										
02-26-97	--	--	4010	911	7.3	--	14.0	6.9	380	100
03-26-97	--	--	4010	920	7.3	--	14.5	--	--	--
04-23-97	--	--	4010	927	7.3	--	14.5	6.0	380	100
05-20-97	--	--	4010	926	7.2	--	14.5	--	390	100
05-20-97	--	--	4010	926	7.2	--	14.5	--	410	110
06-17-97	--	--	4010	929	7.2	--	14.5	--	450	120
07-15-97	--	--	4010	921	7.3	--	14.5	7.0	380	100
08-26-97	--	--	4010	907	6.9	--	14.5	7.7	400	110
09-22-97	5.13	--	4010	867	7.1	--	14.5	--	350	92
02-26-97	--	--	4010	924	7.3	--	13.0	5.7	420	120
03-26-97	--	--	4010	931	7.3	--	13.5	--	--	--
04-23-97	--	--	4010	933	7.3	--	13.0	7.6	390	110
04-23-97	--	--	4010	933	7.3	--	13.0	7.6	400	110
05-20-97	--	--	4010	932	7.3	--	12.5	--	400	110
06-17-97	--	--	4010	933	7.2	--	12.5	--	440	120
07-15-97	--	--	4010	925	7.3	--	12.5	6.5	400	110
08-26-97	--	--	4010	923	6.9	--	13.5	6.7	400	110
09-22-97	5.45	--	4010	925	7.1	--	13.5	--	400	110
10-08-96	--	195	3992	817	7.5	--	--	--	--	--
02-24-97	--	195	3992	730	7.9	--	14.5	0.61	290	78
03-26-97	--	195	3992	728	7.6	--	15.0	--	--	--
03-26-97	--	195	3992	--	--	--	--	--	--	--
04-22-97	--	195	3992	727	7.8	--	15.0	--	--	--
04-22-97	--	195	3992	727	7.8	--	15.0	0.91	--	--
05-19-97	--	195	3992	726	7.4	--	15.0	--	270	73
06-16-97	--	195	3992	726	7.4	--	15.0	--	260	72
06-16-97	--	195	3992	726	7.4	--	15.0	--	280	74
07-14-97	--	195	3992	745	7.4	--	15.0	0.90	290	79
08-25-97	--	195	3992	730	7.3	--	15.0	1.0	320	95
02-24-97	--	108	3992	824	7.8	--	14.5	0.06	390	110
03-26-97	--	108	3992	828	7.3	--	15.0	--	--	--
04-22-97	--	108	3992	832	7.6	--	14.5	0.2	--	--
05-19-97	--	108	3992	844	7.2	--	15.0	--	370	100
06-16-97	--	108	3992	848	7.1	--	15.0	--	340	90
07-14-97	--	108	3992	850	7.2	--	15.0	0.10	340	90
08-25-97	--	108	3992	856	7.1	--	15.0	0.20	340	90
02-24-97	--	30	3992	1040	7.7	--	14.0	4.13	420	120
03-26-97	--	30	3992	1050	7.2	--	14.0	--	--	--
04-22-97	--	30	3992	1050	7.5	--	13.5	3.0	--	--
05-19-97	--	30	3992	1050	7.1	--	13.5	--	440	130
06-16-97	--	30	3992	1050	7.1	--	13.0	--	--	--
07-14-97	--	30	3992	1050	7.1	--	13.5	2.3	430	120
08-25-97	--	30	3992	998	7.0	--	13.5	2.0	460	140
02-24-97	--	77	3991	858	8.0	--	11.5	--	340	92
03-26-97	--	77	3991	859	7.4	--	12.0	--	--	--
04-22-97	--	77	3991	866	--	--	12.0	7.6	340	90
05-20-97	--	77	3991	852	7.4	--	12.0	--	330	89
06-16-97	--	77	3991	854	7.3	--	12.0	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SCOTTS BLUFF COUNTY										
02-26-97	32	68	--	2	--	--	230	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-23-97	32	68	--	2	--	--	240	15	--	--
05-20-97	33	72	--	2	--	--	230	15	--	--
05-20-97	32	67	--	1	--	--	230	15	--	--
06-17-97	33	69	--	1	--	--	230	15	--	--
07-15-97	31	66	--	1	--	--	230	15	--	--
08-26-97	30	65	--	1	--	--	220	15	--	--
09-22-97	29	63	--	1	--	--	230	14	--	--
02-26-97	30	69	--	1	--	--	240	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-23-97	30	68	--	2	--	--	250	15	--	--
04-23-97	31	70	--	2	--	--	250	16	--	--
05-20-97	31	71	--	2	--	--	240	15	--	--
06-17-97	31	73	--	2	--	--	230	15	--	--
07-15-97	30	70	--	2	--	--	240	15	--	--
08-26-97	29	68	--	1	--	--	230	15	--	--
09-22-97	30	65	--	1	--	--	250	16	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-24-97	22	64	--	2	--	--	200	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	21	64	--	2	--	--	200	15	--	--
06-16-97	21	62	--	2	--	--	200	14	--	--
06-16-97	22	67	--	2	--	--	200	15	--	--
07-14-97	22	65	--	2	--	--	200	15	--	--
08-25-97	20	49	--	1	--	--	140	11	--	--
02-24-97	28	64	--	1	--	--	220	16	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	29	68	--	2	--	--	220	16	--	--
06-16-97	27	66	--	2	--	--	220	17	--	--
07-14-97	27	67	--	2	--	--	220	17	--	--
08-25-97	28	67	--	2	--	--	220	17	--	--
02-24-97	28	78	--	2	--	--	230	24	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	30	79	--	2	--	--	240	21	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	29	81	--	2	--	--	250	18	--	--
08-25-97	28	78	--	2	--	--	250	16	--	--
02-24-97	27	73	--	2	--	--	230	18	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	27	72	--	2	--	--	240	17	--	--
05-20-97	27	76	--	2	--	--	230	17	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SCOTTS BLUFF COUNTY										
02-26-97	--	--	--	--	6.6	--	--	--	--	--
03-26-97	--	--	--	--	6.9	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	6.7	--	--	--	--	--
05-20-97	--	--	--	--	6.6	--	--	--	--	--
06-17-97	--	--	--	--	6.6	--	--	--	--	--
07-15-97	--	--	--	--	6.6	--	--	--	--	--
08-26-97	--	--	--	--	9.0	--	--	--	--	--
09-22-97	--	--	--	--	10	--	--	--	--	--
02-26-97	--	--	--	--	7.5	--	--	--	--	--
03-26-97	--	--	--	--	7.3	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	6.3	--	--	--	--	--
06-17-97	--	--	--	--	7.3	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	7.7	--	--	--	--	--
09-22-97	--	--	--	--	7.8	--	--	--	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-24-97	--	--	--	--	2.4	--	--	--	--	--
03-26-97	--	--	--	--	2.2	--	--	--	--	--
03-26-97	--	--	--	--	2.1	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	--	--	--	--	2.2	--	--	--	--	--
06-16-97	--	--	--	--	2.4	--	--	--	--	--
06-16-97	--	--	--	--	2.4	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	2.3	--	--	--	--	--
02-24-97	--	--	--	--	6.1	--	--	--	--	--
03-26-97	--	--	--	--	5.7	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	--	--	--	--	5.6	--	--	--	--	--
06-16-97	--	--	--	--	5.9	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	6.0	--	--	--	--	--
02-24-97	--	--	--	--	27	--	--	--	--	--
03-26-97	--	--	--	--	24	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--	--	--	--
05-19-97	--	--	--	--	21	--	--	--	--	--
06-16-97	--	--	--	--	19	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	10	--	--	--	--	--
02-24-97	--	--	--	--	5.1	--	--	--	--	--
03-26-97	--	--	--	--	5.2	--	--	--	--	--
04-22-97	--	--	--	--	4.9	--	--	--	--	--
05-20-97	--	--	--	--	4.6	--	--	--	--	--
06-16-97	--	--	--	--	4.6	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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)	IRON, DIS- SOLVED (µ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µ G/L AS MN) (01056)	RADON 222 TOTAL (PC/L) (82303)
------	--	--	--	---	--	--	---	--	--	--

SCOTTS BLUFF COUNTY

02-26-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--
06-17-97	--	--	--	--	--	--	1300
07-15-97	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--
09-22-97	--	--	--	--	--	--	--
02-26-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--
06-17-97	--	--	--	--	--	--	580
07-15-97	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--
09-22-97	--	--	--	--	--	--	--
10-08-96	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--
05-19-97	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	170
06-16-97	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--
08-25-97	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--
05-19-97	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	400
07-14-97	--	--	--	--	--	--	--
08-25-97	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--
05-19-97	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	320
07-14-97	--	--	--	--	--	--	--
08-25-97	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--
04-22-97	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	520

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SCOTTS BLUFF COUNTY						
415811103555801	23N 57W 16AAAC1	41 58 11 N	103 55 58 W	07-14-97	1455	112SDGV
				08-26-97	1035	112SDGV
				09-22-97	1210	112SDGV
415811103555802	23N 57W 16AAAC2			02-24-97	1445	112SDGV
				03-26-97	1515	112SDGV
				04-22-97	1355	112SDGV
				05-20-97	1055	112SDGV
				06-16-97	1450	112SDGV
				07-14-97	1515	112SDGV
				08-26-97	1050	112SDGV
				09-22-97	1225	112SDGV
415811103555803	23N 57W 16AAAC3			02-24-97	1505	112SDGV
				03-26-97	1535	112SDGV
				04-22-97	1415	112SDGV
				05-20-97	1115	112SDGV
				06-16-97	1510	112SDGV
				07-14-97	1530	112SDGV
				08-26-97	1105	112SDGV
				09-22-97	1245	112SDGV
415756103555401	23N 57W 16ADAC1	41 57 56 N	103 55 54 W	06-16-97	1330	112SDGV
				07-14-97	1400	112SDGV
				08-26-97	0910	112SDGV
				08-26-97	0915	112SDGV
				09-22-97	1315	112SDGV
415756103555402	23N 57W 16ADAC2			06-16-97	1350	112SDGV
				07-14-97	1415	112SDGV
				08-26-97	0935	112SDGV
				09-22-97	1335	112SDGV
415756103555403	23N 57W 16ADAC3			06-16-97	1405	112SDGV
				07-14-97	1435	112SDGV
				08-26-97	0955	112SDGV
				08-27-97	1110	112SDGV
				08-27-97	1130	112SDGV
				08-27-97	1145	112SDGV
				08-27-97	1605	112SDGV
				09-22-97	1355	112SDGV
415721103561501	23N 57W 21ABBA1	41 57 21 N	103 56 15 W	04-23-97	0950	112SDGV
				06-16-97	1030	112SDGV
				07-14-97	1120	112SDGV
				08-25-97	1515	112SDGV
				09-25-97	1125	112SDGV
415721103561502	23N 57W 21ABBA2			04-23-97	1010	112SDGV
				06-16-97	1055	112SDGV
				07-14-97	1140	112SDGV
				08-25-97	1535	112SDGV
				09-25-97	1110	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SCOTTS BLUFF COUNTY										
07-14-97	--	77	3991	854	7.3	--	12.0	2.1	320	84
08-26-97	--	77	3991	856	7.0	--	12.0	2.4	350	94
09-22-97	10.0	77	3991	867	7.3	--	12.0	--	340	90
02-24-97	--	53	3991	978	8.0	--	12.0	--	410	110
03-26-97	--	53	3991	972	7.4	--	12.0	--	--	--
04-22-97	--	53	3991	954	7.7	--	12.0	5.6	380	100
05-20-97	--	53	3991	947	7.3	--	12.0	--	410	110
06-16-97	--	53	3991	937	7.2	--	12.0	--	370	99
07-14-97	--	53	3991	928	7.3	--	12.0	2.6	360	96
08-26-97	--	53	3991	920	7.0	--	12.0	3.3	380	100
09-22-97	9.79	53	3991	913	7.3	--	11.5	--	360	98
02-24-97	--	30	3991	1090	8.0	--	12.0	--	490	120
03-26-97	--	30	3991	1140	7.3	--	12.0	--	--	--
04-22-97	--	30	3991	1100	7.6	--	11.5	3.1	440	110
05-20-97	--	30	3991	1100	7.3	--	11.5	--	480	120
06-16-97	--	30	3991	1070	7.2	--	11.5	--	450	110
07-14-97	--	30	3991	1050	7.2	--	11.5	1.1	420	99
08-26-97	--	30	3991	1040	7.0	--	11.5	1.5	450	110
09-22-97	9.77	30	3991	--	--	--	--	--	440	110
06-16-97	--	195	3990	650	7.9	--	14.5	0.70	--	--
07-14-97	--	195	3990	907	7.4	--	14.0	3.4	330	90
08-26-97	--	195	3990	651	7.4	--	14.5	--	--	--
08-26-97	--	195	3990	651	7.4	--	14.5	--	--	--
09-22-97	13.7	195	3990	688	7.6	--	14.0	--	220	60
06-16-97	--	112	3990	775	7.4	--	14.5	4.3	--	--
07-14-97	--	112	3990	780	7.4	--	14.0	1.9	270	72
08-26-97	--	112	3990	744	7.1	--	14.5	--	--	--
09-22-97	13.3	112	3990	773	7.4	--	14.0	--	270	73
06-16-97	--	30	3990	1020	7.3	--	13.0	5.6	--	--
07-14-97	--	30	3990	1010	7.3	--	13.5	4.5	390	100
08-26-97	--	30	3990	950	7.0	--	13.5	--	--	--
08-27-97	14.6	30	3990	--	--	--	--	--	--	--
08-27-97	14.6	30	3990	1050	7.1	--	13.5	--	--	--
08-27-97	14.6	30	3990	1070	7.1	--	13.0	--	--	--
08-27-97	72.1	30	3990	621	7.3	--	13.0	--	--	--
09-22-97	12.7	30	3990	--	--	--	--	--	350	91
04-23-97	--	183	3995	862	11	--	13.5	0.15	110	42
06-16-97	--	183	3995	711	8.7	--	14.0	--	230	72
07-14-97	--	183	3995	625	9.4	--	14.5	1.2	93	30
08-25-97	--	183	3995	680	8.2	--	14.0	3.0	150	44
09-25-97	--	183	3995	704	7.9	--	14.0	--	210	60
04-23-97	--	116	3995	730	8.5	--	13.5	0.50	180	53
06-16-97	--	116	3995	824	7.7	--	13.5	--	310	89
07-14-97	--	116	3995	805	7.7	--	13.5	0.80	300	84
08-25-97	--	116	3995	824	7.4	--	14.0	2.5	--	--
09-25-97	--	116	3995	833	7.2	--	13.5	--	320	88

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SCOTTS BLUFF COUNTY										
07-14-97	26	76	--	2	--	--	230	18	--	--
08-26-97	27	74	--	2	--	--	230	17	--	--
09-22-97	27	73	--	2	--	--	260	19	--	--
02-24-97	33	81	--	2	--	--	270	19	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	31	80	--	2	--	--	260	18	--	--
05-20-97	31	77	--	2	--	--	260	19	--	--
06-16-97	30	76	--	2	--	--	250	18	--	--
07-14-97	30	77	--	2	--	--	250	19	--	--
08-26-97	29	76	--	2	--	--	240	18	--	--
09-22-97	29	77	--	2	--	--	260	18	--	--
02-24-97	46	92	--	2	--	--	310	22	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	43	90	--	2	--	--	320	22	--	--
05-20-97	45	89	--	2	--	--	310	22	--	--
06-16-97	44	90	--	2	--	--	300	21	--	--
07-14-97	41	87	--	2	--	--	300	21	--	--
08-26-97	41	83	--	2	--	--	280	20	--	--
09-22-97	43	81	--	2	--	--	300	21	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	26	83	--	2	--	--	210	14	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
09-22-97	17	76	--	2	--	--	150	13	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	21	75	--	2	--	--	210	16	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
09-22-97	22	70	--	2	--	--	230	16	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	34	78	--	2	--	--	240	16	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-22-97	30	77	--	2	--	--	230	15	--	--
04-23-97	0.22	120	--	5	--	--	240	16	--	--
06-16-97	12	78	--	2	--	--	220	15	--	--
07-14-97	4.8	98	--	4	--	--	230	17	--	--
08-25-97	10	92	--	3	--	--	230	15	--	--
09-25-97	15	77	--	2	--	--	230	16	--	--
04-23-97	12	92	--	3	--	--	230	19	--	--
06-16-97	21	76	--	2	--	--	220	18	--	--
07-14-97	21	74	--	2	--	--	220	19	--	--
08-25-97	--	--	--	--	--	--	--	--	--	--
09-25-97	25	69	--	2	--	--	240	19	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SCOTTS BLUFF COUNTY										
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	4.9	--	--	--	--	--
09-22-97	--	--	--	--	4.5	--	--	--	--	--
02-24-97	--	--	--	--	5.5	--	--	--	--	--
03-26-97	--	--	--	--	5.9	--	--	--	--	--
04-22-97	--	--	--	--	5.9	--	--	--	--	--
05-20-97	--	--	--	--	5.5	--	--	--	--	--
06-16-97	--	--	--	--	5.9	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	6.3	--	--	--	--	--
09-22-97	--	--	--	--	6.6	--	--	--	--	--
02-24-97	--	--	--	--	6.9	--	--	--	--	--
03-26-97	--	--	--	--	5.6	--	--	--	--	--
04-22-97	--	--	--	--	5.6	--	--	--	--	--
05-20-97	--	--	--	--	5.0	--	--	--	--	--
06-16-97	--	--	--	--	5.0	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	6.1	--	--	--	--	--
09-22-97	--	--	--	--	6.4	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	1.6	--	--	--	--	--
08-26-97	--	--	--	--	2.0	--	--	--	--	--
09-22-97	--	--	--	--	3.0	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	2.7	--	--	--	--	--
09-22-97	--	--	--	--	2.8	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	10	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-22-97	--	--	--	--	15	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	1.4	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	4.3	--	--	--	--	--
09-25-97	--	--	--	--	3.8	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	7.4	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	7.4	--	--	--	--	--
09-25-97	--	--	--	--	7.5	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SCOTTS BLUFF COUNTY						
415721103561503	23N 57W 21ABBA3	41 57 21 N	103 56 15 W	04-23-97	1030	112SDGV
				06-16-97	1115	112SDGV
				07-14-97	1155	112SDGV
				08-25-97	1550	112SDGV
				09-25-97	1055	112SDGV
415738103551601	23N 57W 22ABAB1	41 57 38 N	103 55 16 W	07-14-97	1015	112SDGV
				08-25-97	1415	112SDGV
				09-25-97	0950	112SDGV
415738103551602	23N 57W 22ABAB2			07-14-97	1035	112SDGV
				08-25-97	1435	112SDGV
				09-25-97	1010	112SDGV
415738103551603	23N 57W 22ABAB3			07-14-97	1050	--
				08-25-97	1450	--
				09-25-97	1025	--
415628103554901	23N 57W 28AAAA1	41 56 28 N	103 55 49 W	10-08-96	0715	112SDGV
				02-24-97	1000	112SDGV
				03-27-97	1110	112SDGV
				04-23-97	0835	112SDGV
				04-23-97	0840	112SDGV
				05-20-97	0815	112SDGV
				05-20-97	0820	112SDGV
				06-16-97	0810	112SDGV
				06-16-97	0920	112SDGV
				07-14-97	0840	112SDGV
				08-25-97	1130	112SDGV
				09-25-97	0845	112SDGV
415628103554902	23N 57W 28AAAA2			02-24-97	1020	112SDGV
				03-27-97	1130	112SDGV
				04-23-97	0855	112SDGV
				05-20-97	0835	112SDGV
				06-16-97	0825	112SDGV
				06-16-97	0935	112SDGV
				07-14-97	0825	112SDGV
				08-25-97	1150	112SDGV
415628103554903	23N 57W 28AAAA3			09-25-97	0910	112SDGV
				02-24-97	1040	112SDGV
				03-27-97	1150	112SDGV
				04-23-97	0910	112SDGV
				05-20-97	0855	112SDGV
				06-16-97	0845	112SDGV
				06-16-97	0955	112SDGV
				07-14-97	0810	112SDGV
				08-25-97	1205	112SDGV
				09-25-97	0920	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SCOTTS BLUFF COUNTY										
04-23-97	--	40	3995	961	7.6	--	13.5	3.4	330	91
06-16-97	--	40	3995	1010	7.2	--	13.5	--	390	110
07-14-97	--	40	3995	1030	7.2	--	13.5	3.8	390	100
08-25-97	--	40	3995	963	7.1	--	13.5	5.0	--	--
09-25-97	--	40	3995	1010	7.0	--	13.5	--	390	110
07-14-97	--	191	3895	717	7.4	--	14.0	1.0	280	75
08-25-97	--	191	3895	718	7.3	--	14.5	--	--	--
09-25-97	11.9	191	3895	720	7.1	--	14.0	--	270	72
07-14-97	--	117	3895	854	7.3	--	14.0	0.0	320	85
08-25-97	--	117	3895	888	7.2	--	14.5	--	--	--
09-25-97	11.9	117	3895	886	7.0	--	13.5	--	340	89
07-14-97	--	35	3895	1060	7.2	--	13.0	0.10	380	90
08-25-97	--	35	3895	1030	7.1	--	14.0	--	--	--
09-25-97	12.0	35	3895	1160	7.0	--	13.5	--	440	110
10-08-96	--	106	3980	1290	7.4	--	13.5	--	--	--
02-24-97	--	106	3980	1400	7.5	--	10.0	--	540	140
03-27-97	--	106	3980	1300	7.5	--	10.0	--	--	--
04-23-97	--	106	3980	1190	7.3	--	10.0	--	440	120
04-23-97	--	106	3980	--	--	--	--	--	440	110
05-20-97	--	106	3980	1180	7.1	--	10.0	--	490	130
05-20-97	--	106	3980	1180	7.1	--	10.0	--	480	120
06-16-97	--	106	3980	763	7.4	--	12.0	--	290	84
06-16-97	--	106	3980	1040	7.2	--	12.5	5.6	--	--
07-14-97	--	106	3980	1190	7.0	--	11.5	0.0	480	120
08-25-97	--	106	3980	763	7.4	--	12.0	0.30	290	88
09-25-97	6.45	106	3980	768	7.1	--	12.0	--	300	89
02-24-97	--	68	3980	1010	7.9	--	11.0	--	440	140
03-27-97	--	68	3980	914	7.8	--	11.5	--	--	--
04-23-97	--	68	3980	914	7.6	--	11.5	--	370	110
05-20-97	--	68	3980	903	7.4	--	11.5	--	390	120
06-16-97	--	68	3980	889	7.3	--	11.5	--	360	110
06-16-97	--	68	3980	870	7.3	--	14.0	0.86	--	--
07-14-97	--	68	3980	879	7.3	--	12.0	2.8	370	110
08-25-97	--	68	3980	886	7.3	--	12.0	0.10	350	110
09-25-97	6.48	68	3980	894	6.9	--	11.5	--	360	110
02-24-97	--	30	3980	891	8.1	--	11.5	--	390	120
03-27-97	--	30	3980	786	8.0	--	12.0	--	--	--
04-23-97	--	30	3980	784	7.7	--	11.5	--	300	89
05-20-97	--	30	3980	781	7.5	--	12.0	--	320	97
06-16-97	--	30	3980	1160	7.0	--	11.0	--	470	120
06-16-97	--	30	3980	718	7.5	--	14.0	2.4	--	--
07-14-97	--	30	3980	759	7.4	--	12.0	4.7	290	84
08-25-97	--	30	3980	1070	6.9	--	12.5	0.10	500	130
09-25-97	6.53	30	3980	--	--	--	--	--	490	120

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SCOTTS BLUFF COUNTY										
04-23-97	26	83	--	2	--	--	250	19	--	--
06-16-97	31	81	--	2	--	--	240	23	--	--
07-14-97	31	78	--	2	--	--	250	21	--	--
08-25-97	--	--	--	--	--	--	--	--	--	--
09-25-97	31	76	--	2	--	--	250	17	--	--
07-14-97	21	61	--	2	--	--	190	14	--	--
08-25-97	--	--	--	--	--	--	--	--	--	--
09-25-97	22	60	--	2	--	--	210	15	--	--
07-14-97	27	73	--	2	--	--	210	17	--	--
08-25-97	--	--	--	--	--	--	--	--	--	--
09-25-97	29	72	--	2	--	--	230	17	--	--
07-14-97	37	100	--	2	--	--	240	18	--	--
08-25-97	--	--	--	--	--	--	--	--	--	--
09-25-97	43	98	--	2	--	--	290	21	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-24-97	47	110	--	2	--	--	310	43	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	36	96	--	2	--	--	310	37	--	--
04-23-97	38	99	--	2	--	--	300	36	--	--
05-20-97	41	100	--	2	--	--	300	38	--	--
05-20-97	41	100	--	2	--	--	290	36	--	--
06-16-97	20	73	--	2	--	--	190	15	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	42	110	--	2	--	--	290	36	--	--
08-25-97	18	68	--	2	--	--	190	15	--	--
09-25-97	20	72	--	2	--	--	210	15	--	--
02-24-97	22	78	--	2	--	--	250	18	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	22	82	--	2	--	--	260	18	--	--
05-20-97	23	84	--	2	--	--	240	18	--	--
06-16-97	23	82	--	2	--	--	240	17	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	21	76	--	2	--	--	230	18	--	--
08-25-97	20	75	--	2	--	--	230	17	--	--
09-25-97	21	76	--	2	--	--	260	17	--	--
02-24-97	21	69	--	2	--	--	200	16	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	20	72	--	2	--	--	200	15	--	--
05-20-97	19	71	--	2	--	--	200	15	--	--
06-16-97	43	110	--	2	--	--	290	34	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	19	70	--	2	--	--	180	15	--	--
08-25-97	44	110	--	2	--	--	310	42	--	--
09-25-97	44	110	--	2	--	--	310	43	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
------	---	---	--	--	---	--	---	---	--	---

SCOTTS BLUFF COUNTY

04-23-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	14	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	11	--	--	--	--	--
09-25-97	--	--	--	--	13	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	2.5	--	--	--	--	--
09-25-97	--	--	--	--	2.5	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	6.7	--	--	--	--	--
09-25-97	--	--	--	--	6.4	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	8.1	--	--	--	--	--
09-25-97	--	--	--	--	8.6	--	--	--	--	--
10-08-96	--	--	--	--	--	--	--	--	--	--
02-24-97	--	--	--	--	18	--	--	--	--	--
03-27-97	--	--	--	--	20	--	--	--	--	--
04-23-97	--	--	--	--	13	--	--	--	--	--
04-23-97	--	--	--	--	12	--	--	--	--	--
05-20-97	--	--	--	--	15	--	--	--	--	--
05-20-97	--	--	--	--	15	--	--	--	--	--
06-16-97	--	--	--	--	2.3	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	2.1	--	--	--	--	--
09-25-97	--	--	--	--	2.3	--	--	--	--	--
02-24-97	--	--	--	--	4.8	--	--	--	--	--
03-27-97	--	--	--	--	4.9	--	--	--	--	--
04-23-97	--	--	--	--	4.8	--	--	--	--	--
05-20-97	--	--	--	--	5.1	--	--	--	--	--
06-16-97	--	--	--	--	4.4	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	4.7	--	--	--	--	--
09-25-97	--	--	--	--	4.4	--	--	--	--	--
02-24-97	--	--	--	--	2.7	--	--	--	--	--
03-27-97	--	--	--	--	2.4	--	--	--	--	--
04-23-97	--	--	--	--	2.6	--	--	--	--	--
05-20-97	--	--	--	--	2.5	--	--	--	--	--
06-16-97	--	--	--	--	16	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-25-97	--	--	--	--	20	--	--	--	--	--
09-25-97	--	--	--	--	18	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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)	IRON, DIS- SOLVED (µ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µ G/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)
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SCOTTS BLUFF COUNTY[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER		LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SCOTTS BLUFF COUNTY							
415628103562401	23N	57W 28ABBB1	41 56 28 N	103 56 24 W	02-24-97	1110	112SDGV
					03-27-97	1005	112SDGV
					04-23-97	0730	112SDGV
					05-20-97	0925	112SDGV
					06-16-97	0705	112SDGV
					07-14-97	0910	112SDGV
					08-26-97	0800	112SDGV
415628103562402	23N	57W 28ABBB2			02-24-97	1130	112SDGV
					03-27-97	1020	112SDGV
					04-23-97	0750	112SDGV
					04-23-97	0755	112SDGV
					05-20-97	0940	112SDGV
					06-16-97	0725	112SDGV
					07-14-97	0925	112SDGV
					08-26-97	0820	112SDGV
415628103562403	23N	57W 28ABBB3			02-24-97	1150	112SDGV
					03-27-97	1040	112SDGV
					04-23-97	0810	112SDGV
					05-20-97	0955	112SDGV
					06-16-97	0740	112SDGV
					07-14-97	0940	112SDGV
					08-26-97	0835	112SDGV
SIOUX COUNTY							
420301103554801	24N	57W 15CBBD1	42 03 01 N	103 55 48 W	10-07-96	1335	112SDGV
					11-25-96	0955	112SDGV
					12-30-96	0930	112SDGV
					01-28-97	1415	112SDGV
					02-26-97	0930	112SDGV
					03-24-97	1415	112SDGV
					04-07-97	1535	112SDGV
					04-16-97	0820	112SDGV
					04-21-97	1130	112SDGV
					04-28-97	1350	112SDGV
					04-28-97	1355	112SDGV
					05-05-97	1135	112SDGV
					05-12-97	1130	112SDGV
					05-19-97	0800	112SDGV
					05-27-97	0920	112SDGV
					06-02-97	1455	112SDGV
					06-09-97	1010	112SDGV
					06-19-97	0920	112SDGV
					06-23-97	1005	112SDGV
					06-30-97	1410	112SDGV
					07-07-97	1020	112SDGV
					07-16-97	1015	112SDGV
					07-21-97	1040	112SDGV
					08-04-97	1025	112SDGV
					08-11-97	1455	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SCOTTS BLUFF COUNTY										
02-24-97	--	86	3982	867	8.1	--	11.5	--	320	96
03-27-97	--	86	3982	785	7.8	--	12.0	--	--	--
04-23-97	--	86	3982	796	7.7	--	11.5	--	300	90
05-20-97	--	86	3982	809	7.5	--	12.0	--	320	97
06-16-97	--	86	3982	812	7.6	--	12.0	--	310	88
07-14-97	--	86	3982	810	7.4	--	12.0	0.0	310	90
08-26-97	--	86	3982	765	7.2	--	12.0	0.20	330	100
02-24-97	--	58	3982	1140	8.0	--	11.5	--	430	130
03-27-97	--	58	3982	1000	7.7	--	12.0	--	--	--
04-23-97	--	58	3982	879	7.5	--	11.5	--	350	110
04-23-97	--	58	3982	--	--	--	--	--	350	110
05-20-97	--	58	3982	824	7.4	--	11.5	--	330	100
06-16-97	--	58	3982	822	7.4	--	11.5	--	320	96
07-14-97	--	58	3982	845	7.3	--	12.0	0.0	330	100
08-26-97	--	58	3982	787	7.1	--	12.0	0.20	350	110
02-24-97	--	--	3982	1140	7.8	--	10.5	--	430	120
03-27-97	--	--	3982	1030	7.5	--	11.0	--	--	--
04-23-97	--	--	3982	1020	7.3	--	10.5	--	410	110
05-20-97	--	--	3982	1050	7.1	--	10.5	--	470	140
06-16-97	--	--	3982	1040	7.1	--	10.5	--	410	110
07-14-97	--	--	3982	1090	7.1	--	11.5	0.2	460	130
08-26-97	--	--	3982	863	6.8	--	13.0	0.40	460	130
SIOUX COUNTY										
10-07-96	--	127	4205	653	7.8	--	18.5	5.9	220	57
11-25-96	--	127	4205	--	7.6	--	16.0	--	210	56
12-30-96	--	127	4205	677	7.7	--	16.5	--	210	56
01-28-97	--	127	4205	695	7.5	--	16.5	--	230	61
02-26-97	--	127	4205	621	8.2	--	10.5	--	220	59
03-24-97	--	127	4205	600	7.2	--	15.5	--	--	--
04-07-97	--	127	4205	609	7.9	--	17.5	--	230	60
04-16-97	--	127	4205	604	--	--	15.0	--	220	58
04-21-97	--	127	4205	634	7.7	--	16.5	--	230	59
04-28-97	--	127	4205	604	7.5	--	18.0	--	230	59
04-28-97	--	127	4205	604	7.5	--	18.0	--	220	58
05-05-97	--	127	4205	595	7.6	--	17.0	--	230	60
05-12-97	--	127	4205	592	7.5	--	17.5	--	220	58
05-19-97	--	127	4205	597	7.9	--	16.5	--	240	64
05-27-97	--	127	4205	597	7.3	--	17.0	--	210	55
06-02-97	--	127	4205	598	7.5	--	18.5	--	220	58
06-09-97	--	127	4205	594	7.4	--	18.5	--	220	58
06-19-97	--	127	4205	597	7.3	--	18.5	--	230	61
06-23-97	--	127	4205	735	7.4	--	18.0	--	240	67
06-30-97	--	127	4205	671	7.4	--	18.0	--	--	--
07-07-97	--	127	4205	605	7.3	--	19.5	5.4	230	62
07-16-97	--	127	4205	598	7.5	--	19.5	5.6	240	63
07-21-97	--	127	4205	584	7.2	--	19.5	5.7	220	57
08-04-97	--	127	4205	646	7.2	--	15.5	6.8	220	60
08-11-97	--	127	4205	646	7.2	--	15.0	7.9	210	56

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SCOTTS BLUFF COUNTY										
02-24-97	20	70	--	2	--	--	190	16	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	20	69	--	2	--	--	210	18	--	--
05-20-97	20	72	--	2	--	--	210	18	--	--
06-16-97	21	79	--	2	--	--	210	19	--	--
07-14-97	19	73	--	2	--	--	210	19	--	--
08-26-97	20	72	--	2	--	--	210	18	--	--
02-24-97	26	86	--	2	--	--	280	22	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	21	76	--	2	--	--	240	18	--	--
04-23-97	21	75	--	2	--	--	240	18	--	--
05-20-97	19	73	--	2	--	--	220	16	--	--
06-16-97	19	71	--	2	--	--	220	16	--	--
07-14-97	20	73	--	2	--	--	220	18	--	--
08-26-97	20	74	--	2	--	--	230	18	--	--
02-24-97	32	90	--	2	--	--	280	25	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	31	88	--	2	--	--	280	25	--	--
05-20-97	31	87	--	2	--	--	270	25	--	--
06-16-97	32	90	--	2	--	--	280	24	--	--
07-14-97	34	95	--	2	--	--	290	29	--	--
08-26-97	34	91	--	2	--	--	280	27	--	--
SIOUX COUNTY										
10-07-96	18	58	36	2	6.5	177	150	11	0.50	35
11-25-96	18	64	--	2	--	--	160	10	--	--
12-30-96	18	55	--	2	--	--	150	10	--	--
01-28-97	19	56	--	2	--	--	160	10	--	--
02-26-97	18	64	--	2	--	--	160	10	--	--
03-24-97	--	--	--	--	--	--	--	--	--	--
04-07-97	19	63	--	2	--	--	160	11	--	--
04-16-97	19	53	--	2	--	--	160	10	--	--
04-21-97	19	56	--	2	--	--	160	11	--	--
04-28-97	19	54	--	2	--	--	160	11	--	--
04-28-97	19	53	--	2	--	--	160	11	--	--
05-05-97	19	54	--	2	--	--	160	11	--	--
05-12-97	18	52	--	2	--	--	150	11	--	--
05-19-97	20	55	--	2	--	--	150	11	--	--
05-27-97	17	50	--	1	--	--	160	11	--	--
06-02-97	19	52	--	2	--	--	160	12	--	--
06-09-97	18	49	--	1	--	--	160	12	--	--
06-19-97	19	50	--	1	--	--	170	11	--	--
06-23-97	18	52	--	1	--	--	170	12	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	20	52	--	1	--	--	170	12	--	--
07-16-97	19	54	--	2	--	--	170	12	--	--
07-21-97	19	52	--	2	--	--	170	11	--	--
08-04-97	18	50	--	1	--	--	160	11	--	--
08-11-97	17	48	--	1	--	--	150	10	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SCOTTS BLUFF COUNTY										
02-24-97	--	--	--	--	2.1	--	--	--	--	--
03-27-97	--	--	--	--	1.8	--	--	--	--	--
04-23-97	--	--	--	--	1.5	--	--	--	--	--
05-20-97	--	--	--	--	1.3	--	--	--	--	--
06-16-97	--	--	--	--	3.9	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	1.6	--	--	--	--	--
02-24-97	--	--	--	--	7.8	--	--	--	--	--
03-27-97	--	--	--	--	6.9	--	--	--	--	--
04-23-97	--	--	--	--	4.6	--	--	--	--	--
04-23-97	--	--	--	--	4.8	--	--	--	--	--
05-20-97	--	--	--	--	3.6	--	--	--	--	--
06-16-97	--	--	--	--	3.7	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	4.6	--	--	--	--	--
02-24-97	--	--	--	--	10	--	--	--	--	--
03-27-97	--	--	--	--	9.8	--	--	--	--	--
04-23-97	--	--	--	--	8.9	--	--	--	--	--
05-20-97	--	--	--	--	7.9	--	--	--	--	--
06-16-97	--	--	--	--	8.5	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	10	--	--	--	--	--
SIOUX COUNTY										
10-07-96	436	444	0.59	<0.010	0.33	0.030	0.04	--	0.17	--
11-25-96	--	--	--	--	0.96	--	--	--	--	--
12-30-96	--	--	--	--	0.67	--	--	--	--	--
01-28-97	--	--	--	--	0.48	--	--	--	--	--
02-26-97	--	--	--	--	1.4	--	--	--	--	--
03-24-97	--	--	--	--	0.67	--	--	--	--	--
04-07-97	--	--	--	--	1.4	--	--	--	--	--
04-16-97	--	--	--	--	0.38	--	--	--	--	--
04-21-97	--	--	--	--	1.4	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	0.65	--	--	--	--	--
05-12-97	--	--	--	--	0.58	--	--	--	--	--
05-19-97	--	--	--	--	0.50	--	--	--	--	--
05-27-97	--	--	--	--	0.58	--	--	--	--	--
06-02-97	--	--	--	--	0.49	--	--	--	--	--
06-09-97	--	--	--	--	0.77	--	--	--	--	--
06-19-97	--	--	--	--	1.4	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	1.2	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	0.97	--	--	--	--	--
07-21-97	--	--	--	--	0.62	--	--	--	--	--
08-04-97	--	--	--	--	0.48	--	--	--	--	--
08-11-97	--	--	--	--	0.56	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	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)	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)	IRON, DIS- SOLVED (µ G/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µ G/L AS MN) (01056)	RADON 222 TOTAL (PCI/L (82303)
SCOTTS BLUFF COUNTY										
02-24-97	--	--	--	--	--	--	--	--	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	500
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--	--	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	510
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
02-24-97	--	--	--	--	--	--	--	--	--	--
03-27-97	--	--	--	--	--	--	--	--	--	--
04-23-97	--	--	--	--	--	--	--	--	--	--
05-20-97	--	--	--	--	--	--	--	--	--	--
06-16-97	--	--	--	--	--	--	--	--	--	480
07-14-97	--	--	--	--	--	--	--	--	--	--
08-26-97	--	--	--	--	--	--	--	--	--	--
SIOUX COUNTY										
10-07-96	0.20	0.53	--	--	--	--	--	<3.0	2.0	--
11-25-96	--	--	--	--	--	--	--	--	--	--
12-30-96	--	--	--	--	--	--	--	--	--	--
01-28-97	--	--	--	--	--	--	--	--	--	--
02-26-97	--	--	--	--	--	--	--	--	--	--
03-24-97	--	--	--	--	--	--	--	--	--	--
04-07-97	--	--	--	--	--	--	--	--	--	--
04-16-97	--	--	--	--	--	--	--	--	--	--
04-21-97	--	--	--	--	--	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	--	--	--	--	--	--
05-12-97	--	--	--	--	--	--	--	--	--	--
05-19-97	--	--	--	--	--	--	--	--	--	--
05-27-97	--	--	--	--	--	--	--	--	--	--
06-02-97	--	--	--	--	--	--	--	--	--	--
06-09-97	--	--	--	--	--	--	--	--	--	--
06-19-97	--	--	--	--	--	--	--	--	--	<80
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	--	--	--	--	--	--
07-21-97	--	--	--	--	--	--	--	--	--	--
08-04-97	--	--	--	--	--	--	--	--	--	--
08-11-97	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420301103554801	24N 57W 15CBBD1	42 03 01 N	103 55 48 W	08-28-97	0745	112SDGV
				09-08-97	1040	112SDGV
				09-15-97	1010	112SDGV
				09-24-97	1545	112SDGV
				09-30-97	1250	112SDGV
420301103554802	24N57W15CBBD2			10-07-96	1355	112SDGV
				11-25-96	1015	112SDGV
				12-30-96	0950	112SDGV
				01-28-97	1435	112SDGV
				02-26-97	0955	112SDGV
				03-24-97	1435	112SDGV
				04-07-97	1600	112SDGV
				04-16-97	0840	112SDGV
				04-21-97	1150	112SDGV
				04-28-97	1415	112SDGV
				05-05-97	1155	112SDGV
				05-12-97	1145	112SDGV
				05-19-97	0815	112SDGV
				05-27-97	0945	112SDGV
				06-02-97	1510	112SDGV
				06-09-97	1030	112SDGV
				06-19-97	0940	112SDGV
				06-23-97	1025	112SDGV
				06-30-97	1430	112SDGV
				07-07-97	1045	112SDGV
				07-16-97	1030	112SDGV
				07-21-97	1100	112SDGV
				08-04-97	1040	112SDGV
				08-11-97	1515	112SDGV
				08-28-97	0805	112SDGV
				09-08-97	1100	112SDGV
				09-15-97	1030	112SDGV
				09-24-97	1600	112SDGV
				09-30-97	1305	112SDGV
420301103554803	24N 57W 15CBBD3			10-07-96	1410	112SDGV
				11-25-96	1030	112SDGV
				12-30-96	1010	112SDGV
				01-28-97	1455	112SDGV
				02-26-97	1015	112SDGV
				03-24-97	1500	112SDGV
				04-07-97	1620	112SDGV
				04-16-97	0900	112SDGV
				04-21-97	1210	112SDGV
				04-28-97	1435	112SDGV
				05-05-97	1215	112SDGV
				05-12-97	1205	112SDGV
				05-19-97	0835	112SDGV
				05-27-97	1005	112SDGV
				06-02-97	1530	112SDGV
				06-09-97	1055	112SDGV
				06-19-97	1000	112SDGV
				06-23-97	1045	112SDGV
				06-30-97	1450	112SDGV
				07-07-97	1110	112SDGV

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
08-28-97	--	127	4205	526	7.1	--	19.5	--	--	--
09-08-97	77.2	127	4205	544	7.3	--	17.0	--	200	51
09-15-97	76.9	127	4205	495	7.5	--	17.5	--	180	47
09-24-97	76.5	127	4205	492	7.2	--	17.5	--	190	52
09-30-97	76.4	127	4205	471	8.1	--	18.0	--	180	47
10-07-96	--	114	4205	594	7.8	--	16.0	6.7	200	51
11-25-96	--	114	4205	--	7.7	--	16.5	--	190	49
12-30-96	--	114	4205	596	7.7	--	16.5	--	180	46
01-28-97	--	114	4205	599	7.6	--	17.0	--	190	49
02-26-97	--	114	4205	538	8.7	--	14.0	--	190	49
03-24-97	--	114	4205	533	7.7	--	17.5	--	--	--
04-07-97	--	114	4205	532	7.8	--	17.5	--	200	50
04-16-97	--	114	4205	533	7.5	--	17.5	--	180	47
04-21-97	--	114	4205	534	7.7	--	18.0	--	190	49
04-28-97	--	114	4205	534	7.6	--	18.0	--	190	48
05-05-97	--	114	4205	534	7.6	--	18.0	--	200	50
05-12-97	--	114	4205	534	7.6	--	18.0	--	190	48
05-19-97	--	114	4205	536	8.0	--	18.0	--	200	51
05-27-97	--	114	4205	541	7.4	--	18.0	--	190	48
06-02-97	--	114	4205	546	7.6	--	19.0	--	190	49
06-09-97	--	114	4205	552	7.5	--	19.0	--	200	53
06-19-97	--	114	4205	554	7.4	--	19.0	--	210	54
06-23-97	--	114	4205	558	7.4	--	22.0	--	200	50
06-30-97	--	114	4205	553	7.4	--	19.0	--	--	--
07-07-97	--	114	4205	567	7.3	--	19.5	4.0	220	57
07-16-97	--	114	4205	569	7.4	--	20.0	5.6	220	57
07-21-97	--	114	4205	560	7.3	--	20.0	6.2	210	53
08-04-97	--	114	4205	546	7.4	--	20.0	6.3	210	54
08-11-97	--	114	4205	511	7.4	--	20.0	7.0	210	54
08-28-97	--	114	4205	456	7.2	--	19.0	--	--	--
09-08-97	77.5	114	4205	446	7.3	--	18.0	--	170	44
09-15-97	77.1	114	4205	446	7.6	--	17.5	--	170	42
09-24-97	76.7	114	4205	447	7.2	--	17.0	--	180	46
09-30-97	76.6	114	4205	447	8.1	--	17.0	--	170	43
10-07-96	--	95	4205	651	7.7	--	17.0	8.0	230	61
11-25-96	--	95	4205	--	7.7	--	17.0	--	230	62
12-30-96	--	95	4205	657	7.7	--	17.5	--	220	59
01-28-97	--	95	4205	638	7.6	--	17.0	--	220	59
02-26-97	--	95	4205	564	8.7	--	16.0	--	210	58
03-24-97	--	95	4205	571	7.8	--	17.5	--	--	--
04-07-97	--	95	4205	572	7.7	--	17.5	--	220	59
04-16-97	--	95	4205	574	7.6	--	17.5	--	210	56
04-21-97	--	95	4205	575	7.7	--	18.0	--	200	52
04-28-97	--	95	4205	575	7.6	--	18.0	--	210	57
05-05-97	--	95	4205	577	7.6	--	18.0	--	220	61
05-12-97	--	95	4205	572	7.5	--	18.0	--	210	57
05-19-97	--	95	4205	570	7.7	--	18.0	--	220	58
05-27-97	--	95	4205	572	7.4	--	18.0	--	210	55
06-02-97	--	95	4205	584	7.5	--	19.0	--	220	58
06-09-97	--	95	4205	590	7.5	--	18.5	--	220	61
06-19-97	--	95	4205	589	7.4	--	19.0	--	230	61
06-23-97	--	95	4205	585	7.3	--	22.5	--	240	67
06-30-97	--	95	4205	585	7.3	--	19.0	--	--	--
07-07-97	--	95	4205	595	7.3	--	19.0	6.1	230	61

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA _{CO} ₃) (90410)	SULFATE DIS- SOLVED (MG/L AS SO₄) (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 SiO₂) (00955)
SIOUX COUNTY										
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	17	50	--	2	--	--	130	9.2	--	--
09-15-97	16	47	--	2	--	--	120	7.9	--	--
09-24-97	15	41	--	1	--	--	110	7.6	--	--
09-30-97	15	39	--	1	--	--	110	7.1	--	--
10-07-96	18	53	36	2	3.6	149	140	9.8	0.40	16
11-25-96	17	53	--	2	--	--	150	9.8	--	--
12-30-96	17	51	--	2	--	--	140	10	--	--
01-28-97	17	52	--	2	--	--	150	10	--	--
02-26-97	17	53	--	2	--	--	150	9.9	--	--
03-24-97	--	--	--	--	--	--	--	--	--	--
04-07-97	18	54	--	2	--	--	150	9.7	--	--
04-16-97	16	49	--	2	--	--	150	9.4	--	--
04-21-97	17	51	--	2	--	--	140	9.8	--	--
04-28-97	17	49	--	2	--	--	140	10	--	--
05-05-97	18	51	--	2	--	--	150	10	--	--
05-12-97	17	49	--	2	--	--	150	10	--	--
05-19-97	18	51	--	2	--	--	140	10	--	--
05-27-97	17	51	--	2	--	--	140	10	--	--
06-02-97	17	51	--	2	--	--	150	10	--	--
06-09-97	17	50	--	2	--	--	150	10	--	--
06-19-97	18	53	--	2	--	--	150	10	--	--
06-23-97	17	50	--	2	--	--	150	11	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	19	51	--	2	--	--	160	11	--	--
07-16-97	19	53	--	2	--	--	160	11	--	--
07-21-97	19	51	--	2	--	--	160	11	--	--
08-04-97	18	45	--	1	--	--	160	11	--	--
08-11-97	18	42	--	1	--	--	140	9.7	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	15	37	--	1	--	--	110	7.1	--	--
09-15-97	15	39	--	1	--	--	110	7.5	--	--
09-24-97	15	41	--	1	--	--	110	7.8	--	--
09-30-97	14	38	--	1	--	--	100	7.0	--	--
10-07-96	19	53	33	2	4.8	171	160	10	0.40	28
11-25-96	19	55	--	2	--	--	170	11	--	--
12-30-96	18	53	--	2	--	--	160	11	--	--
01-28-97	17	51	--	2	--	--	150	10	--	--
02-26-97	17	52	--	2	--	--	150	10	--	--
03-24-97	--	--	--	--	--	--	--	--	--	--
04-07-97	18	55	--	2	--	--	160	11	--	--
04-16-97	17	51	--	2	--	--	150	11	--	--
04-21-97	17	51	--	2	--	--	150	10	--	--
04-28-97	17	50	--	1	--	--	150	11	--	--
05-05-97	17	52	--	2	--	--	160	10	--	--
05-12-97	17	51	--	2	--	--	160	11	--	--
05-19-97	17	52	--	2	--	--	160	11	--	--
05-27-97	17	50	--	2	--	--	160	11	--	--
06-02-97	17	51	--	1	--	--	160	11	--	--
06-09-97	17	49	--	1	--	--	170	11	--	--
06-19-97	18	52	--	2	--	--	160	11	--	--
06-23-97	17	49	--	1	--	--	160	11	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	19	50	--	1	--	--	160	11	--	--

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(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	0.87	--	--	--	--	--
09-15-97	--	--	--	--	0.38	--	--	--	--	--
09-24-97	--	--	--	--	0.30	--	--	--	--	--
09-30-97	--	--	--	--	0.19	--	--	--	--	--
10-07-96	387	382	0.53	<0.010	0.14	<0.015	--	--	--	--
11-25-96	--	--	--	--	0.06	--	--	--	--	--
12-30-96	--	--	--	--	0.14	--	--	--	--	--
01-28-97	--	--	--	--	0.15	--	--	--	--	--
02-26-97	--	--	--	--	0.20	--	--	--	--	--
03-24-97	--	--	--	--	0.19	--	--	--	--	--
04-07-97	--	--	--	--	0.17	--	--	--	--	--
04-16-97	--	--	--	--	0.16	--	--	--	--	--
04-21-97	--	--	--	--	0.24	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	0.22	--	--	--	--	--
05-12-97	--	--	--	--	0.23	--	--	--	--	--
05-19-97	--	--	--	--	0.22	--	--	--	--	--
05-27-97	--	--	--	--	0.28	--	--	--	--	--
06-02-97	--	--	--	--	0.25	--	--	--	--	--
06-09-97	--	--	--	--	0.32	--	--	--	--	--
06-19-97	--	--	--	--	0.25	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.37	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	0.20	--	--	--	--	--
07-21-97	--	--	--	--	0.16	--	--	--	--	--
08-04-97	--	--	--	--	0.18	--	--	--	--	--
08-11-97	--	--	--	--	0.51	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	0.25	--	--	--	--	--
09-15-97	--	--	--	--	0.14	--	--	--	--	--
09-24-97	--	--	--	--	0.13	--	--	--	--	--
09-30-97	--	--	--	--	0.15	--	--	--	--	--
10-07-96	438	439	0.60	<0.010	0.13	0.020	0.03	--	--	--
11-25-96	--	--	--	--	0.18	--	--	--	--	--
12-30-96	--	--	--	--	0.18	--	--	--	--	--
01-28-97	--	--	--	--	0.15	--	--	--	--	--
02-26-97	--	--	--	--	0.44	--	--	--	--	--
03-24-97	--	--	--	--	0.26	--	--	--	--	--
04-07-97	--	--	--	--	0.25	--	--	--	--	--
04-16-97	--	--	--	--	0.25	--	--	--	--	--
04-21-97	--	--	--	--	0.34	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	0.36	--	--	--	--	--
05-12-97	--	--	--	--	0.33	--	--	--	--	--
05-19-97	--	--	--	--	0.24	--	--	--	--	--
05-27-97	--	--	--	--	0.51	--	--	--	--	--
06-02-97	--	--	--	--	0.51	--	--	--	--	--
06-09-97	--	--	--	--	0.81	--	--	--	--	--
06-19-97	--	--	--	--	0.74	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.64	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER		LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT					
SIOUX COUNTY												
420301103554803	24N	57W 15CBBD3	42 03 01 N	103 55 48 W	07-16-97	1050	112SDGV					
					07-21-97	1120	112SDGV					
					08-04-97	1100	112SDGV					
					08-11-97	1535	112SDGV					
					08-28-97	0825	112SDGV					
					09-08-97	1120	112SDGV					
					09-15-97	1050	112SDGV					
					09-24-97	1620	112SDGV					
					09-30-97	1320	112SDGV					
					420316103563201	24N	57W 16BDAA1	42 03 16 N	103 56 32 W	10-07-96	1805	112SDGV
										11-25-96	1450	112SDGV
										12-30-96	1435	112SDGV
01-28-97	1020	112SDGV										
02-25-97	1040	112SDGV										
03-24-97	1535	112SDGV										
04-21-97	0850	112SDGV										
04-28-97	1005	112SDGV										
05-05-97	1355	112SDGV										
05-12-97	1330	112SDGV										
05-12-97	1335	112SDGV										
05-21-97	0815	112SDGV										
05-27-97	1335	112SDGV										
06-02-97	0820	112SDGV										
06-09-97	1225	112SDGV										
06-18-97	1525	112SDGV										
06-23-97	1235	112SDGV										
06-30-97	0820	112SDGV										
07-08-97	1035	112SDGV										
07-16-97	1450	112SDGV										
07-21-97	1320	112SDGV										
07-28-97	0920	112SDGV										
08-04-97	1150	112SDGV										
08-11-97	0835	112SDGV										
08-28-97	1115	112SDGV										
09-08-97	1325	112SDGV										
09-15-97	1320	112SDGV										
09-23-97	0845	112SDGV										
09-30-97	0745	112SDGV										
420313103563101	24N	57W 16BDAD1	42 03 13 N	103 56 31 W	10-07-96	1450	112SDGV					
					11-25-96	1100	112SDGV					
					12-30-96	1045	112SDGV					
					01-28-97	1130	112SDGV					
					02-25-97	1115	112SDGV					
					03-25-97	1335	112SDGV					
					04-21-97	0925	112SDGV					
					04-28-97	1115	112SDGV					
					05-05-97	1445	112SDGV					
					05-12-97	1415	112SDGV					
					05-21-97	0845	112SDGV					
					05-27-97	1505	112SDGV					
					06-02-97	0940	112SDGV					
					06-09-97	1345	112SDGV					
					06-19-97	0720	112SDGV					

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
07-16-97	--	95	4205	599	7.4	--	19.5	6.2	250	66
07-21-97	--	95	4205	597	7.2	--	19.5	6.3	230	63
08-04-97	--	95	4205	580	7.4	--	19.5	7.0	220	59
08-11-97	--	95	4205	574	7.4	--	19.5	6.8	230	62
08-28-97	--	95	4205	541	7.3	--	19.0	--	--	--
09-08-97	77.5	95	4205	506	7.3	--	18.5	--	190	49
09-15-97	77.1	95	4205	499	7.6	--	18.0	--	190	50
09-24-97	76.7	95	4205	490	7.2	--	18.0	--	190	51
09-30-97	76.7	95	4205	488	8.1	--	18.0	--	180	50
10-07-96	--	103	4225	368	7.9	--	13.5	8.5	120	33
11-25-96	--	103	4225	369	7.7	--	13.0	--	120	33
12-30-96	--	103	4225	379	7.8	--	14.5	--	--	--
01-28-97	--	103	4225	397	7.8	--	13.5	--	140	39
02-25-97	--	103	4225	359	7.8	--	13.0	--	150	43
03-24-97	--	103	4225	361	8.0	--	13.0	--	--	--
04-21-97	--	103	4225	356	7.9	--	13.0	--	130	38
04-28-97	--	103	4225	354	8.1	--	13.5	--	130	37
05-05-97	--	103	4225	352	7.8	--	14.5	--	130	37
05-12-97	--	103	4225	346	7.7	--	14.0	--	130	38
05-12-97	--	103	4225	346	7.7	--	14.0	--	130	37
05-21-97	--	103	4225	340	7.8	--	13.5	--	130	36
05-27-97	--	103	4225	359	7.6	--	13.5	--	130	38
06-02-97	--	103	4225	364	7.5	--	13.5	--	130	36
06-09-97	--	103	4225	359	7.6	--	13.5	--	130	36
06-18-97	--	103	4225	360	7.5	--	14.0	--	140	39
06-23-97	--	103	4225	360	7.4	--	17.5	--	140	40
06-30-97	--	103	4225	350	7.3	--	14.5	--	--	--
07-08-97	--	103	4225	345	7.4	--	14.0	8.0	130	36
07-16-97	--	103	4225	352	7.6	--	14.0	8.0	130	37
07-21-97	--	103	4225	398	7.4	--	14.5	7.9	150	44
07-28-97	--	103	4225	416	7.3	--	14.0	--	160	47
08-04-97	--	103	4225	390	7.5	--	14.0	8.4	140	41
08-11-97	--	103	4225	365	7.1	--	13.5	8.1	140	40
08-28-97	--	103	4225	352	7.4	--	14.0	--	--	--
09-08-97	83.6	103	4225	399	7.5	--	14.0	--	150	43
09-15-97	83.2	103	4225	436	7.7	--	14.0	--	170	47
09-23-97	82.9	103	4225	479	7.7	--	13.5	--	190	54
09-30-97	82.6	103	4225	451	--	--	13.5	--	170	50
10-07-96	--	110	4202	468	7.9	--	15.5	8.1	150	42
11-25-96	--	110	4202	--	7.9	--	16.5	--	120	33
12-30-96	--	110	4202	363	7.8	--	16.5	--	120	32
01-28-97	--	110	4202	363	8.0	--	15.0	--	120	33
02-25-97	--	110	4202	323	7.9	--	14.5	--	130	36
03-25-97	--	110	4202	323	7.9	--	14.5	--	--	--
04-21-97	--	110	4202	323	7.9	--	14.0	--	120	33
04-28-97	--	110	4202	323	8.3	--	14.0	--	120	32
05-05-97	--	110	4202	323	7.8	--	15.0	--	120	34
05-12-97	--	110	4202	323	7.7	--	14.0	--	120	34
05-21-97	--	110	4202	323	7.9	--	14.0	--	130	36
05-27-97	--	110	4202	326	7.7	--	14.0	--	120	34
06-02-97	--	110	4202	346	7.7	--	14.5	--	130	35
06-09-97	--	110	4202	378	7.6	--	14.5	--	140	41
06-19-97	--	110	4202	394	7.6	--	14.0	--	160	44

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SIOUX COUNTY										
07-16-97	20	52	--	1	--	--	160	11	--	--
07-21-97	19	50	--	1	--	--	160	11	--	--
08-04-97	18	50	--	1	--	--	160	11	--	--
08-11-97	18	49	--	1	--	--	160	11	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	16	47	--	1	--	--	120	8.4	--	--
09-15-97	16	48	--	2	--	--	120	7.7	--	--
09-24-97	15	46	--	1	--	--	120	8.0	--	--
09-30-97	15	44	--	1	--	--	110	7.5	--	--
10-07-96	8.5	27	32	1	6.0	149	15	5.6	0.50	58
11-25-96	8.0	29	--	1	--	--	15	5.6	--	--
12-30-96	--	--	--	--	--	--	16	6.6	--	--
01-28-97	10	31	--	1	--	--	21	7.1	--	--
02-25-97	10	34	--	1	--	--	23	7.2	--	--
03-24-97	--	--	--	--	--	--	--	--	--	--
04-21-97	9.5	29	--	1	--	--	21	6.1	--	--
04-28-97	9.1	28	--	1	--	--	20	6.4	--	--
05-05-97	9.2	29	--	1	--	--	20	6.2	--	--
05-12-97	9.0	28	--	1	--	--	18	5.7	--	--
05-12-97	8.9	28	--	1	--	--	18	5.8	--	--
05-21-97	8.7	28	--	1	--	--	16	5.6	--	--
05-27-97	9.2	29	--	1	--	--	21	6.2	--	--
06-02-97	9.2	29	--	1	--	--	22	7.0	--	--
06-09-97	8.9	29	--	1	--	--	21	6.9	--	--
06-18-97	10	29	--	1	--	--	20	6.3	--	--
06-23-97	9.6	31	--	1	--	--	20	6.3	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	9.0	29	--	1	--	--	16	5.6	--	--
07-16-97	9.4	29	--	1	--	--	19	5.8	--	--
07-21-97	11	31	--	1	--	--	42	7.6	--	--
07-28-97	11	32	--	1	--	--	56	8.6	--	--
08-04-97	10	30	--	1	--	--	32	9.1	--	--
08-11-97	9.6	29	--	1	--	--	23	8.3	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	11	30	--	1	--	--	38	9.5	--	--
09-15-97	12	34	--	1	--	--	65	9.5	--	--
09-23-97	13	37	--	1	--	--	87	10	--	--
09-30-97	12	34	--	1	--	--	65	11	--	--
10-07-96	11	32	30	1	6.7	151	70	7.1	0.40	55
11-25-96	8.6	28	--	1	--	--	14	4.8	--	--
12-30-96	9.0	28	--	1	--	--	15	5.1	--	--
01-28-97	8.8	26	--	1	--	--	15	5.2	--	--
02-25-97	9.4	28	--	1	--	--	25	5.8	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	8.9	26	--	1	--	--	14	4.9	--	--
04-28-97	8.8	26	--	1	--	--	14	5.1	--	--
05-05-97	8.9	26	--	1	--	--	14	5.1	--	--
05-12-97	8.9	25	--	1	--	--	14	4.9	--	--
05-21-97	9.5	27	--	1	--	--	12	4.9	--	--
05-27-97	9.0	28	--	1	--	--	17	5.0	--	--
06-02-97	9.5	27	--	1	--	--	24	6.0	--	--
06-09-97	10	29	--	1	--	--	41	6.5	--	--
06-19-97	11	29	--	1	--	--	52	6.7	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
07-16-97	--	--	--	--	0.66	--	--	--	--	--
07-21-97	--	--	--	--	0.64	--	--	--	--	--
08-04-97	--	--	--	--	0.40	--	--	--	--	--
08-11-97	--	--	--	--	0.44	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	0.17	--	--	--	--	--
09-15-97	--	--	--	--	0.15	--	--	--	--	--
09-24-97	--	--	--	--	0.14	--	--	--	--	--
09-30-97	--	--	--	--	0.12	--	--	--	--	--
10-07-96	276	270	0.38	<0.010	6.2	<0.015	--	--	--	--
11-25-96	--	--	--	--	6.3	--	--	--	--	--
12-30-96	--	--	--	--	5.5	--	--	--	--	--
01-28-97	--	--	--	--	6.1	--	--	--	--	--
02-25-97	--	--	--	--	7.2	--	--	--	--	--
03-24-97	--	--	--	--	6.7	--	--	--	--	--
04-21-97	--	--	--	--	6.8	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	6.6	--	--	--	--	--
05-12-97	--	--	--	--	7.2	--	--	--	--	--
05-12-97	--	--	--	--	6.8	--	--	--	--	--
05-21-97	--	--	--	--	5.7	--	--	--	--	--
05-27-97	--	--	--	--	6.4	--	--	--	--	--
06-02-97	--	--	--	--	6.7	--	--	--	--	--
06-09-97	--	--	--	--	6.7	--	--	--	--	--
06-18-97	--	--	--	--	6.0	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	6.6	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	6.4	--	--	--	--	--
07-21-97	--	--	--	--	6.0	--	--	--	--	--
07-28-97	--	--	--	--	5.2	--	--	--	--	--
08-04-97	--	--	--	--	6.1	--	--	--	--	--
08-11-97	--	--	--	--	6.2	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	6.3	--	--	--	--	--
09-15-97	--	--	--	--	4.7	--	--	--	--	--
09-23-97	--	--	--	--	4.0	--	--	--	--	--
09-30-97	--	--	--	--	5.2	--	--	--	--	--
10-07-96	332	332	0.45	<0.010	3.8	<0.015	--	--	--	--
11-25-96	--	--	--	--	6.2	--	--	--	--	--
12-30-96	--	--	--	--	4.8	--	--	--	--	--
01-28-97	--	--	--	--	5.5	--	--	--	--	--
02-25-97	--	--	--	--	6.4	--	--	--	--	--
03-25-97	--	--	--	--	5.8	--	--	--	--	--
04-21-97	--	--	--	--	5.8	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	6.2	--	--	--	--	--
05-12-97	--	--	--	--	6.1	--	--	--	--	--
05-21-97	--	--	--	--	5.2	--	--	--	--	--
05-27-97	--	--	--	--	5.4	--	--	--	--	--
06-02-97	--	--	--	--	5.0	--	--	--	--	--
06-09-97	--	--	--	--	5.0	--	--	--	--	--
06-19-97	--	--	--	--	4.5	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420313103563101	24N 57W 16BDAD	42 03 13 N	103 56 31 W	06-23-97	1340	112SDGV
				06-30-97	0925	112SDGV
				07-08-97	1305	112SDGV
				07-16-97	1120	112SDGV
				07-21-97	1435	112SDGV
				07-28-97	1035	112SDGV
				08-04-97	1355	112SDGV
				08-11-97	0955	112SDGV
				08-28-97	1005	112SDGV
				09-08-97	1430	112SDGV
				09-15-97	1350	112SDGV
				09-23-97	0920	112SDGV
				09-30-97	0905	112SDGV
420313103563102	24N 57W 16BDAD2			10-07-96	1510	112SDGV
				11-25-96	1120	112SDGV
				12-30-96	1105	112SDGV
				01-28-97	1145	112SDGV
				02-25-97	1135	112SDGV
				03-25-97	1350	112SDGV
				04-21-97	0940	112SDGV
				04-28-97	1140	112SDGV
				05-05-97	1500	112SDGV
				05-12-97	1435	112SDGV
				05-21-97	0905	112SDGV
				05-27-97	1525	112SDGV
				06-02-97	1000	112SDGV
				06-09-97	1405	112SDGV
				06-19-97	0740	112SDGV
				06-23-97	1400	112SDGV
				06-30-97	0945	112SDGV
				07-08-97	1325	112SDGV
				07-16-97	1140	112SDGV
				07-21-97	1455	112SDGV
				07-28-97	1055	112SDGV
				08-04-97	1415	112SDGV
				08-11-97	1015	112SDGV
				08-28-97	1025	112SDGV
				09-08-97	1445	112SDGV
				09-15-97	1405	112SDGV
				09-23-97	0940	112SDGV
				09-30-97	0925	112SDGV
420313103563103	24N 57W 16BDAD3			10-07-96	1530	112SDGV
				11-25-96	1140	112SDGV
				12-30-96	1125	112SDGV
				01-28-97	1200	112SDGV
				02-25-97	1155	112SDGV
				03-25-97	1410	112SDGV
				04-21-97	1000	112SDGV
				04-28-97	1200	112SDGV
				05-05-97	1515	112SDGV
				05-12-97	1455	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
06-23-97	--	110	4202	368	7.5	--	18.0	--	150	41
06-30-97	--	110	4202	343	7.5	--	14.5	--	--	--
07-08-97	--	110	4202	332	7.6	--	15.0	7.2	120	35
07-16-97	--	110	4202	346	7.6	--	15.5	7.8	130	36
07-21-97	--	110	4202	368	7.4	--	15.5	8.4	150	41
07-28-97	--	110	4202	375	7.5	--	14.5	--	140	41
08-04-97	--	110	4202	371	7.5	--	15.0	8.2	140	38
08-11-97	--	110	4202	366	7.4	--	14.5	8.9	140	40
08-28-97	--	110	4202	380	7.5	--	14.5	--	--	--
09-08-97	76.7	110	4202	395	7.5	--	16.0	9.7	150	41
09-15-97	76.2	110	4202	398	7.7	--	15.0	--	150	41
09-23-97	75.9	110	4202	397	7.7	--	15.0	--	150	44
09-30-97	--	110	4202	--	--	--	--	--	150	41
10-07-96	--	92	4202	589	7.8	--	19.0	6.5	190	50
11-25-96	--	92	4202	--	7.8	--	20.0	--	130	32
12-30-96	--	92	4202	386	7.8	--	18.5	--	120	30
01-28-97	--	92	4202	379	7.9	--	16.5	--	130	34
02-25-97	--	92	4202	340	7.8	--	15.5	--	130	34
03-25-97	--	92	4202	339	7.7	--	15.0	--	--	--
04-21-97	--	92	4202	341	7.8	--	14.5	--	130	34
04-28-97	--	92	4202	343	8.2	--	14.5	--	130	33
05-05-97	--	92	4202	346	7.7	--	15.5	--	130	34
05-12-97	--	92	4202	346	7.7	--	15.0	--	130	34
05-21-97	--	92	4202	391	7.8	--	14.5	--	150	38
05-27-97	--	92	4202	560	7.5	--	14.0	--	240	62
06-02-97	--	92	4202	578	7.5	--	15.5	--	230	59
06-09-97	--	92	4202	571	7.5	--	16.5	--	220	56
06-19-97	--	92	4202	560	7.6	--	17.0	--	230	59
06-23-97	--	92	4202	548	7.4	--	21.0	--	210	55
06-30-97	--	92	4202	545	7.5	--	17.0	--	--	--
07-08-97	--	92	4202	471	7.5	--	17.5	7.4	190	50
07-16-97	--	92	4202	517	7.5	--	16.5	7.3	200	51
07-21-97	--	92	4202	503	7.4	--	16.0	7.5	190	51
07-28-97	--	92	4202	483	7.6	--	15.5	--	190	51
08-04-97	--	92	4202	474	7.6	--	15.5	7.6	170	45
08-11-97	--	92	4202	467	7.5	--	15.0	7.3	180	48
08-28-97	--	92	4202	455	7.5	--	16.5	--	--	--
09-08-97	76.5	92	4202	447	7.5	--	18.0	--	170	44
09-15-97	76.0	92	4202	444	7.7	--	18.5	--	160	42
09-23-97	75.7	92	4202	444	7.7	--	18.0	--	170	44
09-30-97	75.4	92	4202	453	8.1	--	19.0	--	160	44
10-07-96	--	86	4202	598	7.8	--	20.0	7.7	190	48
11-25-96	--	86	4202	--	7.6	--	20.5	--	170	42
12-30-96	--	86	4202	466	7.8	--	18.5	--	150	37
01-28-97	--	86	4202	483	7.8	--	17.0	--	170	44
02-25-97	--	86	4202	426	7.8	--	16.0	--	160	42
03-25-97	--	86	4202	411	7.6	--	15.5	--	--	--
04-21-97	--	86	4202	412	7.7	--	15.0	--	160	41
04-28-97	--	86	4202	410	8.1	--	15.5	--	160	40
05-05-97	--	86	4202	413	7.6	--	15.5	--	160	42
05-12-97	--	86	4202	416	7.6	--	15.5	--	170	43

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SIOUX COUNTY										
06-23-97	10	30	--	1	--	--	38	6.2	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	9.1	28	--	1	--	--	16	5.3	--	--
07-16-97	9.8	27	--	1	--	--	25	5.4	--	--
07-21-97	11	29	--	1	--	--	37	6.2	--	--
07-28-97	10	30	--	1	--	--	41	6.7	--	--
08-04-97	10	30	--	1	--	--	38	6.1	--	--
08-11-97	10	30	--	1	--	--	35	6.2	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	11	31	--	1	--	--	58	6.3	--	--
09-15-97	12	32	--	1	--	--	63	6.5	--	--
09-23-97	11	33	--	1	--	--	64	6.9	--	--
09-30-97	11	31	--	1	--	--	61	5.9	--	--
10-07-96	16	54	37	2	5.4	148	140	10	0.50	27
11-25-96	11	42	--	2	--	--	36	8.5	--	--
12-30-96	9.8	35	--	1	--	--	19	6.7	--	--
01-28-97	10	33	--	1	--	--	18	6.3	--	--
02-25-97	11	31	--	1	--	--	19	6.2	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	11	29	--	1	--	--	19	6.1	--	--
04-28-97	11	29	--	1	--	--	19	6.3	--	--
05-05-97	12	30	--	1	--	--	20	6.2	--	--
05-12-97	11	28	--	1	--	--	19	6.2	--	--
05-21-97	13	30	--	1	--	--	32	8.0	--	--
05-27-97	21	39	--	1	--	--	150	11	--	--
06-02-97	20	43	--	1	--	--	170	11	--	--
06-09-97	19	44	--	1	--	--	160	11	--	--
06-19-97	19	43	--	1	--	--	160	11	--	--
06-23-97	17	42	--	1	--	--	160	11	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	15	40	--	1	--	--	86	10	--	--
07-16-97	17	42	--	1	--	--	140	9.4	--	--
07-21-97	16	41	--	1	--	--	120	9.2	--	--
07-28-97	16	39	--	1	--	--	120	8.4	--	--
08-04-97	15	37	--	1	--	--	120	7.8	--	--
08-11-97	15	38	--	1	--	--	120	8.0	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	14	39	--	1	--	--	100	7.2	--	--
09-15-97	14	41	--	1	--	--	110	7.2	--	--
09-23-97	13	39	--	1	--	--	110	7.8	--	--
09-30-97	13	39	--	1	--	--	100	7.3	--	--
10-07-96	16	51	37	2	4.4	152	150	11	0.50	22
11-25-96	15	48	--	2	--	--	97	10	--	--
12-30-96	13	39	--	1	--	--	55	10	--	--
01-28-97	15	39	--	1	--	--	58	12	--	--
02-25-97	14	36	--	1	--	--	53	11	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	14	33	--	1	--	--	38	10	--	--
04-28-97	14	32	--	1	--	--	38	10	--	--
05-05-97	15	33	--	1	--	--	37	10	--	--
05-12-97	15	32	--	1	--	--	38	10	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	5.2	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	5.3	--	--	--	--	--
07-21-97	--	--	--	--	5.0	--	--	--	--	--
07-28-97	--	--	--	--	4.7	--	--	--	--	--
08-04-97	--	--	--	--	5.3	--	--	--	--	--
08-11-97	--	--	--	--	4.7	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	3.6	--	--	--	--	--
09-15-97	--	--	--	--	3.2	--	--	--	--	--
09-23-97	--	--	--	--	3.1	--	--	--	--	--
09-30-97	--	--	--	--	2.9	--	--	--	--	--
10-07-96	390	393	0.53	<0.010	0.22	0.050	0.06	--	--	--
11-25-96	--	--	--	--	6.2	--	--	--	--	--
12-30-96	--	--	--	--	4.9	--	--	--	--	--
01-28-97	--	--	--	--	5.8	--	--	--	--	--
02-25-97	--	--	--	--	6.7	--	--	--	--	--
03-25-97	--	--	--	--	6.0	--	--	--	--	--
04-21-97	--	--	--	--	6.2	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	6.4	--	--	--	--	--
05-12-97	--	--	--	--	6.5	--	--	--	--	--
05-21-97	--	--	--	--	6.5	--	--	--	--	--
05-27-97	--	--	--	--	1.3	--	--	--	--	--
06-02-97	--	--	--	--	0.70	--	--	--	--	--
06-09-97	--	--	--	--	0.22	--	--	--	--	--
06-19-97	--	--	--	--	0.14	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.15	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	1.0	--	--	--	--	--
07-21-97	--	--	--	--	1.6	--	--	--	--	--
07-28-97	--	--	--	--	0.45	--	--	--	--	--
08-04-97	--	--	--	--	0.40	--	--	--	--	--
08-11-97	--	--	--	--	0.34	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	0.31	--	--	--	--	--
09-15-97	--	--	--	--	0.25	--	--	--	--	--
09-23-97	--	--	--	--	0.22	--	--	--	--	--
09-30-97	--	--	--	--	0.25	--	--	--	--	--
10-07-96	396	395	0.54	<0.010	0.14	<0.015	--	--	--	--
11-25-96	--	--	--	--	2.9	--	--	--	--	--
12-30-96	--	--	--	--	5.2	--	--	--	--	--
01-28-97	--	--	--	--	5.6	--	--	--	--	--
02-25-97	--	--	--	--	6.7	--	--	--	--	--
03-25-97	--	--	--	--	6.9	--	--	--	--	--
04-21-97	--	--	--	--	7.3	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	7.8	--	--	--	--	--
05-12-97	--	--	--	--	8.4	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIOUX COUNTY						
420313103563103	24N 57W 16BDAD3	42 03 13 N	103 56 31 W	05-21-97	0925	112SDGV
				05-27-97	1545	112SDGV
				06-02-97	1020	112SDGV
				06-09-97	1425	112SDGV
				06-19-97	0800	112SDGV
				06-23-97	1420	112SDGV
				06-30-97	1005	112SDGV
				07-08-97	1345	112SDGV
				07-16-97	1200	112SDGV
				07-21-97	1515	112SDGV
				07-28-97	1115	112SDGV
				08-04-97	1435	112SDGV
				08-11-97	1035	112SDGV
				08-28-97	1045	112SDGV
				09-08-97	1505	112SDGV
				09-15-97	1425	112SDGV
				09-23-97	1000	112SDGV
				09-30-97	0945	112SDGV
420234103564001	24N 57W 16CDDA1	42 02 34 N	103 56 40 W	10-07-96	1605	112SDGV
				11-25-96	1310	112SDGV
				12-30-96	1255	112SDGV
				01-28-97	1325	112SDGV
				02-25-97	1545	112SDGV
				03-25-97	1430	112SDGV
				04-21-97	1030	112SDGV
				04-28-97	1240	112SDGV
				05-05-97	1540	112SDGV
				05-12-97	1520	112SDGV
				05-20-97	1515	112SDGV
				05-27-97	1615	112SDGV
				05-27-97	1620	112SDGV
				06-02-97	1050	112SDGV
				06-09-97	1455	112SDGV
				06-19-97	0825	112SDGV
				06-19-97	0830	112SDGV
				06-23-97	1450	112SDGV
				06-30-97	--	112SDGV
				06-30-97	1030	112SDGV
				06-30-97	1030	112SDGV
				07-08-97	1415	112SDGV
				07-16-97	1340	112SDGV
				07-28-97	1140	112SDGV
				08-04-97	1505	112SDGV
				08-11-97	1100	112SDGV
				08-28-97	0850	112SDGV
				08-28-97	0855	112SDGV
				09-08-97	1535	112SDGV
				09-15-97	1450	112SDGV
				09-23-97	1015	112SDGV
				09-30-97	1010	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
05-21-97	--	86	4202	530	7.7	--	15.0	--	230	59
05-27-97	--	86	4202	587	7.5	--	15.0	--	240	61
06-02-97	--	86	4202	582	7.6	--	16.5	--	210	52
06-09-97	--	86	4202	566	7.5	--	17.5	--	210	54
06-19-97	--	86	4202	564	7.5	--	17.5	--	230	61
06-23-97	--	86	4202	554	7.4	--	21.0	--	230	59
06-30-97	--	86	4202	550	7.5	--	17.5	--	--	--
07-08-97	--	86	4202	534	7.5	--	18.0	7.0	220	56
07-16-97	--	86	4202	526	7.4	--	16.5	7.4	210	53
07-21-97	--	86	4202	508	7.4	--	16.5	7.6	200	52
07-28-97	--	86	4202	483	7.6	--	15.5	--	190	49
08-04-97	--	86	4202	472	7.5	--	16.0	7.4	180	45
08-11-97	--	86	4202	464	7.5	--	15.5	6.9	180	46
08-28-97	--	86	4202	452	7.4	--	17.5	--	--	--
09-08-97	76.6	86	4202	448	7.5	--	19.0	--	170	42
09-15-97	76.0	86	4202	449	7.6	--	19.5	--	170	42
09-23-97	75.7	86	4202	459	7.6	--	19.5	--	180	46
09-30-97	75.5	86	4202	466	8.0	--	20.0	--	180	46
10-07-96	--	100	4192	751	7.6	--	17.5	7.7	280	80
11-25-96	--	100	4192	675	7.3	--	16.5	--	240	68
12-30-96	--	100	4192	634	7.6	--	16.5	--	220	63
01-28-97	--	100	4192	649	7.5	--	16.5	--	240	70
02-25-97	--	100	4192	578	7.6	--	17.0	--	230	67
03-25-97	--	100	4192	596	7.5	--	16.5	--	--	--
04-21-97	--	100	4192	588	7.6	--	16.5	--	220	63
04-28-97	--	100	4192	585	7.5	--	17.0	--	220	64
05-05-97	--	100	4192	584	7.5	--	17.0	--	230	67
05-12-97	--	100	4192	583	7.5	--	17.0	--	220	63
05-20-97	--	100	4192	583	7.5	--	16.5	--	240	68
05-27-97	--	100	4192	580	7.6	--	13.5	--	220	62
05-27-97	--	100	4192	580	7.6	--	13.5	--	220	61
06-02-97	--	100	4192	579	7.5	--	17.0	--	220	64
06-09-97	--	100	4192	577	7.4	--	17.0	--	230	66
06-19-97	--	100	4192	572	7.3	--	17.0	--	230	65
06-19-97	--	100	4192	572	7.3	--	17.0	--	230	67
06-23-97	--	100	4192	568	7.3	--	19.5	--	220	63
06-30-97	--	100	4192	564	7.3	--	16.5	--	--	--
06-30-97	--	100	4192	564	7.3	--	16.5	--	--	--
06-30-97	--	100	4192	564	7.3	--	16.5	--	--	--
07-08-97	--	100	4192	557	7.3	--	17.0	6.2	220	64
07-16-97	--	100	4192	565	7.4	--	17.0	6.1	220	62
07-28-97	--	100	4192	572	7.4	--	17.0	--	220	61
08-04-97	--	100	4192	590	7.3	--	17.0	6.7	210	58
08-11-97	--	100	4192	578	7.3	--	16.5	6.4	230	66
08-28-97	--	100	4192	608	7.2	--	17.0	--	--	--
08-28-97	--	100	4192	608	7.2	--	17.0	--	--	--
09-08-97	70.3	100	4192	606	7.3	--	17.5	--	240	68
09-15-97	70.1	100	4192	598	7.5	--	17.5	--	230	66
09-23-97	69.6	100	4192	604	7.5	--	16.5	--	250	72
09-30-97	69.1	100	4192	--	8.0	--	17.0	--	250	73

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA _{CO} ₃) (90410)	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)
SIOUX COUNTY										
05-21-97	19	38	--	1	--	--	120	11	--	--
05-27-97	20	48	--	1	--	--	160	12	--	--
06-02-97	19	48	--	1	--	--	170	11	--	--
06-09-97	19	48	--	1	--	--	160	11	--	--
06-19-97	19	44	--	1	--	--	160	11	--	--
06-23-97	19	47	--	1	--	--	160	11	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	19	44	--	1	--	--	150	10	--	--
07-16-97	18	42	--	1	--	--	140	9.0	--	--
07-21-97	17	40	--	1	--	--	130	8.8	--	--
07-28-97	16	40	--	1	--	--	120	8.2	--	--
08-04-97	15	40	--	1	--	--	120	7.5	--	--
08-11-97	15	40	--	1	--	--	110	7.5	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	15	41	--	1	--	--	100	7.2	--	--
09-15-97	15	42	--	1	--	--	110	7.4	--	--
09-23-97	15	40	--	1	--	--	120	7.9	--	--
09-30-97	15	39	--	1	--	--	110	7.7	--	--
10-07-96	19	54	29	1	7.7	232	140	11	0.40	40
11-25-96	17	49	--	1	--	--	110	9.5	--	--
12-30-96	15	46	--	1	--	--	120	10	--	--
01-28-97	16	47	--	1	--	--	140	11	--	--
02-25-97	16	46	--	1	--	--	150	11	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	16	47	--	1	--	--	160	11	--	--
04-28-97	16	45	--	1	--	--	160	11	--	--
05-05-97	16	48	--	1	--	--	160	11	--	--
05-12-97	16	45	--	1	--	--	160	11	--	--
05-20-97	16	47	--	1	--	--	160	11	--	--
05-27-97	17	46	--	1	--	--	150	11	--	--
05-27-97	16	45	--	1	--	--	150	10	--	--
06-02-97	16	46	--	1	--	--	150	10	--	--
06-09-97	15	44	--	1	--	--	150	10	--	--
06-19-97	16	47	--	1	--	--	150	10	--	--
06-19-97	15	44	--	1	--	--	150	10	--	--
06-23-97	15	43	--	1	--	--	150	10	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	15	45	--	1	--	--	140	10	--	--
07-16-97	16	45	--	1	--	--	140	9.6	--	--
07-28-97	16	45	--	1	--	--	140	9.5	--	--
08-04-97	15	43	--	1	--	--	130	9.5	--	--
08-11-97	16	45	--	1	--	--	140	11	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	17	48	--	1	--	--	130	10	--	--
09-15-97	17	50	--	1	--	--	140	9.9	--	--
09-23-97	17	48	--	1	--	--	130	10	--	--
09-30-97	17	50	--	1	--	--	120	10	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
05-21-97	--	--	--	--	3.0	--	--	--	--	--
05-27-97	--	--	--	--	1.0	--	--	--	--	--
06-02-97	--	--	--	--	0.35	--	--	--	--	--
06-09-97	--	--	--	--	0.17	--	--	--	--	--
06-19-97	--	--	--	--	0.15	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.18	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	0.38	--	--	--	--	--
07-21-97	--	--	--	--	0.53	--	--	--	--	--
07-28-97	--	--	--	--	0.11	--	--	--	--	--
08-04-97	--	--	--	--	0.19	--	--	--	--	--
08-11-97	--	--	--	--	0.19	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	0.17	--	--	--	--	--
09-15-97	--	--	--	--	0.15	--	--	--	--	--
09-23-97	--	--	--	--	0.15	--	--	--	--	--
09-30-97	--	--	--	--	0.15	--	--	--	--	--
10-07-96	512	512	0.70	<0.010	4.6	<0.015	--	--	--	--
11-25-96	--	--	--	--	5.5	--	--	--	--	--
12-30-96	--	--	--	--	4.2	--	--	--	--	--
01-28-97	--	--	--	--	3.3	--	--	--	--	--
02-25-97	--	--	--	--	2.4	--	--	--	--	--
03-25-97	--	--	--	--	1.4	--	--	--	--	--
04-21-97	--	--	--	--	1.2	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	1.1	--	--	--	--	--
05-12-97	--	--	--	--	1.0	--	--	--	--	--
05-20-97	--	--	--	--	0.86	--	--	--	--	--
05-27-97	--	--	--	--	0.85	--	--	--	--	--
05-27-97	--	--	--	--	0.89	--	--	--	--	--
06-02-97	--	--	--	--	0.67	--	--	--	--	--
06-09-97	--	--	--	--	0.75	--	--	--	--	--
06-19-97	--	--	--	--	0.67	--	--	--	--	--
06-19-97	--	--	--	--	0.64	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.88	--	--	--	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	1.6	--	--	--	--	--
07-28-97	--	--	--	--	1.3	--	--	--	--	--
08-04-97	--	--	--	--	1.3	--	--	--	--	--
08-11-97	--	--	--	--	1.5	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	1.7	--	--	--	--	--
09-15-97	--	--	--	--	2.0	--	--	--	--	--
09-23-97	--	--	--	--	2.9	--	--	--	--	--
09-30-97	--	--	--	--	3.6	--	--	--	--	--

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(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420234103564002	24N 57W16CDDA2	42 02 34 N	103 56 40 W	10-07-96	1625	112SDGV
				11-25-96	1325	112SDGV
				12-30-96	1315	112SDGV
				01-28-97	1340	112SDGV
				02-25-97	1605	112SDGV
				03-25-97	1445	112SDGV
				04-21-97	1050	112SDGV
				04-28-97	1300	112SDGV
				05-05-97	1555	112SDGV
				05-12-97	1540	112SDGV
				05-20-97	1535	112SDGV
				05-27-97	1635	112SDGV
				06-02-97	1110	112SDGV
				06-09-97	1515	112SDGV
				06-19-97	0845	112SDGV
				06-23-97	1510	112SDGV
				06-30-97	1050	112SDGV
				07-08-97	1435	112SDGV
				07-16-97	1400	112SDGV
				07-28-97	1200	112SDGV
				08-04-97	1520	112SDGV
				08-11-97	1120	112SDGV
				08-28-97	0915	112SDGV
				09-08-97	1550	112SDGV
				09-15-97	1505	112SDGV
				09-23-97	1045	112SDGV
				09-30-97	1030	112SDGV
420234103564003	24N 57W16CDDA3			10-07-96	1645	112SDGV
				11-25-96	1345	112SDGV
				12-30-96	1335	112SDGV
				01-28-97	1355	112SDGV
				01-28-97	1400	112SDGV
				02-25-97	1625	112SDGV
				03-25-97	1505	112SDGV
				04-21-97	1110	112SDGV
				04-28-97	1320	112SDGV
				05-05-97	1615	112SDGV
				05-12-97	1600	112SDGV
				05-20-97	1555	112SDGV
				05-27-97	1655	112SDGV
				06-02-97	1130	112SDGV
				06-09-97	1535	112SDGV
				06-19-97	0905	112SDGV
				06-23-97	1530	112SDGV
				06-30-97	1105	112SDGV
				07-08-97	1450	112SDGV
				07-16-97	1420	112SDGV
				07-28-97	1220	112SDGV
				08-04-97	1540	112SDGV
				08-11-97	1140	112SDGV
				08-28-97	0935	112SDGV
				08-28-97	1150	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
10-07-96	--	90	4192	742	7.6	--	17.5	7.2	270	78
11-25-96	--	90	4192	692	7.4	--	16.5	--	250	70
12-30-96	--	90	4192	655	7.6	--	17.0	--	220	63
01-28-97	--	90	4192	674	7.4	--	16.5	--	250	72
02-25-97	--	90	4192	596	7.6	--	17.0	--	240	68
03-25-97	--	90	4192	608	7.5	--	16.5	--	--	--
04-21-97	--	90	4192	596	7.6	--	16.5	--	250	73
04-28-97	--	90	4192	593	7.5	--	17.0	--	230	66
05-05-97	--	90	4192	591	7.5	--	17.0	--	230	67
05-12-97	--	90	4192	591	7.5	--	17.0	--	220	64
05-20-97	--	90	4192	590	7.5	--	16.5	--	240	70
05-27-97	--	90	4192	588	7.4	--	16.5	--	240	68
06-02-97	--	90	4192	586	7.5	--	17.0	--	230	66
06-09-97	--	90	4192	582	7.4	--	17.0	--	220	65
06-19-97	--	90	4192	576	7.3	--	16.5	--	230	68
06-23-97	--	90	4192	570	7.3	--	19.5	--	220	63
06-30-97	--	90	4192	566	7.4	--	16.5	--	--	--
07-08-97	--	90	4192	564	7.3	--	17.0	6.2	230	66
07-16-97	--	90	4192	593	7.4	--	17.0	6.2	230	67
07-28-97	--	90	4192	600	7.3	--	17.0	6.9	250	72
08-04-97	--	90	4192	556	7.3	--	17.0	7.0	210	62
08-11-97	--	90	4192	518	7.3	--	17.0	7.1	210	61
08-28-97	--	90	4192	--	--	--	--	--	220	65
09-08-97	70.6	90	4192	573	7.3	--	17.5	--	220	63
09-15-97	70.1	90	4192	574	7.5	--	17.5	--	220	61
09-23-97	69.7	90	4192	593	7.5	--	17.0	--	240	71
09-30-97	69.1	90	4192	617	7.9	--	17.0	--	240	71
10-07-96	--	80	4192	701	7.6	--	17.5	7.5	240	71
11-25-96	--	80	4192	733	7.4	--	16.5	--	240	71
12-30-96	--	80	4192	744	7.5	--	17.0	--	270	77
01-28-97	--	80	4192	757	7.4	--	16.0	--	--	--
01-28-97	--	80	4192	--	--	--	--	--	--	--
02-25-97	--	80	4192	668	7.6	--	17.0	--	270	80
03-25-97	--	80	4192	662	7.4	--	16.5	--	--	--
04-21-97	--	80	4192	656	7.5	--	16.5	--	260	78
04-28-97	--	80	4192	652	7.4	--	16.5	--	260	76
05-05-97	--	80	4192	648	7.4	--	17.0	--	260	76
05-12-97	--	80	4192	647	7.4	--	16.5	--	250	73
05-20-97	--	80	4192	646	7.4	--	16.5	--	260	78
05-27-97	--	80	4192	645	7.3	--	16.5	--	260	77
06-02-97	--	80	4192	645	7.4	--	17.0	--	250	73
06-09-97	--	80	4192	646	7.3	--	17.0	--	260	78
06-19-97	--	80	4192	640	7.3	--	16.5	--	260	76
06-23-97	--	80	4192	632	7.2	--	19.5	--	230	68
06-30-97	--	80	4192	630	7.3	--	16.5	--	--	--
07-08-97	--	80	4192	618	7.3	--	17.0	6.3	260	78
07-16-97	--	80	4192	652	7.3	--	17.0	6.7	260	76
07-28-97	--	80	4192	669	7.3	--	17.0	7.1	280	86
08-04-97	--	80	4192	645	7.2	--	17.5	7.2	260	76
08-11-97	--	80	4192	591	7.2	--	17.0	7.1	240	70
08-28-97	--	80	4192	517	7.3	--	17.0	--	--	--
08-28-97	--	80	4192	361	7.6	--	13.0	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA CO ₂) (90410)	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)
SIOUX COUNTY										
10-07-96	18	55	30	1	7.6	218	160	11	0.40	36
11-25-96	18	51	--	1	--	--	120	9.6	--	--
12-30-96	16	47	--	1	--	--	120	11	--	--
01-28-97	17	48	--	1	--	--	150	11	--	--
02-25-97	16	46	--	1	--	--	160	11	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	16	46	--	1	--	--	160	11	--	--
04-28-97	16	47	--	1	--	--	160	11	--	--
05-05-97	16	48	--	1	--	--	160	11	--	--
05-12-97	16	47	--	1	--	--	160	11	--	--
05-20-97	16	47	--	1	--	--	160	11	--	--
05-27-97	17	48	--	1	--	--	160	11	--	--
06-02-97	16	46	--	1	--	--	160	11	--	--
06-09-97	15	45	--	1	--	--	150	11	--	--
06-19-97	16	49	--	1	--	--	150	10	--	--
06-23-97	15	44	--	1	--	--	150	10	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	15	44	--	1	--	--	140	10	--	--
07-16-97	16	46	--	1	--	--	150	10	--	--
07-28-97	16	49	--	1	--	--	150	10	--	--
08-04-97	15	45	--	1	--	--	140	9.1	--	--
08-11-97	14	44	--	1	--	--	130	9.4	--	--
08-28-97	15	45	--	1	--	--	130	8.4	--	--
09-08-97	16	48	--	1	--	--	130	8.8	--	--
09-15-97	15	51	--	1	--	--	140	8.6	--	--
09-23-97	16	49	--	1	--	--	140	9.5	--	--
09-30-97	16	51	--	1	--	--	130	10	--	--
10-07-96	16	54	32	2	7.7	178	170	12	0.40	38
11-25-96	16	51	--	1	--	--	150	11	--	--
12-30-96	18	53	--	1	--	--	150	12	--	--
01-28-97	--	--	--	--	--	--	--	--	--	--
01-28-97	--	--	--	--	--	--	--	--	--	--
02-25-97	17	51	--	1	--	--	170	12	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-21-97	17	49	--	1	--	--	180	12	--	--
04-28-97	17	51	--	1	--	--	180	13	--	--
05-05-97	17	50	--	1	--	--	180	13	--	--
05-12-97	16	49	--	1	--	--	180	12	--	--
05-20-97	16	49	--	1	--	--	170	12	--	--
05-27-97	17	51	--	1	--	--	170	13	--	--
06-02-97	16	49	--	1	--	--	170	12	--	--
06-09-97	16	48	--	1	--	--	170	12	--	--
06-19-97	16	52	--	1	--	--	170	12	--	--
06-23-97	16	47	--	1	--	--	170	12	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	16	49	--	1	--	--	160	11	--	--
07-16-97	17	49	--	1	--	--	160	12	--	--
07-28-97	17	51	--	1	--	--	170	12	--	--
08-04-97	16	50	--	1	--	--	160	11	--	--
08-11-97	15	48	--	1	--	--	140	9.8	--	--
08-28-97	--	--	--	--	--	--	--	--	--	--
08-28-97--	--	--	--	--	--	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420234103564003	24N 57W16CDDA3	42 02 34 N	103 56 40 W	09-08-97	1605	112SDGV
				09-15-97	1525	112SDGV
				09-23-97	1105	112SDGV
				09-30-97	1050	112SDGV
420244103561401	24N 57W16DCDD1	42 02 44 N	103 56 14 W	06-18-97	1555	112SDGV
				07-15-97	1525	112SDGV
				09-24-97	1645	112SDGV
420325103570901	24N 57W 17AAAD1	42 03 25 N	103 57 09 W	10-07-96	1715	112SDGV
				11-25-96	1415	112SDGV
				12-30-96	1350	112SDGV
				01-28-97	1035	112SDGV
				02-25-97	0930	112SDGV
				05-27-97	1415	112SDGV
				06-02-97	0850	112SDGV
				06-09-97	1255	112SDGV
				06-18-97	1320	112SDGV
				06-23-97	1305	112SDGV
				06-30-97	0850	112SDGV
				07-08-97	1115	112SDGV
				07-21-97	1410	112SDGV
				07-27-97	0950	112SDGV
				07-28-97	0950	112SDGV
				08-04-97	1315	112SDGV
				08-11-97	0905	112SDGV
				09-08-97	1355	112SDGV
				09-15-97	1120	112SDGV
				09-30-97	0820	112SDGV
420325103570902	24N 57W 17AAAD2			10-07-96	1735	112SDGV
				11-25-96	1425	112SDGV
				12-30-96	1410	112SDGV
				01-28-97	1100	112SDGV
				02-25-97	1000	112SDGV
				05-27-97	1440	112SDGV
				06-02-97	0910	112SDGV
				06-09-97	1315	112SDGV
				06-18-97	1340	112SDGV
				06-18-97	1405	112SDGV
				06-23-97	1315	112SDGV
				06-30-97	0900	112SDGV
				07-08-97	1135	112SDGV
				07-21-97	1350	112SDGV
				07-28-97	1010	112SDGV
				08-04-97	1330	112SDGV
				08-11-97	0925	112SDGV
				09-08-97	1405	112SDGV
				09-15-97	1140	112SDGV
				09-30-97	0835	112SDGV
420148103563101	24N 57W21CDDD1	42 01 48 N	103 56 31 W	02-27-97	1220	112SDGV
				03-25-97	1125	112SDGV
				04-22-97	0740	112SDGV
				05-19-97	1100	112SDGV
				06-18-97	0840	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
09-08-97	70.6	80	4192	537	7.3	--	17.5	--	200	58
09-15-97	70.1	80	4192	550	7.5	--	17.5	--	200	59
09-23-97	69.6	80	4192	576	7.5	--	17.0	--	210	62
09-30-97	69.1	80	4192	584	7.9	--	17.0	--	220	66
06-18-97	--	88	4185	628	7.3	--	16.0	--	--	--
07-15-97	--	88	4185	686	7.4	--	16.5	--	300	86
09-24-97	--	88	4185	525	7.1	--	16.0	--	200	57
10-07-96	--	90	4200	596	7.7	--	20.0	6.9	190	50
11-25-96	--	90	4200	637	7.5	--	19.0	--	220	58
12-30-96	--	90	4200	665	7.7	--	18.5	--	230	59
01-28-97	--	90	4200	590	7.9	--	15.5	--	230	59
02-25-97	--	90	4200	654	7.4	--	11.5	--	250	64
05-27-97	--	90	4200	586	7.5	--	19.0	--	230	60
06-02-97	--	90	4200	594	7.4	--	19.5	--	230	58
06-09-97	--	90	4200	588	7.5	--	19.5	--	230	61
06-18-97	--	90	4200	565	7.4	--	20.0	--	230	62
06-23-97	--	90	4200	614	7.4	--	21.0	--	230	66
06-30-97	--	90	4200	615	7.4	--	18.5	--	--	--
07-08-97	--	90	4200	616	7.5	--	19.0	6.2	240	70
07-21-97	--	90	4200	611	7.3	--	18.5	6.8	230	68
07-27-97	--	90	4200	609	7.4	--	18.0	--	--	--
07-28-97	--	90	4200	609	7.4	--	18.0	--	240	70
08-04-97	--	90	4200	606	7.4	--	18.0	6.6	230	69
08-11-97	--	90	4200	601	7.2	--	17.5	6.5	230	68
09-08-97	69.1	90	4200	581	7.5	--	18.0	--	220	64
09-15-97	68.7	90	4200	577	7.6	--	17.5	--	220	64
09-30-97	68.4	90	4200	565	7.9	--	17.5	--	210	63
10-07-96	--	80	4200	717	7.7	--	18.0	8.1	250	74
11-25-96	--	80	4200	701	7.6	--	18.0	--	240	70
12-30-96	--	80	4200	700	7.7	--	18.5	--	220	64
01-28-97	--	80	4200	693	7.8	--	18.5	--	250	74
02-25-97	--	80	4200	615	7.6	--	18.0	--	230	67
05-27-97	--	80	4200	612	7.5	--	18.5	--	230	68
06-02-97	--	80	4200	611	7.5	--	19.0	--	230	66
06-09-97	--	80	4200	614	7.5	--	19.0	--	240	70
06-18-97	--	80	4200	616	7.4	--	19.5	--	270	83
06-18-97	--	80	4200	608	7.4	--	17.0	--	--	--
06-23-97	--	80	4200	570	7.4	--	22.0	--	230	63
06-30-97	--	80	4200	566	7.4	--	19.0	--	--	--
07-08-97	--	80	4200	547	7.5	--	18.5	6.8	220	58
07-21-97	--	80	4200	526	7.4	--	17.0	7.6	210	55
07-28-97	--	80	4200	504	7.5	--	16.0	--	200	53
08-04-97	--	80	4200	483	7.5	--	16.0	8.0	190	49
08-11-97	--	80	4200	469	7.3	--	15.5	7.5	180	47
09-08-97	68.6	80	4200	444	7.5	--	19.0	--	170	43
09-15-97	68.2	80	4200	446	7.6	--	19.5	--	170	44
09-30-97	67.9	80	4200	461	7.9	--	20.0	--	180	47
02-27-97	--	181	4137	582	8.1	--	14.5	--	230	65
03-25-97	--	181	4137	583	7.7	--	14.5	--	--	--
04-22-97	--	181	4137	583	7.8	--	14.5	--	230	64
05-19-97	--	181	4137	568	7.6	--	14.5	--	240	65
06-18-97	--	181	4137	581	7.6	--	15.5	--	250	72

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA _{CO} ₃) (90410)	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)
SIOUX COUNTY										
09-08-97	13	47	--	1	--	--	130	8.9	--	--
09-15-97	14	50	--	2	--	--	140	8.7	--	--
09-23-97	14	47	--	1	--	--	140	9.8	--	--
09-30-97	14	49	--	1	--	--	130	9.9	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
07-15-97	20	50	--	1	--	--	180	13	--	--
09-24-97	14	41	--	1	--	--	100	9.9	--	--
10-07-96	17	53	37	2	4.5	152	140	9.9	0.50	20
11-25-96	19	54	--	2	--	--	160	11	--	--
12-30-96	20	53	--	2	--	--	160	11	--	--
01-28-97	19	56	--	2	--	--	150	11	--	--
02-25-97	21	55	--	2	--	--	180	13	--	--
05-27-97	21	51	--	1	--	--	160	12	--	--
06-02-97	20	50	--	1	--	--	170	12	--	--
06-09-97	19	48	--	1	--	--	160	12	--	--
06-18-97	19	46	--	1	--	--	160	11	--	--
06-23-97	15	49	--	1	--	--	160	14	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	16	51	--	1	--	--	170	14	--	--
07-21-97	15	50	--	1	--	--	170	14	--	--
07-27-97	--	--	--	--	--	--	--	--	--	--
07-28-97	15	52	--	1	--	--	160	13	--	--
08-04-97	15	50	--	1	--	--	160	13	--	--
08-11-97	15	49	--	1	--	--	160	13	--	--
09-08-97	15	50	--	1	--	--	150	12	--	--
09-15-97	15	51	--	2	--	--	170	12	--	--
09-30-97	14	48	--	1	--	--	150	11	--	--
10-07-96	16	54	31	1	8.1	164	190	13	0.40	44
11-25-96	16	52	--	1	--	--	190	13	--	--
12-30-96	15	51	--	1	--	--	180	13	--	--
01-28-97	16	52	--	1	--	--	180	12	--	--
02-25-97	15	50	--	1	--	--	180	12	--	--
05-27-97	16	49	--	1	--	--	170	13	--	--
06-02-97	15	49	--	1	--	--	170	13	--	--
06-09-97	15	49	--	1	--	--	170	13	--	--
06-18-97	15	48	--	1	--	--	170	14	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
06-23-97	18	46	--	1	--	--	170	12	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-08-97	19	44	--	1	--	--	150	11	--	--
07-21-97	18	41	--	1	--	--	140	9.3	--	--
07-28-97	17	42	--	1	--	--	130	8.6	--	--
08-04-97	16	39	--	1	--	--	120	7.9	--	--
08-11-97	15	39	--	1	--	--	110	7.8	--	--
09-08-97	15	39	--	1	--	--	100	7.3	--	--
09-15-97	15	41	--	1	--	--	110	7.4	--	--
09-30-97	15	38	--	1	--	--	110	7.7	--	--
02-27-97	17	45	--	1	--	--	160	12	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-22-97	17	46	--	1	--	--	160	12	--	--
05-19-97	18	46	--	1	--	--	160	11	--	--
06-18-97	16	43	--	1	--	--	160	11	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
09-08-97	--	--	--	--	1.1	--	--	--	--	--
09-15-97	--	--	--	--	1.3	--	--	--	--	--
09-23-97	--	--	--	--	2.4	--	--	--	--	--
09-30-97	--	--	--	--	2.7	--	--	--	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	4.6	--	--	--	--	--
10-07-96	391	387	0.53	<0.010	0.21	<0.015	--	--	--	--
11-25-96	--	--	--	--	0.22	--	--	--	--	--
12-30-96	--	--	--	--	0.31	--	--	--	--	--
01-28-97	--	--	--	--	0.47	--	--	--	--	--
02-25-97	--	--	--	--	1.5	--	--	--	--	--
05-27-97	--	--	--	--	0.65	--	--	--	--	--
06-02-97	--	--	--	--	0.57	--	--	--	--	--
06-09-97	--	--	--	--	0.30	--	--	--	--	--
06-18-97	--	--	--	--	0.13	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	1.6	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-21-97	--	--	--	--	1.4	--	--	--	--	--
07-27-97	--	--	--	--	--	--	--	--	--	--
07-28-97	--	--	--	--	1.4	--	--	--	--	--
08-04-97	--	--	--	--	1.4	--	--	--	--	--
08-11-97	--	--	--	--	1.2	--	--	--	--	--
09-08-97	--	--	--	--	0.94	--	--	--	--	--
09-15-97	--	--	--	--	0.83	--	--	--	--	--
09-30-97	--	--	--	--	0.68	--	--	--	--	--
10-07-96	509	501	0.69	<0.010	0.69	<0.020	--	--	--	--
11-25-96	--	--	--	--	0.42	--	--	--	--	--
12-30-96	--	--	--	--	0.63	--	--	--	--	--
01-28-97	--	--	--	--	0.67	--	--	--	--	--
02-25-97	--	--	--	--	0.95	--	--	--	--	--
05-27-97	--	--	--	--	1.4	--	--	--	--	--
06-02-97	--	--	--	--	1.1	--	--	--	--	--
06-09-97	--	--	--	--	1.3	--	--	--	--	--
06-18-97	--	--	--	--	1.4	--	--	--	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	0.18	--	--	--	--	--
07-08-97	--	--	--	--	--	--	--	--	--	--
07-21-97	--	--	--	--	0.44	--	--	--	--	--
07-28-97	--	--	--	--	0.41	--	--	--	--	--
08-04-97	--	--	--	--	0.44	--	--	--	--	--
08-11-97	--	--	--	--	0.25	--	--	--	--	--
09-08-97	--	--	--	--	0.16	--	--	--	--	--
09-15-97	--	--	--	--	0.14	--	--	--	--	--
09-30-97	--	--	--	--	0.15	--	--	--	--	--
02-27-97	--	--	--	--	1.5	--	--	--	--	--
03-25-97	--	--	--	--	1.4	--	--	--	--	--
04-22-97	--	--	--	--	1.5	--	--	--	--	--
05-19-97	--	--	--	--	1.4	--	--	--	--	--
06-18-97	--	--	--	--	1.4	--	--	--	--	--

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(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420148103563101	24N 57W21CDDD1	42 01 48 N	103 56 31 W	06-18-97	0845	112SDGV
				07-16-97	0915	112SDGV
				07-16-97	0920	112SDGV
				08-27-97	1310	112SDGV
				09-24-97	1415	112SDGV
420148103563102	24N 57W21CDDD2			02-27-97	1240	112SDGV
				03-25-97	1140	112SDGV
				04-22-97	0800	112SDGV
				05-19-97	1115	112SDGV
				06-18-97	0900	112SDGV
				07-16-97	0935	112SDGV
				08-27-97	1330	112SDGV
				09-24-97	1435	112SDGV
420148103563103	24N 57W21CDDD3			02-27-97	1300	112SDGV
				03-25-97	1200	112SDGV
				04-22-97	0815	112SDGV
				05-19-97	1135	112SDGV
				06-18-97	0920	112SDGV
				07-16-97	0950	112SDGV
				08-27-97	1345	112SDGV
				09-24-97	1450	112SDGV
420234103555501	24N 57W2 2BBCC1	42 02 34 N	103 55 55 W	10-07-96	1300	112SDGV
				11-25-96	0925	112SDGV
				12-30-96	0855	112SDGV
				01-28-97	1525	112SDGV
				02-26-97	1050	112SDGV
				02-26-97	1055	112SDGV
				03-25-97	0920	112SDGV
				03-25-97	0925	112SDGV
				04-08-97	0955	112SDGV
				04-16-97	0935	112SDGV
				04-21-97	1330	112SDGV
				04-21-97	1335	112SDGV
				04-28-97	1505	112SDGV
				05-05-97	1115	112SDGV
				05-12-97	1110	112SDGV
				05-19-97	0910	112SDGV
				05-27-97	1035	112SDGV
				06-02-97	1430	112SDGV
				06-09-97	0945	112SDGV
				06-09-97	0950	112SDGV
				06-19-97	1055	112SDGV
				06-23-97	1115	112SDGV
				06-30-97	1135	112SDGV
				07-07-97	0955	112SDGV
				07-15-97	1135	112SDGV
				07-21-97	1020	112SDGV
				08-04-97	1005	112SDGV
				08-04-97	1010	112SDGV
				08-11-97	1435	112SDGV
				08-27-97	1540	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
06-18-97	--	181	4137	581	7.6	--	15.5	--	230	65
07-16-97	--	181	4137	582	7.5	--	15.0	4.6	230	63
07-16-97	--	181	4137	582	7.5	--	15.0	4.6	240	68
08-27-97	--	181	4137	--	--	--	--	--	--	--
09-24-97	37.1	181	4137	592	7.2	--	15.0	--	250	70
02-27-97	--	120	4137	734	8.0	--	14.5	--	310	86
03-25-97	--	120	4137	732	7.6	--	14.5	--	--	--
04-22-97	--	120	4137	719	7.6	--	14.0	--	300	83
05-19-97	--	120	4137	733	7.5	--	14.5	--	310	85
06-18-97	--	120	4137	733	7.5	--	15.0	--	340	98
07-16-97	--	120	4137	736	7.4	--	15.0	5.0	310	86
08-27-97	--	120	4137	--	--	--	--	--	--	--
09-24-97	37.1	120	4137	--	--	--	--	--	320	91
02-27-97	--	59	4137	938	7.8	--	13.5	--	410	130
03-25-97	--	59	4137	935	7.4	--	13.5	--	--	--
04-22-97	--	59	4137	936	7.4	--	13.5	7.9	400	130
05-19-97	--	59	4137	928	7.3	--	14.0	--	400	130
06-18-97	--	59	4137	924	7.2	--	14.0	--	400	130
07-16-97	--	59	4137	928	7.2	--	14.0	6.7	410	130
08-27-97	--	59	4137	931	7.1	--	14.0	--	--	--
09-24-97	37.1	59	4137	924	6.9	--	14.0	--	440	140
10-07-96	--	63	4162	767	7.4	--	14.0	8.0	300	89
11-25-96	--	63	4162	--	7.4	--	13.5	--	360	110
12-30-96	--	63	4162	922	7.3	--	13.5	--	340	100
01-28-97	--	63	4162	940	7.3	--	13.5	--	370	110
02-26-97	--	63	4162	841	8.4	--	13.0	--	360	110
02-26-97	--	63	4162	841	8.4	--	13.0	--	360	110
03-25-97	--	63	4162	842	--	--	13.5	--	--	--
03-25-97	--	63	4162	842	--	--	13.5	--	--	--
04-08-97	--	63	4162	842	--	--	13.0	--	360	110
04-16-97	--	63	4162	844	7.4	--	13.5	--	350	110
04-21-97	--	63	4162	845	7.3	--	14.0	--	350	110
04-21-97	--	63	4162	845	7.3	--	14.0	--	340	100
04-28-97	--	63	4162	845	7.2	--	14.0	--	350	100
05-05-97	--	63	4162	846	7.3	--	13.5	--	360	110
05-12-97	--	63	4162	845	7.2	--	14.0	--	350	110
05-19-97	--	63	4162	847	7.3	--	13.5	--	360	110
05-27-97	--	63	4162	786	7.2	--	13.5	--	310	93
06-02-97	--	63	4162	684	7.3	--	14.0	--	270	81
06-09-97	--	63	4162	714	7.2	--	14.0	--	290	88
06-09-97	--	63	4162	714	7.2	--	14.0	--	300	93
06-19-97	--	63	4162	767	7.1	--	14.0	--	320	97
06-23-97	--	63	4162	779	7.1	--	15.5	--	340	110
06-30-97	--	63	4162	794	7.2	--	14.0	--	--	--
07-07-97	--	63	4162	796	7.1	--	14.0	7.3	340	100
07-15-97	--	63	4162	757	7.2	--	14.5	9	320	96
07-21-97	--	63	4162	705	7.0	--	14.0	7.5	300	91
08-04-97	--	63	4162	650	7.2	--	14.0	7.8	260	79
08-04-97	--	63	4162	650	7.2	--	14.0	7.8	260	78
08-11-97	--	63	4162	650	7.2	--	14.0	8.2	280	85
08-27-97	--	63	4162	642	7.1	--	14.5	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SIOUX COUNTY										
06-18-97	17	46	--	1	--	--	150	11	--	--
07-16-97	17	44	--	1	--	--	150	10	--	--
07-16-97	17	45	--	1	--	--	160	11	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	18	46	--	1	--	--	170	12	--	--
02-27-97	22	53	--	1	--	--	190	16	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-22-97	22	53	--	1	--	--	190	15	--	--
05-19-97	23	56	--	1	--	--	190	15	--	--
06-18-97	23	55	--	1	--	--	190	15	--	--
07-16-97	23	54	--	1	--	--	190	15	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	23	55	--	1	--	--	210	16	--	--
02-27-97	21	66	--	1	--	--	270	21	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-22-97	20	63	--	1	--	--	270	21	--	--
05-19-97	21	63	--	1	--	--	270	21	--	--
06-18-97	20	59	--	1	--	--	270	21	--	--
07-16-97	20	64	--	1	--	--	260	20	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	21	65	--	1	--	--	290	22	--	--
10-07-96	18	56	29	1	7.1	210	180	12	0.40	35
11-25-96	21	58	--	1	--	--	230	15	--	--
12-30-96	21	60	--	1	--	--	230	15	--	--
01-28-97	22	63	--	1	--	--	240	16	--	--
02-26-97	20	61	--	1	--	--	250	16	--	--
02-26-97	21	62	--	1	--	--	250	16	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-08-97	21	63	--	1	--	--	250	16	--	--
04-16-97	20	61	--	1	--	--	250	16	--	--
04-21-97	21	61	--	1	--	--	250	16	--	--
04-21-97	21	60	--	1	--	--	250	16	--	--
04-28-97	21	59	--	1	--	--	250	16	--	--
05-05-97	21	62	--	1	--	--	250	16	--	--
05-12-97	21	59	--	1	--	--	250	17	--	--
05-19-97	21	61	--	1	--	--	250	16	--	--
05-27-97	20	57	--	1	--	--	210	13	--	--
06-02-97	16	52	--	1	--	--	180	12	--	--
06-09-97	16	52	--	1	--	--	180	12	--	--
06-09-97	17	53	--	1	--	--	190	12	--	--
06-19-97	20	60	--	1	--	--	210	14	--	--
06-23-97	19	57	--	1	--	--	210	14	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	20	58	--	1	--	--	220	14	--	--
07-15-97	18	56	--	1	--	--	200	13	--	--
07-21-97	18	55	--	1	--	--	180	12	--	--
08-04-97	16	51	--	1	--	--	160	11	--	--
08-04-97	16	51	--	1	--	--	160	11	--	--
08-11-97	16	50	--	1	--	--	160	11	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
06-18-97	--	--	--	--	1.3	--	--	--	--	--
07-16-97	--	--	--	--	1.3	--	--	--	--	--
07-16-97	--	--	--	--	1.4	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	1.5	--	--	--	--	--
02-27-97	--	--	--	--	4.7	--	--	--	--	--
03-25-97	--	--	--	--	4.7	--	--	--	--	--
04-22-97	--	--	--	--	4.5	--	--	--	--	--
05-19-97	--	--	--	--	4.4	--	--	--	--	--
06-18-97	--	--	--	--	4.6	--	--	--	--	--
07-16-97	--	--	--	--	4.4	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	--	4.2	--	--	--	--
02-27-97	--	--	--	--	--	9.4	--	--	--	--
03-25-97	--	--	--	--	8.6	--	--	--	--	--
04-22-97	--	--	--	--	8.3	--	--	--	--	--
05-19-97	--	--	--	--	7.7	--	--	--	--	--
06-18-97	--	--	--	--	8.0	--	--	--	--	--
07-16-97	--	--	--	--	7.8	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	7.8	--	--	--	--	--
10-07-96	533	526	0.72	<0.010	0.59	<0.015	--	--	--	--
11-25-96	--	--	--	--	3.7	--	--	--	--	--
12-30-96	--	--	--	--	4.0	--	--	--	--	--
01-28-97	--	--	--	--	4.1	--	--	--	--	--
02-26-97	--	--	--	--	4.5	--	--	--	--	--
02-26-97	--	--	--	--	4.5	--	--	--	--	--
03-25-97	--	--	--	--	4.6	--	--	--	--	--
03-25-97	--	--	--	--	4.7	--	--	--	--	--
04-08-97	--	--	--	--	4.6	--	--	--	--	--
04-16-97	--	--	--	--	4.6	--	--	--	--	--
04-21-97	--	--	--	--	4.5	--	--	--	--	--
04-21-97	--	--	--	--	4.6	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	4.5	--	--	--	--	--
05-12-97	--	--	--	--	4.5	--	--	--	--	--
05-19-97	--	--	--	--	4.6	--	--	--	--	--
05-27-97	--	--	--	--	3.2	--	--	--	--	--
06-02-97	--	--	--	--	1.2	--	--	--	--	--
06-09-97	--	--	--	--	1.9	--	--	--	--	--
06-09-97	--	--	--	--	1.9	--	--	--	--	--
06-19-97	--	--	--	--	3.2	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	3.8	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
07-21-97	--	--	--	--	2.2	--	--	--	--	--
08-04-97	--	--	--	--	0.57	--	--	--	--	--
08-04-97	--	--	--	--	0.53	--	--	--	--	--
08-11-97	--	--	--	--	0.76	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420234103555501	24N 57W22BBCC1	42 02 34 N	103 55 55 W	09-08-97	1015	112SDGV
				09-08-97	1020	112SDGV
				09-15-97	0955	112SDGV
				09-24-97	1520	112SDGV
				09-30-97	1120	112SDGV
420148103555201	24N 57W22CCCC1	42 01 48 N	103 55 52 W	10-07-96	1100	112SDGV
				11-25-96	0815	112SDGV
				12-30-96	0745	112SDGV
				01-28-97	1545	112SDGV
				02-25-97	1330	112SDGV
				03-25-97	1005	112SDGV
				04-07-97	1410	112SDGV
				04-16-97	1000	112SDGV
				04-16-97	1005	112SDGV
				04-21-97	1405	112SDGV
				04-28-97	1535	112SDGV
				05-05-97	0955	112SDGV
				05-05-97	1000	112SDGV
				05-12-97	0945	112SDGV
				05-19-97	0935	112SDGV
				05-27-97	1105	112SDGV
				06-02-97	1300	112SDGV
				06-02-97	1305	112SDGV
				06-09-97	0815	112SDGV
				06-18-97	0705	112SDGV
				06-23-97	0850	112SDGV
				06-30-97	1300	112SDGV
				07-07-97	0830	112SDGV
				07-16-97	0750	112SDGV
				07-21-97	0855	112SDGV
				07-28-97	1350	112SDGV
				08-04-97	0835	112SDGV
				08-11-97	1320	112SDGV
				08-27-97	1415	112SDGV
				09-08-97	0855	112SDGV
				09-15-97	0830	112SDGV
				09-24-97	1250	112SDGV
				09-30-97	1350	112SDGV
420148103555202	24N 57W22CCCC2			10-07-96	1120	112SDGV
				11-25-96	0835	112SDGV
				12-30-96	0805	112SDGV
				01-28-97	1600	112SDGV
				02-25-97	1350	112SDGV
				03-25-97	1025	112SDGV
				04-07-97	1430	112SDGV
				04-16-97	1040	112SDGV
				04-21-97	1425	112SDGV
				04-28-97	1555	112SDGV
				05-05-97	1020	112SDGV
				05-12-97	1005	112SDGV
				05-19-97	0950	112SDGV
				05-27-97	1120	112SDGV
				06-02-97	1320	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
09-08-97	56.3	63	4162	631	7.1	--	14.0	--	260	76
09-08-97	56.3	63	4162	361	7.1	--	14.0	--	260	75
09-15-97	56.0	63	4162	630	7.3	--	14.0	--	270	78
09-24-97	55.4	63	4162	630	6.9	--	14.0	--	280	84
09-30-97	55.0	63	4162	619	7.8	--	14.0	--	260	77
10-07-96	--	110	4139	666	7.5	--	15.0	7.8	230	66
11-25-96	--	110	4139	--	7.5	--	14.5	--	220	64
12-30-96	--	110	4139	670	7.7	--	14.0	--	230	65
01-28-97	--	110	4139	672	7.6	--	14.0	--	240	71
02-25-97	--	110	4139	598	7.7	--	14.5	--	250	74
03-25-97	--	110	4139	596	8.0	--	14.0	--	--	--
04-07-97	--	110	4139	596	7.5	--	14.0	--	240	69
04-16-97	--	110	4139	597	7.7	--	14.0	--	230	66
04-16-97	--	110	4139	--	--	--	--	--	240	69
04-21-97	--	110	4139	598	7.7	--	14.5	--	230	67
04-28-97	--	110	4139	598	7.6	--	14.5	--	230	65
05-05-97	--	110	4139	598	7.7	--	14.5	--	240	70
05-05-97	--	110	4139	598	7.7	598.0	14.5	99	230	68
05-12-97	--	110	4139	598	7.6	--	14.5	--	230	66
05-19-97	--	110	4139	598	7.6	--	14.0	--	230	68
05-27-97	--	110	4139	597	7.5	--	14.0	--	240	69
06-02-97	--	110	4139	598	7.6	--	14.5	--	220	63
06-02-97	--	110	4139	598	7.6	--	14.5	--	220	64
06-09-97	--	110	4139	597	7.5	--	14.5	--	240	71
06-18-97	--	110	4139	597	7.4	--	14.5	--	230	68
06-23-97	--	110	4139	595	7.5	--	16.0	--	240	72
06-30-97	--	110	4139	597	7.4	--	14.5	--	--	--
07-07-97	--	110	4139	597	7.4	--	14.5	--	240	69
07-16-97	--	110	4139	600	7.3	--	14.5	0.90	230	68
07-21-97	--	110	4139	600	7.3	--	14.5	6.1	240	71
07-28-97	--	110	4139	600	7.5	--	14.5	--	250	73
08-04-97	--	110	4139	602	7.3	--	14.5	7.6	230	68
08-11-97	--	110	4139	602	7.4	--	14.5	6.1	240	71
08-27-97	--	110	4139	600	7.4	--	14.5	--	--	--
09-08-97	39.9	110	4139	598	7.0	--	14.5	--	230	68
09-15-97	39.3	110	4139	599	7.3	--	14.5	--	230	68
09-24-97	38.5	110	4139	598	7.2	--	14.0	--	250	71
09-30-97	38.4	110	4139	597	7.2	--	14.5	--	230	69
10-07-96	--	82	4139	721	7.6	--	14.0	7.8	250	80
11-25-96	--	82	4139	--	7.5	--	14.5	--	260	80
12-30-96	--	82	4139	726	7.7	--	14.0	--	250	78
01-28-97	--	82	4139	723	7.5	--	13.5	--	270	85
02-25-97	--	82	4139	643	7.7	--	14.5	--	260	81
03-25-97	--	82	4139	644	7.6	--	14.0	--	--	--
04-07-97	--	82	4139	643	7.6	--	14.0	--	260	80
04-16-97	--	82	4139	644	7.6	--	14.0	--	260	82
04-21-97	--	82	4139	644	7.6	--	14.0	--	260	81
04-28-97	--	82	4139	643	7.5	--	14.0	--	260	81
05-05-97	--	82	4139	643	7.6	--	14.0	--	270	85
05-12-97	--	82	4139	643	7.5	--	14.0	--	250	79
05-19-97	--	82	4139	643	7.5	--	14.0	--	260	81
05-27-97	--	82	4139	643	7.4	--	14.0	--	260	81
06-02-97	--	82	4139	646	7.5	--	14.5	--	250	78

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB AS CACO ₃ (90410)	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)
SIOUX COUNTY										
09-08-97	16	49	--	1	--	--	140	9.6	--	--
09-08-97	16	49	--	1	--	--	140	9.3	--	--
09-15-97	17	51	--	1	--	--	150	9.2	--	--
09-24-97	17	49	--	1	--	--	150	10	--	--
09-30-97	16	48	--	1	--	--	130	9.0	--	--
10-07-96	15	47	30	1	8.6	161	160	13	0.40	49
11-25-96	15	48	--	1	--	--	160	12	--	--
12-30-96	16	48	--	1	--	--	160	12	--	--
01-28-97	16	49	--	1	--	--	160	12	--	--
02-25-97	16	48	--	1	--	--	160	12	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	16	49	--	1	--	--	160	13	--	--
04-16-97	16	46	--	1	--	--	160	12	--	--
04-16-97	16	47	--	1	--	--	160	13	--	--
04-21-97	15	45	--	1	--	--	160	12	--	--
04-28-97	16	46	--	1	--	--	160	12	--	--
05-05-97	16	47	--	1	--	--	160	13	--	--
05-05-97	16	45	--	1	--	--	160	13	--	--
05-12-97	15	45	--	1	--	--	160	12	--	--
05-19-97	16	47	--	1	--	--	160	12	--	--
05-27-97	16	48	--	1	--	--	150	12	--	--
06-02-97	15	45	--	1	--	--	150	12	--	--
06-02-97	15	45	--	1	--	--	160	12	--	--
06-09-97	15	45	--	1	--	--	150	12	--	--
06-18-97	15	46	--	1	--	--	160	12	--	--
06-23-97	16	47	--	1	--	--	150	12	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	15	46	--	1	--	--	160	12	--	--
07-16-97	15	45	--	1	--	--	160	12	--	--
07-21-97	16	46	--	1	--	--	160	13	--	--
07-28-97	15	45	--	1	--	--	160	13	--	--
08-04-97	15	45	--	1	--	--	160	13	--	--
08-11-97	15	46	--	1	--	--	160	12	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	16	48	--	1	--	--	160	12	--	--
09-15-97	16	48	--	1	--	--	170	12	--	--
09-24-97	16	50	--	1	--	--	170	13	--	--
09-30-97	15	46	--	1	--	--	160	12	--	--
10-07-96	13	47	28	1	8.5	169	180	14	0.40	43
11-25-96	14	50	--	1	--	--	180	13	--	--
12-30-96	14	48	--	1	--	--	180	13	--	--
01-28-97	14	49	--	1	--	--	180	14	--	--
02-25-97	13	46	--	1	--	--	180	13	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	14	51	--	1	--	--	180	13	--	--
04-16-97	14	49	--	1	--	--	180	14	--	--
04-21-97	14	47	--	1	--	--	180	13	--	--
04-28-97	14	48	--	1	--	--	180	13	--	--
05-05-97	14	48	--	1	--	--	180	14	--	--
05-12-97	13	47	--	1	--	--	180	13	--	--
05-19-97	14	49	--	1	--	--	180	13	--	--
05-27-97	14	47	--	1	--	--	180	13	--	--
06-02-97	13	47	--	1	--	--	180	13	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
09-08-97	--	--	--	--	0.81	--	--	--	--	--
09-08-97	--	--	--	--	1.0	--	--	--	--	--
09-15-97	--	--	--	--	0.80	--	--	--	--	--
09-24-97	--	--	--	--	0.81	--	--	--	--	--
09-30-97	--	--	--	--	0.57	--	--	--	--	--
10-07-96	474	468	0.64	<0.010	2.8	0.020	0.03	--	--	--
11-25-96	--	--	--	--	2.7	--	--	--	--	--
12-30-96	--	--	--	--	2.7	--	--	--	--	--
01-28-97	--	--	--	--	2.7	--	--	--	--	--
02-25-97	--	--	--	--	3.0	--	--	--	--	--
03-25-97	--	--	--	--	2.8	--	--	--	--	--
04-07-97	--	--	--	--	2.9	--	--	--	--	--
04-16-97	--	--	--	--	2.8	--	--	--	--	--
04-16-97	--	--	--	--	2.8	--	--	--	--	--
04-21-97	--	--	--	--	2.8	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	2.8	--	--	--	--	--
05-05-97	--	--	--	--	2.8	--	--	--	--	--
05-12-97	--	--	--	--	2.8	--	--	--	--	--
05-19-97	--	--	--	--	2.6	--	--	--	--	--
05-27-97	--	--	--	--	2.7	--	--	--	--	--
06-02-97	--	--	--	--	2.7	--	--	--	--	--
06-02-97	--	--	--	--	2.6	--	--	--	--	--
06-09-97	--	--	--	--	2.8	--	--	--	--	--
06-18-97	--	--	--	--	2.7	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	2.8	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	2.6	--	--	--	--	--
07-21-97	--	--	--	--	2.6	--	--	--	--	--
07-28-97	--	--	--	--	2.6	--	--	--	--	--
08-04-97	--	--	--	--	2.5	--	--	--	--	--
08-11-97	--	--	--	--	2.4	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	2.6	--	--	--	--	--
09-15-97	--	--	--	--	2.6	--	--	--	--	--
09-24-97	--	--	--	--	2.6	--	--	--	--	--
09-30-97	--	--	--	--	2.6	--	--	--	--	--
10-07-96	512	502	0.70	<0.010	3.4	<0.015	--	--	--	--
11-25-96	--	--	--	--	3.2	--	--	--	--	--
12-30-96	--	--	--	--	3.2	--	--	--	--	--
01-28-97	--	--	--	--	3.1	--	--	--	--	--
02-25-97	--	--	--	--	3.2	--	--	--	--	--
03-25-97	--	--	--	--	2.9	--	--	--	--	--
04-07-97	--	--	--	--	2.8	--	--	--	--	--
04-16-97	--	--	--	--	2.8	--	--	--	--	--
04-21-97	--	--	--	--	2.7	--	--	--	--	--
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	2.7	--	--	--	--	--
05-12-97	--	--	--	--	2.7	--	--	--	--	--
05-19-97	--	--	--	--	2.5	--	--	--	--	--
05-27-97	--	--	--	--	2.5	--	--	--	--	--
06-02-97	--	--	--	--	2.5	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIOUX COUNTY						
420148103555202	24N 57W22CCCC2	42 01 48 N	103 55 52 W	06-09-97	0835	112SDGV
				06-18-97	0725	112SDGV
				06-23-97	0910	112SDGV
				06-30-97	1320	112SDGV
				07-07-97	0850	112SDGV
				07-16-97	0810	112SDGV
				07-21-97	0915	112SDGV
				07-28-97	1410	112SDGV
				08-04-97	0855	112SDGV
				08-11-97	1335	112SDGV
				08-27-97	1430	112SDGV
				09-08-97	0910	112SDGV
				09-15-97	0845	112SDGV
				09-24-97	1310	112SDGV
				09-30-97	1420	112SDGV
420148103555203	24N 57W22CCCC3			10-07-96	1140	112SDGV
				11-25-96	0850	112SDGV
				11-25-96	0900	112SDGV
				12-30-96	0830	112SDGV
				01-28-97	1615	112SDGV
				02-25-97	1410	112SDGV
				03-25-97	1045	112SDGV
				04-07-97	1445	112SDGV
				04-16-97	1025	112SDGV
				04-21-97	1445	112SDGV
				04-28-97	1610	112SDGV
				05-05-97	1035	112SDGV
				05-12-97	1025	112SDGV
				05-19-97	1010	112SDGV
				05-27-97	1140	112SDGV
				06-02-97	1340	112SDGV
				06-09-97	0855	112SDGV
				06-18-97	0745	112SDGV
				06-23-97	0925	112SDGV
				06-30-97	1335	112SDGV
				07-07-97	0905	112SDGV
				07-16-97	0830	112SDGV
				07-21-97	0930	112SDGV
				07-28-97	1425	112SDGV
				08-04-97	0910	112SDGV
				08-11-97	1350	112SDGV
				08-27-97	1450	112SDGV
				09-08-97	0930	112SDGV
				09-15-97	0905	112SDGV
				09-24-97	1325	112SDGV
				09-30-97	1405	112SDGV
420148103555204	24N 57W22CCCC4			01-28-97	1640	112SDGV
				02-25-97	1440	112SDGV
				03-25-97	1105	112SDGV
				04-07-97	1510	112SDGV
				04-21-97	1510	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARDS UNITS) (00400)	TEMPER- ATURE AIR (°C) (00020)	TEMPER- ATURE WATER (°C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
06-09-97	--	82	4139	646	7.4	--	14.0	--	270	85
06-18-97	--	82	4139	648	7.3	--	14.5	--	290	93
06-23-97	--	82	4139	647	7.5	--	16.0	--	270	89
06-30-97	--	82	4139	650	7.4	--	14.5	--	--	--
07-07-97	--	82	4139	649	7.3	--	14.5	6.1	260	80
07-16-97	--	82	4139	652	7.4	--	14.5	0.90	260	82
07-21-97	--	82	4139	653	7.1	--	14.5	8.4	270	86
07-28-97	--	82	4139	652	7.4	--	14.0	--	260	83
08-04-97	--	82	4139	654	7.3	--	14.5	6.2	260	82
08-11-97	--	82	4139	653	7.4	--	14.0	6.2	270	87
08-27-97	--	82	4139	655	7.3	--	14.5	--	--	--
09-08-97	40.0	82	4139	661	7.0	--	14.5	--	270	83
09-15-97	39.3	82	4139	661	7.3	--	14.0	--	260	80
09-24-97	38.5	82	4139	665	7.1	--	14.0	--	270	86
09-30-97	38.3	82	4139	667	--	--	7.0	--	270	85
10-07-96	--	55	4139	992	7.4	--	13.5	7.7	380	120
11-25-96	--	55	4139	--	7.4	--	14.5	--	350	110
11-25-96	--	55	4139	--	7.4	--	14.5	--	350	110
12-30-96	--	55	4139	964	7.5	--	13.5	--	350	110
01-28-97	--	55	4139	953	7.4	--	13.5	--	380	120
02-25-97	--	55	4139	843	7.5	--	14.5	--	350	110
03-25-97	--	55	4139	864	7.4	--	13.5	--	--	--
04-07-97	--	55	4139	876	7.5	--	13.5	--	380	120
04-16-97	--	55	4139	885	7.5	--	13.5	--	390	120
04-21-97	--	55	4139	886	7.4	--	14.0	--	370	120
04-28-97	--	55	4139	876	7.3	--	14.0	--	370	120
05-05-97	--	55	4139	874	7.4	--	14.0	--	380	120
05-12-97	--	55	4139	867	7.3	--	14.0	--	360	110
05-19-97	--	55	4139	860	7.3	--	14.0	--	370	120
05-27-97	--	55	4139	852	7.3	--	13.5	--	350	110
06-02-97	--	55	4139	845	7.4	--	14.0	--	340	110
06-09-97	--	55	4139	838	7.3	--	14.0	--	360	110
06-18-97	--	55	4139	840	7.1	--	14.0	--	380	120
06-23-97	--	55	4139	835	7.3	--	15.0	--	360	110
06-30-97	--	55	4139	837	7.3	--	14.0	--	--	--
07-07-97	--	55	4139	847	7.2	--	14.0	7.1	350	110
07-16-97	--	55	4139	852	7.2	--	14.0	0.90	370	120
07-21-97	--	55	4139	838	7.0	--	14.0	8.3	360	110
07-28-97	--	55	4139	844	7.3	--	14.0	--	390	120
08-04-97	--	55	4139	836	7.2	--	14.0	7.2	340	100
08-11-97	--	55	4139	845	7.2	--	14.0	7.3	370	120
08-27-97	--	55	4139	856	7.1	--	14.0	--	--	--
09-08-97	40.0	55	4139	887	7.0	--	14.0	--	380	120
09-15-97	39.3	55	4139	878	7.3	--	14.0	--	380	120
09-24-97	38.5	55	4139	854	6.9	--	13.5	--	370	120
09-30-97	38.3	55	4139	852	7.0	--	14.0	--	360	120
01-28-97	--	70	4140	962	7.3	--	13.5	--	380	120
02-25-97	--	70	4140	878	7.5	--	14.0	--	350	110
03-25-97	--	70	4140	890	7.4	--	14.0	--	--	--
04-07-97	--	70	4140	881	7.5	--	14.0	--	380	120
04-21-97	--	70	4140	883	7.4	--	14.0	--	360	110

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
SIOUX COUNTY										
06-09-97	13	47	--	1	--	--	180	13	--	--
06-18-97	14	50	--	1	--	--	180	13	--	--
06-23-97	13	44	--	1	--	--	180	14	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	14	48	--	1	--	--	180	14	--	--
07-16-97	14	47	--	1	--	--	180	13	--	--
07-21-97	14	48	--	1	--	--	190	14	--	--
07-28-97	14	48	--	1	--	--	190	13	--	--
08-04-97	14	49	--	1	--	--	190	15	--	--
08-11-97	14	48	--	1	--	--	190	14	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	14	49	--	1	--	--	180	14	--	--
09-15-97	14	51	--	1	--	--	200	14	--	--
09-24-97	14	49	--	1	--	--	210	14	--	--
09-30-97	14	48	--	1	--	--	190	14	--	--
10-07-96	19	65	27	1	11	241	240	21	0.40	45
11-25-96	18	61	--	1	--	--	240	19	--	--
11-25-96	19	63	--	1	--	--	240	19	--	--
12-30-96	19	62	--	1	--	--	240	19	--	--
01-28-97	19	65	--	1	--	--	240	18	--	--
02-25-97	18	58	--	1	--	--	240	17	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	20	63	--	1	--	--	240	19	--	--
04-16-97	20	63	--	1	--	--	240	20	--	--
04-21-97	20	60	--	1	--	--	240	20	--	--
04-28-97	20	61	--	1	--	--	240	19	--	--
05-05-97	20	61	--	1	--	--	240	19	--	--
05-12-97	19	58	--	1	--	--	240	18	--	--
05-19-97	19	59	--	1	--	--	240	19	--	--
05-27-97	19	59	--	1	--	--	230	18	--	--
06-02-97	18	58	--	1	--	--	230	18	--	--
06-09-97	18	56	--	1	--	--	230	17	--	--
06-18-97	19	62	--	1	--	--	230	18	--	--
06-23-97	18	56	--	1	--	--	230	18	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	19	58	--	1	--	--	230	18	--	--
07-16-97	20	61	--	1	--	--	230	17	--	--
07-21-97	19	58	--	1	--	--	230	18	--	--
07-28-97	19	57	--	1	--	--	230	18	--	--
08-04-97	18	58	--	1	--	--	230	19	--	--
08-11-97	19	59	--	1	--	--	230	17	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	20	63	--	1	--	--	230	18	--	--
09-15-97	20	64	--	1	--	--	240	19	--	--
09-24-97	20	60	--	1	--	--	240	17	--	--
09-30-97	18	58	--	1	--	--	220	17	--	--
01-28-97	19	59	--	1	--	--	250	18	--	--
02-25-97	18	57	--	1	--	--	250	20	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	20	62	--	1	--	--	250	20	--	--
04-21-97	20	59	--	1	--	--	250	20	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
06-09-97	13	47	--	1	--	--	180	13	--	--
06-18-97	14	50	--	1	--	--	180	13	--	--
06-23-97	13	44	--	1	--	--	180	14	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	14	48	--	1	--	--	180	14	--	--
07-16-97	14	47	--	1	--	--	180	13	--	--
07-21-97	14	48	--	1	--	--	190	14	--	--
07-28-97	14	48	--	1	--	--	190	13	--	--
08-04-97	14	49	--	1	--	--	190	15	--	--
08-11-97	14	48	--	1	--	--	190	14	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	14	49	--	1	--	--	180	14	--	--
09-15-97	14	51	--	1	--	--	200	14	--	--
09-24-97	14	49	--	1	--	--	210	14	--	--
09-30-97	14	48	--	1	--	--	190	14	--	--
10-07-96	19	65	27	1	11	241	240	21	0.40	45
11-25-96	18	61	--	1	--	--	240	19	--	--
11-25-96	19	63	--	1	--	--	240	19	--	--
12-30-96	19	62	--	1	--	--	240	19	--	--
01-28-97	19	65	--	1	--	--	240	18	--	--
02-25-97	18	58	--	1	--	--	240	17	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	20	63	--	1	--	--	240	19	--	--
04-16-97	20	63	--	1	--	--	240	20	--	--
04-21-97	20	60	--	1	--	--	240	20	--	--
04-28-97	20	61	--	1	--	--	240	19	--	--
05-05-97	20	61	--	1	--	--	240	19	--	--
05-12-97	19	58	--	1	--	--	240	18	--	--
05-19-97	19	59	--	1	--	--	240	19	--	--
05-27-97	19	59	--	1	--	--	230	18	--	--
06-02-97	18	58	--	1	--	--	230	18	--	--
06-09-97	18	56	--	1	--	--	230	17	--	--
06-18-97	19	62	--	1	--	--	230	18	--	--
06-23-97	18	56	--	1	--	--	230	18	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	19	58	--	1	--	--	230	18	--	--
07-16-97	20	61	--	1	--	--	230	17	--	--
07-21-97	19	58	--	1	--	--	230	18	--	--
07-28-97	19	57	--	1	--	--	230	18	--	--
08-04-97	18	58	--	1	--	--	230	19	--	--
08-11-97	19	59	--	1	--	--	230	17	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	20	63	--	1	--	--	230	18	--	--
09-15-97	20	64	--	1	--	--	240	19	--	--
09-24-97	20	60	--	1	--	--	240	17	--	--
09-30-97	18	58	--	1	--	--	220	17	--	--
01-28-97	19	59	--	1	--	--	250	18	--	--
02-25-97	18	57	--	1	--	--	250	20	--	--
03-25-97	--	--	--	--	--	--	--	--	--	--
04-07-97	20	62	--	1	--	--	250	20	--	--
04-21-97	20	59	--	1	--	--	250	20	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIoux COUNTY						
420148103555204	24N 57W22CCCC4	42 01 48 N	103 55 52 W	04-28-97	1630	112SDGV
				05-05-97	1055	112SDGV
				05-12-97	1045	112SDGV
				05-19-97	1035	112SDGV
				05-19-97	1040	112SDGV
				05-27-97	1205	112SDGV
				06-02-97	1405	112SDGV
				06-09-97	0920	112SDGV
				06-18-97	0815	112SDGV
				06-23-97	0945	112SDGV
				06-30-97	1355	112SDGV
				07-07-97	0925	112SDGV
				07-16-97	0850	112SDGV
				07-21-97	0955	112SDGV
				07-28-97	1450	112SDGV
				08-04-97	0930	112SDGV
				08-11-97	1410	112SDGV
				08-27-97	1510	112SDGV
				09-08-97	0950	112SDGV
				09-15-97	0925	112SDGV
420121103560501	24N 57W 28DABA1	42 01 21 N	103 56 05 W	06-17-97	1525	112SDGV
				07-15-97	1420	112SDGV
				09-24-97	1050	112SDGV
420121103560502	24N 57W 28DABA2			06-17-97	1545	112SDGV
				07-15-97	1440	112SDGV
				09-24-97	1105	112SDGV
420121103560503	24N 57W 28DABA3			06-17-97	1605	112SDGV
				07-15-97	1455	112SDGV
				09-24-97	1125	112SDGV
420049103555501	24N 57W 33AAAD1	42 00 49 N	103 55 55 W	02-27-97	1120	112SDGV
				03-26-97	0815	112SDGV
				04-21-97	1540	112SDGV
				05-19-97	1245	112SDGV
				06-17-97	1310	112SDGV
				07-15-97	1320	112SDGV
				08-27-97	1010	112SDGV
				09-24-97	0945	112SDGV
420049103555502	24N 57W 33AAAD2			02-27-97	1140	112SDGV
				03-26-97	0835	112SDGV
				03-26-97	0840	112SDGV
				04-21-97	1600	112SDGV
				05-19-97	1305	112SDGV
				06-17-97	1325	112SDGV
				07-15-97	1335	112SDGV
				08-27-97	1025	112SDGV
				09-24-97	1005	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
04-28-97	--	70	4140	876	7.3	--	14.0	--	360	110
05-05-97	--	70	4140	876	7.4	--	14.0	--	380	120
05-12-97	--	70	4140	879	7.3	--	14.0	--	370	120
05-19-97	--	70	4140	876	7.3	--	14.0	--	380	120
05-19-97	--	70	4140	876	7.5	--	14.0	--	380	120
05-27-97	--	70	4140	874	7.2	--	14.0	--	370	110
06-02-97	--	70	4140	853	7.3	--	14.5	--	350	110
06-09-97	--	70	4140	869	7.2	--	14.0	--	370	120
06-18-97	--	70	4140	879	7.3	--	14.0	--	400	120
06-23-97	--	70	4140	865	7.2	--	16.0	--	380	120
06-30-97	--	70	4140	873	7.2	--	14.5	--	--	--
07-07-97	--	70	4140	876	7.1	--	14.0	7.1	370	110
07-16-97	--	70	4140	847	7.2	--	14.0	7.1	360	110
07-21-97	--	70	4140	842	7.0	--	14.0	7.4	360	110
07-28-97	--	70	4140	832	7.2	--	14.0	--	360	110
08-04-97	--	70	4140	788	7.1	--	14.0	7.4	340	110
08-11-97	--	70	4140	760	7.1	--	14.0	7.8	330	100
08-27-97	--	70	4140	770	7.0	--	15.5	--	--	--
09-08-97	42.5	70	4140	755	7.0	--	16.0	--	320	98
09-15-97	41.7	70	4140	797	7.2	--	15.5	--	340	100
09-24-97	40.9	70	4140	827	6.8	--	15.5	--	370	110
09-30-97	40.7	70	4140	838	7.0	--	16.0	--	370	120
06-17-97	--	200	4110	633	7.6	--	14.0	--	--	--
07-15-97	--	200	4110	1030	7.3	--	14.0	--	250	69
09-24-97	13.6	200	4110	603	7.2	--	14.0	--	240	68
06-17-97	--	99	4110	1010	7.3	--	13.5	--	--	--
07-15-97	--	99	4110	1030	7.3	--	14.0	--	420	130
09-24-97	13.7	99	4110	1040	6.9	--	13.5	--	480	150
06-17-97	--	40	4110	1090	7.1	--	13.0	--	--	--
07-15-97	--	40	4110	1090	7.2	--	13.0	--	480	150
09-24-97	--	40	4110	1090	6.9	--	13.0	--	480	140
02-27-97	--	67	4100	604	8.1	--	13.5	--	220	60
03-26-97	--	67	4100	604	7.4	--	14.0	--	--	--
04-21-97	--	67	4100	604	7.8	--	14.0	--	200	55
05-19-97	--	67	4100	605	7.6	--	14.0	--	230	63
06-17-97	--	67	4100	604	7.4	--	14.0	--	230	66
07-15-97	--	67	4100	604	7.5	--	14.5	5.4	220	61
08-27-97	--	67	4100	603	7.4	--	14.0	--	--	--
09-24-97	13.5	67	4100	603	7.3	--	14.5	--	220	60
02-27-97	--	50	4100	618	8.0	--	14.0	--	250	68
03-26-97	--	50	4100	617	7.4	--	14.5	--	--	--
03-26-97	--	50	4100	617	7.4	--	14.5	--	--	--
04-21-97	--	50	4100	617	7.7	--	14.0	--	240	67
05-19-97	--	50	4100	617	7.6	--	14.0	--	--	--
06-17-97	--	50	4100	616	7.4	--	14.0	--	250	72
07-15-97	--	50	4100	615	7.5	--	14.5	5.3	240	66
08-27-97	--	50	4100	618	7.4	--	14.0	--	--	--
09-24-97	13.6	50	4100	661	7.2	--	14.5	--	280	79

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA _{CO} ₃) (90410)	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)
SIOUX COUNTY										
04-28-97	20	60	--	1	--	--	250	20	--	--
05-05-97	20	62	--	1	--	--	250	20	--	--
05-12-97	20	60	--	1	--	--	250	21	--	--
05-19-97	20	60	--	1	--	--	250	20	--	--
05-19-97	21	62	--	1	--	--	250	20	--	--
05-27-97	21	61	--	1	--	--	240	20	--	--
06-02-97	20	57	--	1	--	--	230	18	--	--
06-09-97	19	57	--	1	--	--	240	18	--	--
06-18-97	21	64	--	1	--	--	240	19	--	--
06-23-97	20	58	--	1	--	--	240	19	--	--
06-30-97	--	--	--	--	--	--	--	--	--	--
07-07-97	21	60	--	1	--	--	240	20	--	--
07-16-97	20	59	--	1	--	--	230	17	--	--
07-21-97	19	58	--	1	--	--	220	18	--	--
07-28-97	19	56	--	1	--	--	210	17	--	--
08-04-97	19	54	--	1	--	--	200	15	--	--
08-11-97	18	52	--	1	--	--	180	14	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	19	53	--	1	--	--	190	15	--	--
09-15-97	20	57	--	1	--	--	220	16	--	--
09-24-97	21	56	--	1	--	--	230	18	--	--
09-30-97	21	58	--	1	--	--	210	17	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	18	48	--	1	--	--	170	13	--	--
09-24-97	18	46	--	1	--	--	170	12	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	24	63	--	1	--	--	280	23	--	--
09-24-97	26	63	--	1	--	--	290	23	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	28	69	--	1	--	--	290	23	--	--
09-24-97	28	70	--	1	--	--	290	20	--	--
02-27-97	17	52	--	2	--	--	170	12	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	16	49	--	1	--	--	170	12	--	--
05-19-97	18	53	--	2	--	--	170	12	--	--
06-17-97	17	52	--	1	--	--	160	12	--	--
07-15-97	17	52	--	2	--	--	160	13	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	17	50	--	1	--	--	180	12	--	--
02-27-97	19	45	--	1	--	--	180	12	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	19	45	--	1	--	--	180	12	--	--
05-19-97	--	--	--	--	--	--	--	--	--	--
06-17-97	18	46	--	1	--	--	170	12	--	--
07-15-97	18	45	--	1	--	--	170	13	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	19	47	--	1	--	--	200	13	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
04-28-97	--	--	--	--	--	--	--	--	--	--
05-05-97	--	--	--	--	7.2	--	--	--	--	--
05-12-97	--	--	--	--	7.3	--	--	--	--	--
05-19-97	--	--	--	--	6.4	--	--	--	--	--
05-19-97	--	--	--	--	6.4	--	--	--	--	--
05-27-97	--	--	--	--	6.5	--	--	--	--	--
06-02-97	--	--	--	--	6.2	--	--	--	--	--
06-09-97	--	--	--	--	6.6	--	--	--	--	--
06-18-97	--	--	--	--	6.8	--	--	--	--	--
06-23-97	--	--	--	--	--	--	--	--	--	--
06-30-97	--	--	--	--	7.0	--	--	--	--	--
07-07-97	--	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	6.4	--	--	--	--	--
07-21-97	--	--	--	--	6.5	--	--	--	--	--
07-28-97	--	--	--	--	6.3	--	--	--	--	--
08-04-97	--	--	--	--	5.5	--	--	--	--	--
08-11-97	--	--	--	--	4.7	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-08-97	--	--	--	--	4.6	--	--	--	--	--
09-15-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	7.0	--	--	--	--	--
09-30-97	--	--	--	--	6.7	--	--	--	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	1.5	--	--	--	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	14	--	--	--	--	--
09-24-97	--	--	--	--	14	--	--	--	--	--
06-17-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	12	--	--	--	--	--
09-24-97	--	--	--	--	8.7	--	--	--	--	--
02-27-97	--	--	--	--	1.5	--	--	--	--	--
03-26-97	--	--	--	--	1.2	--	--	--	--	--
04-21-97	--	--	--	--	1.2	--	--	--	--	--
05-19-97	--	--	--	--	1.1	--	--	--	--	--
06-17-97	--	--	--	--	1.1	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	1.2	--	--	--	--	--
02-27-97	--	--	--	--	1.1	--	--	--	--	--
03-26-97	--	--	--	--	0.98	--	--	--	--	--
03-26-97	--	--	--	--	0.95	--	--	--	--	--
04-21-97	--	--	--	--	1.0	--	--	--	--	--
05-19-97	--	--	--	--	--	--	--	--	--	--
06-17-97	--	--	--	--	0.84	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	2.1	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIOUX COUNTY						
420049103555503	24N 57W 33AAAD3	42 00 49 N	103 55 55 W	02-27-97	1200	112SDGV
				03-26-97	0900	112SDGV
				04-21-97	1620	112SDGV
				05-19-97	1320	112SDGV
				06-17-97	1345	112SDGV
				07-15-97	1355	112SDGV
				08-27-97	1045	112SDGV
				09-24-97	1020	112SDGV
420005103562801	24N 57W33DCCC1	42 00 05 N	103 56 28 W	02-27-97	1025	112SDGV
				03-26-97	0920	112SDGV
				04-22-97	1110	112SDGV
				05-19-97	1450	112SDGV
				06-17-97	1005	112SDGV
				06-18-97	1450	112SDGV
				07-15-97	1030	112SDGV
				08-27-97	0905	112SDGV
				08-27-97	0910	112SDGV
				09-24-97	0840	112SDGV
				09-24-97	0845	112SDGV
420005103562802	24N 57W33DCCC2			02-27-97	1045	112SDGV
				03-26-97	0940	112SDGV
				04-22-97	1125	112SDGV
				05-19-97	1505	112SDGV
				06-17-97	1025	112SDGV
				07-15-97	1105	112SDGV
				08-27-97	0925	112SDGV
				09-24-97	0900	112SDGV
420005103562803	24N 57W33DCCC3			02-27-97	1105	112SDGV
				03-26-97	1000	112SDGV
				04-22-97	1145	112SDGV
				05-19-97	1525	112SDGV
				06-17-97	1045	112SDGV
				07-15-97	1045	112SDGV
				08-27-97	0940	112SDGV
				09-24-97	0920	112SDGV
420004103555301	24N 57W33DDDD1	42 00 04 N	103 55 53 W	02-27-97	0920	112SDGV
				03-26-97	1025	112SDGV
				04-22-97	0915	112SDGV
				05-19-97	1345	112SDGV
				06-17-97	0905	112SDGV
				07-15-97	0930	112SDGV
				08-27-97	0800	112SDGV
				09-24-97	0740	112SDGV
420004103555302	24N 57W33DDDD2			02-27-97	0940	112SDGV
				03-26-97	1040	112SDGV
				04-22-97	0935	112SDGV
				05-19-97	1405	112SDGV
				06-17-97	0925	112SDGV

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
02-27-97	--	35	4100	858	7.7	--	14.0	--	340	100
03-26-97	--	35	4100	869	7.3	--	14.0	--	--	--
04-21-97	--	35	4100	849	7.4	--	13.5	--	360	110
05-19-97	--	35	4100	837	7.3	--	13.0	--	350	100
06-17-97	--	35	4100	853	7.1	--	13.0	--	370	110
07-15-97	--	35	4100	815	7.2	--	13.5	5.3	340	100
08-27-97	--	35	4100	540	7.2	--	13.5	--	--	--
09-24-97	13.6	35	4100	531	7.0	--	19.0	--	220	65
02-27-97	--	100	4100	624	8.0	--	13.5	--	220	61
03-26-97	--	100	4100	624	7.7	--	14.0	--	--	--
04-22-97	--	100	4100	621	7.7	--	14.0	4.0	220	59
05-19-97	--	100	4100	630	7.6	--	14.0	--	220	62
06-17-97	--	100	4100	631	7.4	--	14.0	--	220	62
06-18-97	--	100	4100	421	7.6	--	13.0	7.6	--	--
07-15-97	--	100	4100	632	7.5	--	14.0	5.1	220	61
08-27-97	--	100	4100	634	7.4	--	14.0	--	--	--
08-27-97	--	100	4100	634	7.4	7.5	14.0	--	--	--
09-24-97	20.6	100	4100	635	7.2	--	14.0	--	220	60
09-24-97	20.6	100	4100	635	7.2	--	14.0	--	220	60
02-27-97	--	70	4100	933	7.8	--	13.5	--	420	120
03-26-97	--	70	4100	927	7.5	--	13.5	--	--	--
04-22-97	--	70	4100	918	7.5	--	13.5	6.5	390	110
05-19-97	--	70	4100	910	7.4	--	14.0	--	380	100
06-17-97	--	70	4100	900	7.2	--	14.0	--	400	110
07-15-97	--	70	4100	901	7.3	--	14.0	5.2	350	99
08-27-97	--	70	4100	887	7.2	--	14.0	--	370	100
09-24-97	--	70	4100	854	7.1	--	13.5	--	360	99
02-27-97	--	45	4100	786	7.8	--	14.0	--	310	92
03-26-97	--	45	4100	786	7.5	--	14.5	--	--	--
04-22-97	--	45	4100	787	7.5	--	14.0	7.1	300	88
05-19-97	--	45	4100	787	7.4	--	14.0	--	300	86
06-17-97	--	45	4100	783	7.2	--	14.0	--	320	93
07-15-97	--	45	4100	794	7.3	--	14.0	5.0	300	86
08-27-97	--	45	4100	780	7.2	--	14.0	--	--	--
09-24-97	--	45	4100	778	7.1	--	14.5	--	300	86
02-27-97	--	118	4094	649	7.9	--	13.5	--	240	67
03-26-97	--	118	4094	649	7.7	--	14.0	--	--	--
04-22-97	--	118	4094	649	7.7	--	14.0	4.1	240	67
05-19-97	--	118	4094	649	7.6	--	14.0	--	240	64
06-17-97	--	118	4094	649	7.4	--	14.0	--	260	72
07-15-97	--	118	4094	649	7.5	--	14.5	5.3	240	65
08-27-97	--	118	4094	649	7.2	--	14.0	--	--	--
09-24-97	17.0	118	4094	648	7.2	--	13.5	--	250	69
02-27-97	--	73	4094	843	7.7	--	13.0	--	350	97
03-26-97	--	73	4094	857	7.5	--	13.5	--	--	--
04-22-97	--	73	4094	857	7.5	--	13.5	6.7	370	100
05-19-97	--	73	4094	859	7.3	--	14.0	--	360	99
06-17-97	--	73	4094	837	7.2	--	14.0	--	370	110

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CA _{CO} ₃) (90410)	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)
SIOUX COUNTY										
02-27-97	23	62	--	1	--	--	220	17	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-21-97	23	60	--	1	--	--	230	16	--	--
05-19-97	23	60	--	1	--	--	220	16	--	--
06-17-97	24	59	--	1	--	--	230	17	--	--
07-15-97	22	58	--	1	--	--	220	17	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	15	34	--	1	--	--	130	8.8	--	--
02-27-97	16	57	--	2	--	--	150	12	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	17	62	--	2	--	--	150	12	--	--
05-19-97	16	59	--	2	--	--	150	12	--	--
06-17-97	17	57	--	2	--	--	150	12	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
07-15-97	16	59	--	2	--	--	150	12	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	17	59	--	2	--	--	160	13	--	--
09-24-97	17	60	--	2	--	--	160	12	--	--
02-27-97	30	56	--	1	--	--	240	18	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	29	56	--	1	--	--	240	18	--	--
05-19-97	29	55	--	1	--	--	240	17	--	--
06-17-97	29	54	--	1	--	--	230	17	--	--
07-15-97	26	56	--	1	--	--	230	17	--	--
08-27-97	27	52	--	1	--	--	230	17	--	--
09-24-97	27	54	--	1	--	--	250	17	--	--
02-27-97	20	56	--	1	--	--	210	17	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	21	59	--	1	--	--	220	15	--	--
05-19-97	21	58	--	1	--	--	220	14	--	--
06-17-97	21	56	--	1	--	--	210	14	--	--
07-15-97	20	56	--	1	--	--	210	16	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	20	55	--	1	--	--	190	21	--	--
02-27-97	18	55	--	2	--	--	170	13	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	18	54	--	2	--	--	170	13	--	--
05-19-97	18	54	--	2	--	--	170	13	--	--
06-17-97	19	55	--	1	--	--	170	13	--	--
07-15-97	18	54	--	2	--	--	170	13	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	19	57	--	2	--	--	190	13	--	--
02-27-97	25	54	--	1	--	--	230	18	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	27	54	--	1	--	--	230	19	--	--
05-19-97	26	54	--	1	--	--	230	19	--	--
06-17-97	25	50	--	1	--	--	230	18	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
SIOUX COUNTY										
02-27-97	--	--	--	--	7.1	--	--	--	--	--
03-26-97	--	--	--	--	7.9	--	--	--	--	--
04-21-97	--	--	--	--	7.5	--	--	--	--	--
05-19-97	--	--	--	--	7.1	--	--	--	--	--
06-17-97	--	--	--	--	7.6	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	0.42	--	--	--	--	--
02-27-97	--	--	--	--	2.6	--	--	--	--	--
03-26-97	--	--	--	--	2.4	--	--	--	--	--
04-22-97	--	--	--	--	2.4	--	--	--	--	--
05-19-97	--	--	--	--	2.3	--	--	--	--	--
06-17-97	--	--	--	--	2.4	--	--	--	--	--
06-18-97	--	--	--	--	--	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	2.5	--	--	--	--	--
09-24-97	--	--	--	--	2.4	--	--	--	--	--
02-27-97	--	--	--	--	17	--	--	--	--	--
03-26-97	--	--	--	--	17	--	--	--	--	--
04-22-97	--	--	--	--	16	--	--	--	--	--
05-19-97	--	--	--	--	14	--	--	--	--	--
06-17-97	--	--	--	--	15	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	11	--	--	--	--	--
02-27-97	--	--	--	--	8.2	--	--	--	--	--
03-26-97	--	--	--	--	6.9	--	--	--	--	--
04-22-97	--	--	--	--	6.0	--	--	--	--	--
05-19-97	--	--	--	--	4.9	--	--	--	--	--
06-17-97	--	--	--	--	4.4	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	16	--	--	--	--	--
02-27-97	--	--	--	--	2.5	--	--	--	--	--
03-26-97	--	--	--	--	2.4	--	--	--	--	--
04-22-97	--	--	--	--	2.4	--	--	--	--	--
05-19-97	--	--	--	--	2.2	--	--	--	--	--
06-17-97	--	--	--	--	2.4	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	2.3	--	--	--	--	--
02-27-97	--	--	--	--	10	--	--	--	--	--
03-26-97	--	--	--	--	11	--	--	--	--	--
04-22-97	--	--	--	--	11	--	--	--	--	--
05-19-97	--	--	--	--	10	--	--	--	--	--
06-17-97	--	--	--	--	9.3	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME	GEOLOGIC UNIT
SIOUX COUNTY						
420004103555302	24N 57W33DDDD2	42 00 04 N	103 55 53 W	07-15-97 08-27-97 09-24-97	0945 0820 0755	112SDGV 112SDGV 112SDGV
420004103555303	24N 57W33DDDD3			02-27-97 03-26-97 04-22-97 05-19-97 06-17-97 07-15-97 08-27-97 09-24-97	1000 1100 0955 1420 0940 1005 0835 0815	112SDGV 112SDGV 112SDGV 112SDGV 112SDGV 112SDGV 112SDGV 112SDGV
420516103562501	25N 57W35DCDD1	42 05 16 N	103 56 25 W	07-16-97	1525	112SDGV

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ELEV. OF DEPTH OF WELL, TOTAL (FEET) (72008)	LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)
SIOUX COUNTY										
07-15-97	--	73	4094	813	7.3	--	14.0	4.9	330	94
08-27-97	--	73	4094	825	7.1	--	14.0	--	--	--
09-24-97	17.0	73	4094	834	7.0	--	13.5	--	350	96
02-27-97	--	35	4094	843	7.7	--	13.0	--	340	100
03-26-97	--	35	4094	828	7.4	--	13.5	--	--	--
04-22-97	--	35	4094	823	7.4	--	13.5	7.2	330	99
05-19-97	--	35	4094	830	7.2	--	13.5	--	340	100
06-17-97	--	35	4094	844	7.1	--	13.5	--	360	110
07-15-97	--	35	4094	868	7.2	--	13.5	5.9	360	110
08-27-97	--	35	4094	878	7.0	--	13.5	--	--	--
09-24-97	17.0	35	4094	874	6.9	--	13.0	--	390	120
07-16-97	--	80	4248	357	7.7	--	13.5	--	97	24

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Dutch Flats Ground-water/Surface-water Interaction Study--Continued

(Ground-water Sites)

DATE	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)	ALKA- LINITY LAB (MG/L AS CAO ₃) (90410)	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)
------	---	---	------------------------------	---	--	--	---	--	---	---

SIOUX COUNTY

07-15-97	24	52	--	1	--	--	220	18	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	26	54	--	1	--	--	240	18	--	--
02-27-97	21	63	--	1	--	--	220	15	--	--
03-26-97	--	--	--	--	--	--	--	--	--	--
04-22-97	20	60	--	1	--	--	210	14	--	--
05-19-97	21	61	--	1	--	--	210	14	--	--
06-17-97	20	57	--	1	--	--	210	15	--	--
07-15-97	21	61	--	1	--	--	220	17	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	23	64	--	1	--	--	240	16	--	--
07-16-97	8.8	49	--	2	--	--	24	7.1	--	--

DATE	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)	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 DIS- SOLVED (MG/L AS NH ₄) (71846)	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)
------	---	---	--	--	---	--	---	---	--	---

SIOUX COUNTY

07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	9.5	--	--	--	--	--
02-27-97	--	--	--	--	10	--	--	--	--	--
03-26-97	--	--	--	--	9.9	--	--	--	--	--
04-22-97	--	--	--	--	9.4	--	--	--	--	--
05-19-97	--	--	--	--	9.2	--	--	--	--	--
06-17-97	--	--	--	--	11	--	--	--	--	--
07-15-97	--	--	--	--	--	--	--	--	--	--
08-27-97	--	--	--	--	--	--	--	--	--	--
09-24-97	--	--	--	--	12	--	--	--	--	--
07-16-97	--	--	--	--	4.9	--	--	--	--	--

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Dutch Flats Ground-water/Surface-water Interaction Study--Continued
(Ground-water Sites)

[illegible]

GROUND-WATER LEVELS

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, 1935; lowest, 128.82 ft below land-surface datum, July 10, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 8	115.88	DEC 5	113.62	FEB 10	113.06	APR 2	113.05	JUN 4	114.15	AUG 13	118.50
NOV 18	113.38	JAN 6	113.10	MAR 5	113.14	MAY 13	112.55	JUL 2	117.42	SEP 3	118.22

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 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 3	4.17	JAN 6	3.85	APR 29	3.45						

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413323098074501. Local number 18N 7W 4CA.

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 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 8	11.22	MAY 1	10.86								

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, 109.60 ft below land-surface datum, Oct. 27, 1995..

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 31	109.40	MAR 26	108.00								

GROUND-WATER LEVELS

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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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	100.49	DEC 3	97.76	JAN 25	97.18	MAR 15	96.96	MAY 7	96.52	JUL 20	152.37
OCT 10	99.82	DEC 5	97.75	JAN 31	97.18	MAR 20	96.86	JUN 2	98.05	JUL 25	161.05
OCT 15	99.40	DEC 10	97.65	FEB 5	97.20	MAR 25	96.76	JUN 5	97.88	JUL 31	169.58
OCT 20	99.07	DEC 15	97.70	FEB 6	96.90	MAR 31	96.76	JUN 10	97.90	AUG 12	154.40
OCT 25	98.87	DEC 20	97.64	FEB 10	97.14	APR 1	96.75	JUN 15	97.35	AUG 31	134.57
OCT 31	98.76	DEC 25	97.63	FEB 15	97.03	APR 5	96.59	JUN 20	103.36	SEP 2	129.56
NOV 5	98.53	DEC 31	97.45	FEB 20	96.96	APR 10	96.79	JUN 25	99.91	SEP 5	125.16
NOV 10	98.51	JAN 2	97.34	FEB 25	97.09	APR 15	96.72	JUN 30	101.82	SEP 10	119.41
NOV 15	98.36	JAN 5	97.35	FEB 28	96.82	APR 20	96.60	JUL 2	99.49	SEP 15	115.15
NOV 20	98.03	JAN 10	97.33	MAR 4	96.63	APR 25	96.70	JUL 5	98.45	SEP 20	111.94
NOV 25	98.10	JAN 15	97.40	MAR 5	96.94	APR 30	96.38	JUL 10	109.21	SEP 25	109.36
NOV 30	97.73	JAN 20	97.32	MAR 10	96.88	MAY 5	96.55	JUL 15	129.05	SEP 30	107.39

WATER YEAR 1997: HIGHEST 96.37 APR 30, May 2, 1997
 LOWEST 170.05 JUL 2, 5, 1997

CHASE COUNTY

403220101384001. Local number 7N 38W 28CC.

LOCATION.--Lat 40°32'20", long 101°38'40", SW1/4 SW1/4 sec.28, T.7 N., R.38 W., Hydrologic Unit 10250005, about 0.5 mi north of Imperial. Owner: Roy Hust.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in, depth 143 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,284.6 ft. Measuring point: Top of casing 0.30 ft above land-surface datum.

REMARKS.--Recording gage was installed on this well from December 1948 to December 1963. Water levels in well are affected by irrigation pumpage in area.

PERIOD OF RECORD.--December 1944; December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.82 ft below land-surface datum, June 29, 1964; lowest measured, 110.26 ft below land-surface datum, Oct. 15, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 18	107.35	APR 17	104.79								

CHASE COUNTY

403235101395501. Local number 7N 38W 29CBB.

LOCATION.--Lat 40°32'35", long 101°39'55", NW1/4 NW1/4 SW1/4 sec.29, T.7 N., R.38 W., Hydrologic Unit 10250005, 0.5 mi north and 1 mi west of Imperial on U.S. Highway 6, then 0.5 mi north on gravel road. Owner: U.S. Geological Survey.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 230 ft, perforated 190 to 230 ft.

DATUM.--Altitude of land-surface datum is 3,290.30 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well are affected by irrigation pumpage in area.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.87 ft below land-surface datum, July 4, 1964; lowest, 97.48 ft below land-surface datum, Aug. 29, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	94.08	93.69	93.17	92.84	92.41	91.97	91.29	91.74	91.44	94.04	---	---
10	94.11	93.62	93.06	---	92.27	91.76	91.23	91.52	91.39	93.17	---	---
15	93.99	93.40	93.18	---	92.18	91.73	91.22	92.46	91.12	94.70	---	---
20	93.97	93.50	92.94	---	92.03	91.57	91.07	93.08	91.01	95.43	---	---
25	93.68	93.38	92.91	92.54	92.03	91.63	91.10	91.76	93.05	---	---	---
EOM	93.90	93.32	92.87	92.28	91.92	91.40	91.78	91.66	93.52	---	---	---

WATER YEAR 1997:	HIGHEST	90.97	APR 27, 1997
	LOWEST	94.41	OCT 2, 1996

GROUND-WATER LEVELS

401

CHERRY COUNTY

423205100321501. Local number 30N 28W 36AAA.

LOCATION.--Lat 42°32'05", long 100°32'15", NE1/4 NE1/4 NE1/4 sec. 36, T.30 N., R.28 W., Hydrologic Unit 10150004, 8 mi south of the intersection of U.S. Highway 83 and State Highway 483, south of Valentine. Owner: U.S. Geological Survey.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in, depth 12 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,897.26 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

REMARKS.--Water levels affected by evapotranspiration.

PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.30 ft above land-surface datum, Feb. 6, 1985. Lowest, 1.99 ft below land-surface datum, Oct. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	1.03	MAY 13	1.01								

COLFAX COUNTY

412810097054501. Local number 17N 3E 4CC.

LOCATION.--Lat 41°28'10", long 97°05'45", SW1/4 SW1/4, sec. 4, T.17 N., R.3 E., Hydrologic Unit 10200201, 2 mi west and 1 mi north of intersection of U.S. Highway 30 and State Highway 15 in Schuyler. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 16 ft, screened 14 to 16 ft.

DATUM.--Altitude of land-surface datum is 1,370.58 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.15 ft below land-surface datum, Apr. 1, 1952; lowest, 10.68 ft below land-surface datum, Oct. 29, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	8.00	OCT 10	6.29	MAY 5	5.19						

DAWES COUNTY

424100103243501. Local number 31N 52W 3DC.

LOCATION.--Lat 42°41'00", long 103°24'35", SW1/4 SE1/4 sec.3, T.31 N., R.52 W., Hydrologic Unit 10140201, behind house at 312 Annin Street in Crawford. Owner: T. P. Moody.

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 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 14	18.95	MAR 19	20.13								

DAWSON COUNTY

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 and 25, 1993; lowest, 21.50 ft below land-surface datum, July 16, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	8.18	8.93	9.39	9.89	10.34	10.63	10.79	10.89	10.52	11.96	10.25	---
10	8.34	9.07	9.49	9.95	10.41	10.63	10.84	10.92	10.50	12.11	9.86	---
15	8.42	9.13	9.62	10.05	10.45	10.73	10.85	10.97	10.50	12.10	9.14	9.38
20	8.59	9.24	9.62	10.04	10.48	10.69	10.81	11.05	10.48	11.38	9.22	9.62
25	8.66	9.35	9.73	10.20	10.54	10.77	10.86	10.80	10.53	10.97	10.17	9.65
EOM	8.88	9.36	9.79	10.21	10.56	10.76	10.86	10.62	11.08	10.54	10.20	9.80

WATER YEAR 1997:	HIGHEST	8.00	OCT	1, 1996
	LOWEST	12.28	JUL	11-12, 1997

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, 27.14 ft below land-surface datum, Aug. 31, 1997.

**WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	18.37	18.15	17.81	17.55	17.32	17.16	16.99	17.15	17.31	18.39	19.53	26.78
10	18.62	18.09	17.75	17.50	17.28	17.13	16.97	17.19	17.40	18.60	23.84	---
15	18.66	18.02	17.73	17.47	17.25	17.11	16.93	17.27	17.31	18.74	19.80	---
20	18.44	17.97	17.68	17.43	17.21	17.07	16.91	17.28	17.63	18.93	20.89	---
25	18.31	17.93	17.65	17.40	17.20	17.06	16.97	17.38	17.74	19.23	24.69	25.55
EOM	18.23	17.86	17.60	17.33	17.17	17.02	17.01	17.24	18.01	19.35	27.14	---

WATER YEAR 1997: HIGHEST 16.89 APR 22, 1997
 LOWEST 27.14 AUG 31, 1997

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 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 15	97.41	DEC 5	95.30	FEB 17	94.39	APR 2	93.97	JUN 3	93.20	AUG 13	96.47
NOV 7	96.04	JAN 14	94.83	MAR 6	94.36	MAY 13	93.17	JUL 8	94.09	SEP 9	96.87

GROUND-WATER LEVELS

405

GOSPER COUNTY

403626099451401. Local number 7N 21W 6BC

LOCATION.--Lat 40°36'26", 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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	33.59	MAY 5	32.19								

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	13.25	13.25	13.16	13.12	13.16	13.10	12.93	12.97	12.95	13.05	14.32	14.71
10	13.31	13.28	13.11	13.06	13.10	13.06	13.02	13.01	12.96	13.19	14.52	14.75
15	13.24	13.22	13.22	13.11	13.10	13.09	12.98	12.97	12.90	13.29	14.58	14.73
20	13.23	13.22	13.16	13.06	13.08	13.02	12.93	13.03	12.96	13.48	14.66	14.75
25	13.18	13.27	13.20	13.13	13.16	13.04	12.97	12.96	12.94	13.73	14.62	14.67
EOM	13.31	13.18	13.16	13.03	13.02	13.05	12.91	13.00	12.92	14.08	14.65	14.60

WATER YEAR 1997: HIGHEST 12.85 APR 30, 1997
LOWEST 14.75 SEP 8-10, 20-21, 1997

GROUND-WATER LEVELS

407

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	88.55	88.29	87.99	87.98	87.82	87.58	87.17	87.14	87.03	97.64	106.46	92.16
10	88.65	88.31	87.87	87.83	87.61	87.52	87.26	87.35	87.15	99.10	103.74	97.36
15	88.49	88.04	88.09	87.76	87.57	87.54	87.28	88.16	86.96	100.64	96.39	95.10
20	88.45	88.12	87.93	87.68	87.52	87.38	87.15	87.74	89.29	99.48	94.26	90.67
25	88.25	88.22	87.98	87.84	87.61	87.46	87.21	87.05	95.70	102.67	99.14	89.90
EOM	88.50	88.02	87.92	87.54	87.34	87.42	87.08	87.07	95.20	105.51	99.12	89.78

WATER YEAR 1997: HIGHEST 86.88 JUN 11-12, 1997
 LOWEST 106.46 AUG 5, 1997

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.59	JAN 3	7.79	MAR 17	7.42	JUN 23	7.30	SEP 15	8.53		
NOV 18	8.45	FEB 10	7.31	MAY 5	6.62	AUG 4	8.41				

HOLT COUNTY

423148098300601. Local number 30N 10W 32DAA.

LOCATION.--Lat 42°31'48", long 98°30'06", NE1/4 NE1/4 SE1/4 sec.32, T.30 N., R.10 W., Hydrologic Unit 10150007, 2 mi east on paved road from O'Neill, then 2 mi north, 4 mi east, 2 mi north, 2 mi east, and 0.5 mi north. Owner: William J. Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 85 ft, perforated 25.5 to 85 ft.

DATUM.--Altitude of land-surface datum is 1,952 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in this well affected by withdrawals by nearby irrigation wells completed in this aquifer and withdrawals from a deeper aquifer which has resulted in water movement from the upper aquifer to the deeper aquifer.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.41 ft below land-surface datum, Oct. 21, 1966; lowest, 53.72 ft below land-surface datum, Sept. 15, 20, 25, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	42.69	42.49	42.20	42.09	41.87	41.65	41.18	41.03	40.84	41.00	41.97	43.26
10	42.74	42.49	42.16	42.00	41.79	41.51	41.26	41.00	40.87	41.07	42.21	43.41
15	42.64	42.38	42.24	42.03	41.78	41.51	41.22	40.99	40.79	41.17	42.40	43.51
20	42.62	42.38	42.12	41.88	41.69	41.41	41.09	40.97	40.78	41.29	42.62	43.66
25	42.49	42.39	42.15	41.96	41.68	41.40	41.13	40.86	40.85	41.46	42.78	43.67
EOM	42.61	42.28	42.10	41.80	41.58	41.33	41.01	40.88	40.87	41.74	43.06	43.75

WATER YEAR 1997:	HIGHEST	40.75	JUN	19-21, 1997
	LOWEST	43.75	SEP	30, 1997

HOLT COUNTY

423730098560001. Local number 31 N 14W 27DDD

LOCATION.--Lat 42°37'30", long 98°56'00", SE1/4 SE1/4 SE1/4 sec.27, T.31 N., R.14 W., Hydrologic Unit 10150007, 6 mi north from Atkinson on Route 11, then 2 mi east. Owner: Elmer Goldfuss.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 72 ft, perforated 32 to 72 ft.

DATUM.--Altitude of land-surface datum is 2,080 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.--July 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.72 ft below land-surface datum, July 3, 1995; lowest, 43.30 ft below land-surface datum, Sept. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	33.45	32.36	31.95	31.76	31.53	31.24	31.03	30.98	31.30	31.44	33.06	34.11
10	33.21	32.29	31.89	31.70	31.49	31.18	31.11	31.01	31.24	31.51	33.36	34.02
15	32.98	32.21	31.90	31.66	31.46	31.16	31.06	31.13	31.14	31.65	33.35	33.95
20	32.77	32.12	31.85	31.64	30.50	31.13	31.00	31.24	31.12	32.01	33.35	33.84
25	32.61	32.09	31.84	31.65	31.25	31.11	31.02	31.37	31.04	32.38	33.66	33.72
EOM	32.52	32.00	31.78	31.55	31.19	31.11	30.95	31.36	31.25	32.91	34.06	33.58

WATER YEAR 1997:	HIGHEST	29.63	FEB	20, 1997
	LOWEST	34.13	SEP	3-4, 1997

GROUND-WATER LEVELS

KIMBALL COUNTY

411416103361101. Local number 15N 55W 26CCC.

LOCATION.--Lat 41°14'18", long 103°36'15", SW1/4 SW1/4 SW1/4 sec.26, T.15 N., R.55 W., Hydrologic Unit 10190016, east of intersection of U.S. Highway 30 and State Highway 71 in Kimball. Owner: Henry Meier.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 124 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,652.3 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Local well number formerly listed as 15N 55W 26CC. Replacement for 411600103393501, local number 15N 55W 17CC1, period of record January 1935 to November 1942; June 1950 to October 1975.

PERIOD OF RECORD.--January 1936 to October 1937; January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.82 ft below land-surface datum, Jan. 2, 1936; lowest, 54.86 ft below land-surface datum, Nov. 4, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	54.86	MAR 25	52.73								

LANCASTER COUNTY

403929096401001. Local number 8N 7E 18DDB.

LOCATION.--Lat 40°39'29", long 96°40'10", NW1/4 SE1/4 SE1/4 sec.18, T.8 N., R.7 E., Hydrologic Unit 10200203, 0.6 mi west of Roca. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 41 ft, perforated 36 to 41 ft.

DATUM.--Altitude of land-surface datum is 1,215 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water level not measured during 1984 water year.

PERIOD OF RECORD.--June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land-surface datum, Aug. 25, 1954; lowest, 14.87 ft below land-surface datum, Oct. 18, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	8.17	MAY 9	3.83								

411

403833096385501. Local number 8N 7E 20DDA.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 33 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,243 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water level not measured during 1984 water year.

PERIOD OF RECORD.--June 1954 to current year.

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.

REVISIONS.--The highest water level measured as shown in EXTREMES FOR PERIOD OF RECORD should have been listed as +16 ft above land-surface datum rather than "below". The date is correct.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 3	3.19	MAY 9	2.32								

LANCASTER COUNTY

404706096413001. Local number 10N 6E 36CDD.

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.

AQUIFER.--Dakota Formation of Lower Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Recorder removed in January 1983. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1951 to current year.

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 LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 17	48.47	MAY 9	47.83								

GROUND-WATER LEVELS

MORRILL COUNTY

414058103054001. Local number 20N 50W 28BBC.

LOCATION.--Lat 41°40'58", long 103°05'40", SW1/4 NW1/4 NW1/4 sec.28, T.20 N., R.50 W., Hydrologic unit 10180009, 0.1 mi west of Northport. Owner: Fred Smith.

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	14.97	MAR 20	15.87								

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 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 7	3.51	MAY 6	2.65								

413

403123099261501. Local number 6N 19W 2AA.

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, 1997; lowest, 123.70 ft below land-surface datum, Mar. 9, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 15	31.59	JAN 22	33.90	APR 24	36.15	MAY 5	34.86				

412955097192001. Local number 18N 1E 28CD.

LOCATION.--Lat 41°09'55", 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, 1940; lowest, 72.81 ft below land-surface datum, Oct. 9, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 13	63.95	MAY 7	63.56								

SALINE COUNTY

403855097072501. Local number 8N 3E 19ADA.

LOCATION.--Lat 40°38'55", long 97°07'25", NE1/4 SE1/4 NE1/4 sec.19, T.8 N., R.3 E., Hydrologic Unit 10270202, west edge of Dorchester, on west side of Route 15 between U.S. Highway and Route 33. Owner: U.S. Geological Survey.

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. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 4	98.94	DEC 4	97.65	FEB 5	97.19	APR 2	96.37	JUN 3	95.88	AUG 13	99.14
NOV 7	98.16	JAN 6	97.68	MAR 6	96.90	MAY 12	95.78	JUL 8	95.62	SEP 9	98.76

SARPY COUNTY

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	3.15	3.72	3.10	1.97	1.38	2.92	3.28	3.17	3.63	3.16	4.87	3.99
10	3.30	3.52	3.12	1.82	1.45	3.14	3.14	3.58	3.63	3.62	4.85	4.04
15	3.37	3.67	3.22	2.42	1.54	3.13	3.16	3.70	3.60	4.02	3.79	3.77
20	3.19	2.93	3.26	2.27	1.29	3.17	2.94	3.97	3.28	4.35	3.58	3.90
25	3.64	3.41	2.80	1.73	2.13	3.16	2.87	3.99	2.18	4.56	3.86	3.56
EOM	3.60	3.52	2.53	1.97	2.70	3.25	3.22	3.16	2.93	4.87	4.13	3.51

WATER YEAR 1997:	HIGHEST	-.22	FEB	23, 1997
	LOWEST	4.91	AUG	1, 8, 1997

415

WATER YEAR 1997:	HIGHEST	11.13	FEB	22, 1997
	LOWEST	13.34	AUG	10, 1997

GROUND-WATER LEVELS
SAUNDERS COUNTY

410428096211001. Local number 13N 9E 24DDCC

LOCATION.--Lat 41°04'28", long 96°21'10", SW1/4 SW1/4 SE1/4 4SE1/4 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	4.65	4.53	4.31	5.05	5.44	2.99	4.45	3.74	4.20	3.98	5.20	4.76
10	4.70	4.29	4.40	5.08	5.40	3.55	4.21	3.58	4.53	4.20	5.10	4.88
15	4.64	4.05	4.33	5.20	5.39	3.81	4.11	3.63	4.29	4.39	5.07	5.17
20	4.55	4.22	4.57	5.27	5.27	4.02	3.81	3.97	4.46	4.45	5.42	5.01
25	4.41	4.36	4.77	5.36	1.87	4.29	3.71	3.94	4.07	4.72	5.37	4.87
EOM	4.27	4.42	4.89	5.38	2.31	4.61	3.49	4.26	4.15	5.03	5.02	5.02

WATER YEAR 1997:	HIGHEST	.91	FEB 22, 1997
	LOWEST	5.44	FEB 5, 1997

GROUND-WATER LEVELS

417

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	11.25	12.05	12.63	12.74	11.98	6.56	7.94	9.39	10.84	11.65	15.42	14.68
10	11.67	12.21	12.72	12.39	11.78	6.72	---	9.53	11.07	11.65	14.99	14.89
15	11.80	12.30	12.96	12.17	11.64	7.05	---	9.71	11.22	12.29	14.67	14.86
20	11.85	12.37	12.73	11.98	11.36	7.18	8.88	10.03	11.57	13.79	14.71	15.20
25	11.91	12.71	12.85	12.11	6.38	7.55	9.28	10.11	11.78	14.58	14.63	15.05
EOM	12.05	12.68	12.71	11.83	6.19	7.85	9.26	10.59	11.49	14.15	14.68	15.42

WATER YEAR 1997: HIGHEST 6.08 FEB 28, 1997
LOWEST 15.55 AUG 6, 1997

GROUND-WATER LEVELS

SAUNDERS COUNTY

410527096203201. Local number 13N 10E 18CDBD.

LOCATION.--Lat 41°05'27", long 96°20'32", SE1/4 NW1/4 SE1/4SW1/4 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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	6.00	6.62	6.01	5.58	5.26	---	5.97	6.09	6.36	6.31	7.74	6.72
10	6.20	6.30	6.04	5.30	5.22	---	7.20	6.17	6.67	6.68	7.89	6.84
15	6.34	6.45	5.92	5.69	---	6.62	7.42	6.51	6.71	6.97	7.27	6.94
20	6.27	5.87	6.36	5.88	---	5.34	6.10	6.65	6.57	7.36	6.79	7.02
25	6.50	6.11	6.16	5.54	---	5.59	5.93	6.85	5.69	7.65	6.74	6.55
EOM	6.58	6.40	5.76	5.59	---	5.44	6.17	6.12	5.94	7.82	7.07	6.52

WATER YEAR 1997:	HIGHEST	3.91	APR	8,	1997
	LOWEST	7.89	AUG	10-11,	1997

419

WATER YEAR 1997:	HIGHEST	2.30	FEB	23, 1997
	LOWEST	11.96	AUG	4, 1997

GROUND-WATER LEVELS

SAUNDERS COUNTY

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	13.58	14.22	12.18	11.69	11.56	5.51	9.47	11.24	13.96	14.85	17.29	19.67
10	14.72	13.41	11.46	12.33	11.35	6.57	10.52	12.82	14.48	14.74	17.18	20.30
15	14.79	12.49	11.64	11.74	9.94	7.20	9.70	13.29	14.51	14.70	16.21	20.84
20	13.68	12.93	12.55	11.61	9.58	9.65	10.69	14.22	14.54	15.95	15.73	20.62
25	13.17	12.93	12.58	10.73	---	9.49	11.63	14.26	14.72	17.11	16.49	19.91
EOM	13.56	12.03	11.95	10.68	---	9.06	12.08	14.32	14.94	17.06	19.12	19.36

WATER YEAR 1997:	HIGHEST	4.97	MAR 2, 1997
	LOWEST	20.91	SEP 17, 1997

421

410401096195201. Local number 13N 10E 30DAAB.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

DATUM.--Altitude of land-surface datum is 1,060 ft. Measuring point: Top of casing 3.6 ft above land-surface datum.

PERIOD OF RECORD.--August 1990 to current year.

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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	8.17	8.94	8.37	7.60	6.98	7.96	8.54	8.30	8.30	8.14	10.32	9.10
10	8.55	8.73	8.48	7.03	6.79	8.16	8.29	8.74	8.48	8.70	10.31	9.30
15	8.66	8.89	8.56	7.70	6.80	8.27	8.12	8.82	9.18	9.27	8.99	9.12
20	8.35	8.12	8.97	7.84	5.88	8.38	8.07	9.13	8.78	9.64	8.62	9.27
25	8.74	8.68	8.41	7.30	6.10	8.42	8.16	9.02	7.23	9.93	8.80	8.74
EOM	8.71	8.98	8.19	7.66	7.00	8.49	8.49	7.83	7.64	10.29	9.14	8.67

WATER YEAR 1997:	HIGHEST	-.29	FEB	22, 1997
	LOWEST	10.38	AUG	8, 1997

SAUNDERS COUNTY

410314096201101. Local number 13N 10E 31ACDB.

LOCATION.--Lat 41°03'14", long 96°20'11", NW1/4 SE1/4 SW1/4 NE1/4 sec.31, T.13 N., R.10E., Hydrologic Unit 10200203, 1.4 mi northeast of Ashland north of U.S. Highway 6. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 49 ft., screened 35 to 49 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,060 ft. Measuring point: Top of casing 5.9 ft (April 1994) above land-surface datum.

REMARKS.--Starting in April 1991, recorder instrument set to read depth below measuring point.

PERIOD OF RECORD.--November 1990 to current year.

REVISED RECORDS.--WDR NE-96: Water levels for 1995 water year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.86 ft above land-surface datum, Mar 12, 1993; lowest, 20.37 ft below land-surface datum, Oct 10, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	13.47	13.96	---	13.26	11.44	9.23	11.69	11.54	13.83	15.20	18.22	19.10
10	13.44	15.83	13.03	13.06	11.14	9.40	11.55	12.27	13.98	15.43	18.51	19.21
15	13.78	---	13.15	12.89	11.12	9.71	11.06	13.25	14.21	15.90	18.44	19.15
20	14.06	---	13.24	12.47	11.07	10.20	11.11	13.96	14.80	16.63	18.29	19.18
25	13.93	---	13.17	12.13	8.29	11.01	11.47	14.61	14.90	17.35	18.24	19.31
EOM	13.96	---	13.01	11.60	8.81	11.53	11.54	14.35	14.87	18.06	18.75	19.30

WATER YEAR 1997:	HIGHEST	6.90	FEB	22, 1997
	LOWEST	19.33	SEP	25-28, 1997

423

410303096192901. Local number 13N 10E 32CABC.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	6.99	8.47	8.02	6.56	6.72	5.44	7.78	7.73	7.13	7.72	10.95	8.73
10	7.15	8.74	8.29	6.15	5.23	5.61	6.62	7.03	8.75	8.05	11.71	8.73
15	8.12	8.64	7.34	6.32	5.16	6.87	6.72	8.34	9.18	8.56	10.19	8.71
20	8.00	7.70	7.18	6.28	4.81	5.97	6.24	8.72	9.00	8.97	9.50	9.14
25	7.13	8.17	8.42	5.92	4.88	6.31	7.46	7.93	6.72	9.57	9.20	9.10
EOM	7.12	8.47	7.31	6.00	5.18	7.59	7.65	7.04	6.75	9.77	8.95	8.01

WATER YEAR 1997:	HIGHEST	3.72	FEB	23, 1997
	LOWEST	11.75	AUG	11, 1997

SAUNDERS COUNTY

410307096193801. Local number 13N 10E 32CBAB.

LOCATION.--Lat 41°03'07", long 96°19'38", NW1/4 NE1/4 NW1/4 SW1/4 sec.32, T.13 N., R.10E., Hydrologic Unit 10200202, 2.0 mi northeast of Ashland on highway 6 and 0.5 mi south of highway 6 entrance to City of Lincoln southern well field. Southern end of well field. Owner: City of Lincoln.

AQUIFER.--Alluvial sand and gravel deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 46 ft., screened 11 to 46 ft., casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,060 ft. Measuring point: Top of casing 3.8 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.

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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
 LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	---	7.48	7.08	6.74	5.10	3.69	6.01	7.28	7.28	8.93	13.23	10.67
10	---	8.35	7.74	5.92	3.09	3.87	5.50	7.00	9.85	9.51	13.87	10.34
15	---	7.77	7.70	5.61	3.37	4.83	5.29	7.98	11.01	10.40	13.22	10.45
20	7.69	6.79	6.89	5.49	2.78	4.46	5.77	8.63	10.74	11.11	12.92	11.79
25	6.61	7.31	7.94	5.31	3.07	5.35	6.99	8.47	6.75	11.66	12.09	12.03
EOM	6.25	7.66	7.08	5.11	3.44	6.01	7.11	7.16	7.50	12.31	10.86	11.33

WATER YEAR 1997:	HIGHEST	1.24	FEB	22, 1997
	LOWEST	13.87	AUG	10, 1997

425

411005096281502. Local number 14N 8E 24ACD2.

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 1996 TO SEPTEMBER 1997
 LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
01	---	---	---	---	41.84	---	---	---	---	---	---	---
02	---	---	---	---	---	---	---	---	42.05	---	---	43.06
03	---	---	---	---	---	41.83	---	---	---	---	---	---
04	---	41.90	41.90	---	---	---	---	---	---	---	---	---
05	42.06	---	---	---	41.97	41.94	41.89	41.99	42.06	42.24	42.52	43.09
07	---	---	---	41.80	---	---	---	---	---	---	---	---
08	---	---	---	---	---	---	---	41.95	---	---	---	---
09	42.06	---	---	---	---	---	---	---	---	---	---	---
10	42.06	---	---	---	41.92	41.91	41.96	41.98	42.13	42.29	42.61	43.15
15	42.04	---	---	---	41.93	41.97	41.99	42.02	42.13	42.29	42.73	43.19
20	42.01	---	---	---	41.87	41.90	41.96	42.05	42.20	42.34	42.83	43.25
25	41.95	---	---	---	41.95	41.94	42.01	42.00	42.23	42.37	42.90	43.23
EOM	41.98	---	---	41.87	41.87	41.95	41.93	42.00	42.19	42.45	43.01	43.27

WATER YEAR 1997:	HIGHEST	41.80	JAN	7, 1997
	LOWEST	43.27	SEP	30, 1997

WATER YEAR 1997:	HIGHEST.	25.67	NOV	4-21,	1996
	LOWEST	26.74	JUL	3-4,	1997

427

405406097115001. Local number 11N 2E 21DD.

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 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	78.63	77.32	76.49	75.84	75.63	75.18	74.79	74.65	75.13	75.22	81.25	80.31
10	78.26	77.25	76.36	75.91	75.64	75.17	75.03	74.73	75.21	75.53	81.21	79.96
15	---	77.24	76.38	76.10	75.48	75.23	74.89	74.62	75.45	76.42	81.35	79.64
20	---	76.82	76.37	75.89	75.30	75.13	74.73	76.93	75.49	77.74	80.83	79.12
25	---	76.88	76.30	75.74	75.48	74.94	74.73	75.07	75.30	79.49	80.24	78.88
EOM	---	76.62	76.12	75.71	75.18	74.90	74.61	75.07	75.13	80.69	80.19	78.42

WATER YEAR 1997:	HIGHEST	74.53	MAY 2, 1997
	LOWEST	81.72	AUG. 11, 1997

SHERIDAN COUNTY

423034102415001. Local number 29N 46W 10AA

LOCATION.--Lat 42°30'34", long 102°41'50", NE1/4 NE1/4 sec.10, T.29 N., R.46 W., Hydrologic Unit 10150003, at Mirage Flats project headquarters, 11.5 mi south of Hay Springs. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 100 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,794.5 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Water levels affected by seepage losses from nearby irrigation canal and laterals and by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--September 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.47 ft below land-surface datum, Aug. 25, 1969; lowest, 44.49 ft below land-surface datum, Aug. 20, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	---	39.74	39.58	39.52	39.50	39.45	39.41	39.38	39.42	39.65	39.69	40.13
10	---	39.73	39.56	39.48	39.46	39.42	39.40	39.37	39.46	39.96	39.71	40.06
15	---	39.69	39.57	39.48	39.48	39.43	39.39	39.38	39.52	39.52	39.77	40.02
20	---	39.67	39.48	39.45	39.45	39.40	39.36	39.45	39.45	39.59	40.05	40.01
25	---	39.67	39.46	39.50	39.43	39.43	39.44	39.43	39.45	38.92	40.02	39.93
EOM	39.80	39.62	39.45	39.47	39.42	39.40	39.38	39.44	39.39	39.66	39.90	39.88

WATER YEAR 1997:	HIGHEST	38.71	APR	12, 1997
	LOWEST	40.13	SEP	5-6, 1997

GROUND-WATER LEVELS

429

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, 1951; lowest, 10.56 ft below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 7	5.48	MAY 6	5.38								

YORK COUNTY

404618097482201. Local number 9N 4W 5CCC.

LOCATION.--Lat 40°46'18", long 97°48'22", SW1/4 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, 72.93 ft below land-surface datum, May 7, 1997; lowest, 87.52 ft below land-surface datum, Aug. 20, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	75.40	DEC 3	74.79	FEB 6	73.73	APR 1	73.25	JUN 4	73.03	AUG 12	74.50
NOV 5	74.85	JAN 2	73.97	MAR 4	73.68	MAY 7	72.93	JUL 2	72.96	SEP 2	75.85

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, 79.61 ft below land-surface datum, June 6, 1995; lowest, 120.81 ft below land-surface datum, July 15, 1974.

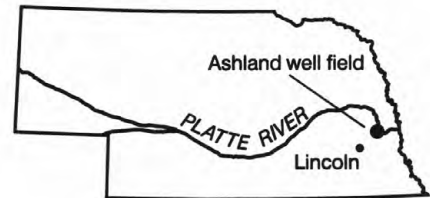
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 3	82.06	DEC 3	81.05	FEB 5	80.60	APR 1	80.22	JUN 2	80.75	AUG 12	83.77
NOV 5	81.44	JAN 2	80.61	MAR 4	80.31	MAY 7	80.36	JUL 2	81.29	SEP 2	83.28

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

ASHLAND WELL FIELD STUDY

COUNTIES: Sarpy, Saunders



LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH	TEMPERATURE WATER (°C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA-	CALCIUM
					WATER WHOLE FIELD (STAND- ARD UNITS) (00400)			LINITY LAB (MG/L AS CaCO ₃) (90410)	
SARPY COUNTY									
12N10E 4CDAA1	41 01 59 N	096 18 10 W	09-03-97	657		7.5	13.0	0.09	68
13N10E 32BADC1	41 03 24 N	096 19 18 W	09-03-97	572		7.6	14.0	0.05	65
12N10E 4BADB1	41 02 33 N	096 18 18 W	09-03-97	602		7.8	11.0	0.04	64
13N10E 32ADDD1	41 03 12 N	096 18 39 W	09-03-97	440		7.8	8.5	0.02	40

SAUNDERS COUNTY

13N10E 32CABC1	41 03 03 N	096 19 29 W	09-03-97	590	7.6	13.0	0.01	151	50
13N 9E 14AAAAA1	41 06 12 N	096 22 06 W	09-04-97	816	7.1	12.0	0.10	--	--
13N 9E 2DDDD1	41 07 07 N	096 22 06 W	09-04-97	778	7.0	12.5	0.07	--	--
13N10E 7BBBB1	41 07 03 N	096 20 53 W	09-04-97	597	7.0	14.0	0.05	--	--

[illegible]**SARPY COUNTY**

09-03-97	17	39	10	110	18	0.4	30	7	200	<0.5	75.0	<1
09-03-97	12	32	7.4	89	15	0.4	32	4	170	<0.5	65.0	<1
09-03-97	15	31	8.7	80	14	0.3	26	6	220	<0.5	68.0	<1
09-03-97	14	23	7.0	54	12	0.3	11	4	190	<0.5	50.0	<1

SAUNDERS COUNTY[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Ashland Well Field Study--Continued

	CHRO- MIUM, DIS-	COBALT, DIS-	COPPER, DIS-	LEAD, DIS-	LITHIUM DIS-	MANGA- NESE, DIS-	MERCURY DIS-	MOLYB- DENUM, DIS-	NICKEL, DIS-	SELE- NIUM, DIS-	SILVER, DIS-
DATE	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)	SOLVED (µ G/L)
	AS CR)	AS CO)	AS CU)	AS PB)	AS LI)	AS MN)	AS HG)	AS MO)	AS NI)	AS SE)	AS AG)
	(01030)	(01035)	(01040)	(01049)	(01130)	(01056)	(71890)	(01060)	(01065)	(01145)	(01075)

SARPY COUNTY

09-03-97	<5	<3	<10	10	20	570	<0.1	<10	<10	1	<1
09-03-97	<5	4	<10	30	19	55	<0.1	10	<10	<1	<1
09-03-97	<5	<3	<10	30	20	1200	<0.1	<10	<10	3	<1
09-03-97	<5	<3	<10	<10	12	300	<0.1	<10	<10	<1	<1

SAUNDERS COUNTY[illegible][illegible]**SARPY COUNTY**

09-03-97	450	<6	<3	<0.05	<0.05	<0.05	<0.05	E0.09	0.09	E0.03	<0.05
09-03-97	390	<6	22	<0.05	<0.05	<0.05	<0.05	E0.10	0.10	E0.03	<0.05
09-03-97	410	<6	11	<0.05	<0.05	<0.05	<0.05	E0.15	0.11	E0.04	<0.05
09-03-97	310	<6	7	<0.05	<0.05	<0.05	<0.05	E0.18	0.09	E0.04	<0.05

SAUNDERS COUNTY[illegible]

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Ashland Well Field Study--Continued

	HEXA- ZINONE, WATER, DISS, REC	PRO- METON, WATER, DISS, REC	PRO- METRYN, WATER, DISS, REC	PROP- CHLOR, WATER, DISS, REC	SIL- CLOATE, WATER, DISS, REC	SIMA- TRYN, WATER, DISS, REC	SIL- MAZINE, WATER, DISS, REC	TER- BACIL, WATER, DISS, REC	TRI- FLUR- ALIN, WATER, DISS, REC	VERNO- LATE, WATER, DISS, REC	ACETO- CHLOR, WATER, FLTRD REC
DATE	(µ G/L (04025)	(µ G/L (04037)	(µ G/L (04036)	(µ G/L (04024)	(µ G/L (04031)	(µ G/L (04030)	(µ G/L (04035)	(µ G/L (04032)	(µ G/L (04023)	(µ G/L (04034)	(µ G/L (49260)

SARPY COUNTY[illegible]**SAUNDERS COUNTY**[illegible][illegible]

SARPY COUNTY

09-03-97	<0.05	<0.05	0.28	--	--	--	--	--	--	--
09-03-97	<0.05	<0.05	0.41	--	--	--	--	--	--	--
09-03-97	<0.05	<0.05	0.60	--	--	--	--	--	--	--
09-03-97	<0.05	<0.05	0.34	--	--	--	--	--	--	--

SAUNDERS COUNTY[illegible]

WATER-QUALITY DATA. WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Ashland Well Field Study--Continued

DATE	BENZENE	BENZENE	BENZENE								
	1,3-DI-	135-TRI	1,4-DI-	BROMO-		CARBON-		CHLORO-			CIS-1,2-
	CHLORO-	METHYL	CHLORO-	BENZENE		TETRA-		DI-			-DI-
	WATER	WATER	WATER	WATER,	BROMO-	CHLO-	CHLORO-	BROMO-	CHLORO-	CHLORO-	CHLORO-
	UNFLTRD	UNFLTRD	UNFLTRD	WHOLE,	FORM	RIDE	BENZENE	METHANE	ETHANE	FORM	ETHENE
	REC	REC	REC	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
	(34566)	(77226)	(34571)	(81555)	(32104)	(32102)	(34301)	(32105)	(34311)	(32106)	(77093)

SARPY COUNTY[illegible]**SAUNDERS COUNTY**[illegible]

DATE	DIBROMO 1,2-DIBROMO		DI-BROMO		DI-CHLORO		1,1-DI-CHLORO		1,1-DI-CHLORO		1,1-DI-CHLORO	
	CIS CHLORO-PROPANE	ETHANE	METHANE	CHLORO-BROMO-METHANE	DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHANE	1,2-DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHYL-ENE	CHLORO-PENE, WAT, WH	1,2-DI-CHLORO-PROPANE		
	CHLORO-PROPENE	WATER	WATER	WATER	FLUORO-ETHANE	CHLORO-ETHANE	CHLORO-ETHANE	CHLORO-ETHANE	CHLORO-ETHANE	CHLORO-ETHANE		
	WHOLE	WHOLE	WHOLE	METHANE	METHANE	ETHANE	ETHANE	ETHANE	ETHANE	ETHANE		
	TOTAL	TOT.REC	TOTAL	RECOVER	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)		
	(34704)	(82625)	(77651)	(30217)	(32101)	(34668)	(34496)	(32103)	(34501)	(77168)	(34541)	

SARPY COUNTY

[illegible]**SAUNDERS COUNTY**[illegible]

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Ashland Well Field Study--Continued

DATE	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (µ G/L (77173)	2,2-DI CHLORO- PRO- PANE WAT. WH TOTAL (µ G/L (77170)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (µ G/L (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (µ G/L (34516)	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)	ISO- PROPYL- BENZENE WATER WHOLE REC (µ G/L (77223)	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)
------	--	--	--	--	---	---	--	--	---	--	--

SARPY COUNTY

09-03-97	--	--	--	--	--	--	--	--	--	--	--
09-03-97	--	--	--	--	--	--	--	--	--	--	--
09-03-97	--	--	--	--	--	--	--	--	--	--	--
09-03-97	--	--	--	--	--	--	--	--	--	--	--

SAUNDERS COUNTY

09-03-97	--	--	--	--	--	--	--	--	--	--	--
09-04-97	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
09-04-97	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
09-04-97	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

DATE	METHYL- ENE CHLO- RIDE TOTAL (µ G/L (34423)	METHYL TERT- BUTYL ETHER WAT UNF REC (µ G/L (78032)	METO- LACHLOR WATER DISSOLV (µ G/L (39415)	METRI- BUZIN SENCOR WATER DISSOLV (µ G/L (82630)	NAPHTH- ALENE TOTAL (µ G/L (34696)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (µ G/L (77275)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (µ G/L (77356)	PROP- AZINE WATER DISS REC (µ G/L (38535)	STYRENE TOTAL (µ G/L (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (µ G/L (34475)	TOLUENE TOTAL (µ G/L (34010)
------	---	--	---	--	--	--	--	---	---------------------------------------	--	---------------------------------------

SARPY COUNTY

09-03-97	--	--	0.07	<0.05	--	--	--	<0.05	--	--	--
09-03-97	--	--	0.08	<0.05	--	--	--	<0.05	--	--	--
09-03-97	--	--	0.11	<0.05	--	--	--	<0.05	--	--	--
09-03-97	--	--	0.12	<0.05	--	--	--	<0.05	--	--	--

SAUNDERS COUNTY

09-03-97	--	--	0.12	<0.05	--	--	--	<0.05	--	--	--
09-04-97	<3.0	<3.0	--	--	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
09-04-97	<3.0	<3.0	--	--	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
09-04-97	<3.0	<3.0	--	--	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0

WATER-QUALITY DATA. WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Ashland Well Field Study--Continued

[illegible]**SARPY COUNTY**[illegible]**SAUNDERS COUNTY**[illegible]

CHEMICAL ANALYSES OF GROUND WATER

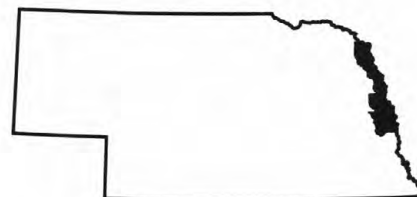
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(Local identifier: indicates location by township, range, and section. Geologic unit: 110 SDGV, Quaternary sand and gravel deposits, undifferentiated; 111 ALVM, Holocene alluvium; 112 SDGV, Pleistocene sand and gravel deposits; 121 OGLL, Pliocene Ogallala 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 1996 TO SEPTEMBER 1997

PAPIO-MISSOURI STUDY

COUNTIES: Burt, Dakota, Douglas, Sarpy,
Thurston, Washington



STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	DATE	TIME
BURT COUNTY						
414622096131801	21N 11E 19CDAA1	41 46 22 N	096 13 18 W	--	07-16-97	1710
414707096134901	21N 11E 19BBCD1	41 47 07 N	096 13 49 W	211DKOT	07-16-97	1640
414659096134901	21N 11E 19BBCB1	41 46 59 N	096 13 49 W	--	07-16-97	1610
414850096133401	21N 11E 7BABB1	41 48 50 N	096 13 34 W	110QRNR	07-16-97	1410
415924096130901	23N 11E 6DCDD1	41 59 24 N	096 13 09 W	--	07-16-97	1230
414242096141201	20N 10E 13ABAA1	41 42 42 N	096 14 12 W	211DKOT	07-21-97	1315
DAKOTA COUNTY						
421848096371801	27N 7E 16CABD1	42 18 48 N	096 37 18 W	211DKOT	07-17-97	1100
422316096353301	28N 7E 22ADCD1	42 23 16 N	096 35 33 W	211DKOT	07-17-97	0945
422758096243901	29N 9E 28ABAB1	42 27 58 N	096 24 39 W	211DKOT	07-16-97	0945
DOUGLAS COUNTY						
411443096194201	15N 10E 29BBCC1	41 14 43 N	096 19 42 W	112SDGV	07-15-97	1715
411943096200101	16N 10E 30DABA1	41 19 43 N	096 20 01 W	112SDGV	07-15-97	1500
411945096200701	16N 10E 30DABB1	41 19 45 N	096 20 07 W	110QRNR	07-15-97	1430
411914096200701	16N 10E 31AABB1	41 19 14 N	096 20 07 W	--	07-15-97	1530
411218096082101	14N 11E 11AAAA1	41 12 18 N	096 08 21 W	211DKOT	07-15-97	0920
411719096135601	15N 11E 7BBDC1	41 17 19 N	096 13 56 W	211DKOT	07-15-97	1040
411738096140601	15N 10E 1DDAD1	41 17 38 N	096 14 06 W	--	07-15-97	1010
412050096143101	16N 10E 24ABCA1	41 20 50 N	096 14 31 W	211DKOT	07-15-97	1300
411500096160101	15N 10E 23CDCB1	41 15 00 N	096 16 01 W	211DKOT	07-16-97	1145
412312096261601	16N 9E 5BDCA1	41 23 12 N	096 26 16 W	112SDGV	07-21-97	1030
412333096264801	16N 9E 6AABA1	41 23 33 N	096 26 48 W	112SDGV	07-21-97	1000
412217096093601	16N 11E 10DAAA1	41 22 17 N	096 09 36 W	--	07-16-97	1445
412018096084501	16N 11E 23DCBA1	41 20 18 N	096 08 45 W	112SDGV	07-16-97	1530
411928096203701	16N 10E 30CDBB1	41 19 28 N	096 20 37 W	110SDGV	07-15-97	1615
411902096193401	16N 10E 32BBDD1	41 19 02 N	096 19 34 W	110SDGV	07-17-97	1715
411717096193501	15N 10E 8BDDD1	41 17 17 N	096 19 35 W	112SDGV	07-17-97	1830
411914096022401	16N 12E 35BBAB1	41 19 14 N	096 02 24 W	112SDGV	07-22-97	1300
411125096093001	14N 11E 15AAAA1	41 11 25 N	096 09 30 W	211DKOT	07-22-97	0915
412113096232001	16N 9E 15DADC1	41 21 13 N	096 23 20 W	112SDGV	07-24-97	1155
411413096194401	15N 10E 29CCBA1	41 14 13 N	096 19 44 W	110QRNR	07-17-97	1800

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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										
07-16-97	152	--	7.1	13.0	5.6	4.7	--	--	--	--
07-16-97	--	788	7.0	12.0	4.3	6.7	--	--	--	--
07-16-97	180	1070	7.0	12.5	2.2	6.7	--	--	--	--
07-16-97	115	874	7.1	11.5	0.1	<0.05	--	--	--	--
07-16-97	--	791	7.1	11.5	0.1	1.0	--	--	--	--
07-21-97	92	802	6.9	12.5	3.7	3.8	--	--	--	--
DAKOTA COUNTY										
07-17-97	565	--	7.1	15.0	0.1	<0.05	--	--	--	--
07-17-97	149	--	7.2	12.0	3.9	3.1	--	--	--	--
07-16-97	270	1570	7.2	7.0	0.1	<0.05	--	--	--	--
DOUGLAS COUNTY										
07-15-97	61	662	7.0	11.0	0.1	8.6	<0.05	<0.05	<0.05	0.23
07-15-97	--	582	7.0	12.0	4.5	6.7	--	--	--	--
07-15-97	90	545	6.9	13.0	5.5	6.9	--	--	--	--
07-15-97	--	684	6.9	13.0	3.6	13.0	--	--	--	--
07-15-97	290	584	7.0	12.5	5.1	0.37	--	--	--	--
07-15-97	238	738	6.9	12.5	5.0	6.5	--	--	--	--
07-15-97	230	702	6.9	12.0	4.1	2.9	--	--	--	--
07-15-97	325	862	8.0	19.5	13.6	0.22	--	--	--	--
07-16-97	50	602	7.0	14.0	4.8	<0.05	--	--	--	--
07-21-97	91	524	7.0	11.5	0.24	0.32	<0.05	<0.05	<0.05	0.32
07-21-97	91	516	7.0	11.5	0.18	0.81	<0.05	<0.05	<0.05	0.36
07-16-97	--	650	6.8	13.0	0.08	<0.05	--	--	--	--
07-16-97	56	786	6.6	11.5	3.6	7.0	--	--	--	--
07-15-97	--	650	6.8	13.0	4.5	14	--	--	--	--
07-17-97	95	655	7.0	11.0	0.10	9.6	--	--	--	--
07-17-97	61	525	6.8	12.5	8.9	5.2	--	--	--	--
07-22-97	141	718	7.0	12.5	2.5	<0.05	--	--	--	--
07-22-97	235	575	6.7	12.5	8.7	3.3	<0.05	<0.05	<0.05	<0.05
07-24-97	80	517	7.1	11.5	0.46	4.2	<0.05	<0.05	<0.05	0.12
07-17-97	--	655	7.0	11.0	0.10	7.3	--	--	--	--

Papio-Missouri Study--Continued

[illegible]

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Papio-Missouri Study--Continued

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	DATE	TIME
SARPY COUNTY						
410535096174501	13N 10E 16DACC1	41 05 35 N	096 17 45 W	112SDGV	07-16-97	1730
410337095593701	13N 13E 30DCCC1	41 03 37 N	095 59 40 W	112SDGV	07-17-97	0930
410332095594701	13N 13E 31BAAC1	41 03 32 N	095 59 47 W	112SDGV	07-17-97	1015
410351096080901	13N 11E 25CCBB1	41 03 51 N	097 08 09 W	--	07-14-97	1020
410350096081001	13N 11E 25CBCD1	41 03 50 N	096 08 10 W	112SDGV	07-14-97	1050
410824096141901	14N 10E 36ADCC1	41 08 24 N	096 14 19 W	211DKOT	07-14-97	1415
410503096073801	13N 11E 24ACBD1	41 05 03 N	096 07 38 W	211DKOT	07-14-97	0945
410334095595701	13N 13E 31BABB1	41 03 34 N	095 59 57 W	112SDGV	07-17-97	1045
410407096032701	13N 12E 27BCDA1	41 04 07 N	096 03 27 W	112SDGV	07-17-97	1300
410525096081601	13N 10E 14CDDA1	41 05 25 N	096 08 16 W	112SDGV	07-16-97	0915
410818096001201	14N 13E 31CBBC1	41 08 18 N	096 00 12 W	211DKOT	07-16-97	1040
410651096134801	13N 11E 7BCAA1	41 06 51 N	096 13 48 W	112SDGV	07-16-97	1645
410609096131501	13N 11E 18ABAD1	41 06 09 N	096 13 15 W	--	07-14-97	1500
410728096134401	13N 11E 6CAAA1	41 07 28 N	096 13 44 W	--	07-25-97	0940
410228096083501	12N 11E 2ADB1	41 02 29 N	096 08 38 W	--	08-06-97	1100
410558096144801	13N 10E 13BDAA1	41 05 58 N	096 14 48 W	--	07-23-97	1425
410343095580801	13N 13E 29DDCB1	41 03 40 N	095 58 17 W	112SDGV	07-22-97	1015
410806096151001	14N 10E 36CCBC1	41 08 06 N	096 15 10 W	110SDGV	07-14-97	1345
410534096093001	13N 11E 15DBD1	41 05 34 N	096 09 30 W	211DKOT	07-17-97	1200
410828096145001	14N 10E 36BDCB1	41 08 28 N	096 14 50 W	110SDGV	07-14-97	1325
THURSTON COUNTY						
421317096262401	26N 9E 17CCAA1	42 13 17 N	096 26 24 W	112PLSC	07-16-97	1120
420903096262901	25N 9E 8CCAA1	42 09 03 N	096 26 29 W	--	07-15-97	1305
420844096245701	25N 9E 16BAAA1	42 08 44 N	096 24 57 W	--	07-15-97	1215
420848096245101	25N 9E 9DCCC1	42 08 48 N	096 24 51 W	112PLSC	07-15-97	1140
420519096273201	24N 9E 6BBAB1	42 05 19 N	096 27 32 W	112PLSC	07-15-97	1625
421028096273101	25N 9E 6ABBB1	42 10 28 N	096 27 31 W	110SDGV	07-15-97	1545
420843096272501	25N 9E 18BABB1	42 08 43 N	096 27 25 W	110SDGV	07-15-97	1425
420840096292402	25N 8E 11DBC2	42 08 40 N	096 29 24 W	211DKOT	07-22-97	1040
420825096292401	25N 8E 11DCCC1	42 08 25 N	096 29 24 W	112SDGV	07-22-97	1010
420718096293501	25N 8E 23CDA1	42 07 18 N	096 29 35 W	110SDGV	07-15-97	1505
WASHINGTON COUNTY						
412706096200901	17N 10E 7DCDC1	41 27 06 N	096 20 09 W	110QRNR	07-16-97	1315
412636096183201	17N 10E 16CBBB1	41 26 36 N	096 18 32 W	112SDGV	07-18-97	0950
413053096205401	18N 9E 24DADA1	41 30 53 N	096 20 54 W	112SDGV	07-18-97	1025
412836096210701	17N 9E 1AACC1	41 28 36 N	096 21 07 W	110QRNR	07-18-97	1135
412454096122601	17N 11E 29CABA1	41 24 54 N	096 12 26 W	112SDGV	07-30-97	0950
413656096230901	19N 9E 14CBBB1	41 36 56 N	096 23 09 W	211DKOT	07-24-97	1020
412629096053001	17N 12E 17CACA1	41 26 29 N	096 05 30 W	112SDGV	07-21-97	1630
412751096203901	17N 10E 7BBAC1	41 27 51 N	096 20 39 W	110QRNR	07-21-97	1145
412833096034401	17N 12E 4ADBA1	41 28 33 N	096 03 44 W	--	07-21-97	1500

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
SARPY COUNTY										
07-16-97	84	611	7.1	11.0	0.10	<0.05	<0.05	<0.05	<0.05	0.14
07-17-97	46	618	7.1	12.0	0.38	1.6	<0.05	<0.05	<0.05	0.50
07-17-97	62	654	7.6	24.0	0.05	0.66	<0.05	<0.05	<0.05	0.90
07-14-97	66	521	6.7	16.0	6.3	2.6	--	--	--	--
07-14-97	66	529	6.9	17.0	8.2	2.7	--	--	--	--
07-14-97	315	624	6.8	13.0	6.5	2.7	--	--	--	--
07-14-97	195	519	6.7	15.0	6.5	2.5	--	--	--	--
07-17-97	52	638	7.3	22.0	0.20	0.73	<0.05	<0.05	<0.05	1.7
07-17-97	74	614	7.0	11.0	0.10	0.47	E0.05	<0.05	<0.05	0.68
07-16-97	206	623	7.0	16.0	0.05	<0.05	--	--	--	--
07-16-97	134	456	6.7	14.0	11	1.1	--	--	--	--
07-16-97	198	520	6.6	12.0	17	8.1	--	--	--	--
07-14-97	90	688	6.7	12.0	6.0	16	--	--	--	--
07-25-97	278	597	7.8	13.0	0.06	<0.05	--	--	--	--
08-06-97	73	541	7.5	17.0	7.5	8.8	--	--	--	--
07-23-97	--	660	7.3	14.0	11	4.8	--	--	--	--
07-22-97	45	652	6.9	12.0	1.4	0.42	<0.05	<0.05	<0.05	0.33
07-14-97	--	585	6.8	13.5	5.6	0.32	--	--	--	--
07-17-97	165	493	6.8	12.5	13	6.1	--	--	--	--
07-14-97	--	655	6.8	13.0	8.0	4.6	<0.05	0.49	<0.05	0.20
THURSTON COUNTY										
07-16-97	37	911	7.3	12.5	9.3	<0.05	--	--	--	--
07-15-97	--	653	7.4	9.0	4.4	5.3	--	--	--	--
07-15-97	--	1040	7.2	11.5	6.3	31	--	--	--	--
07-15-97	100	727	7.4	11.5	4.3	10	--	--	--	--
07-15-97	25	724	7.1	13.0	0.10	<0.05	--	--	--	--
07-15-97	119	1650	6.9	12.0	8.8	75	--	--	--	--
07-15-97	--	756	7.1	10.5	4.1	8.8	--	--	--	--
07-22-97	200	812	7.2	12.0	0.19	<0.05	--	--	--	--
07-22-97	155	786	7.2	12.0	9.8	<0.05	<0.05	<0.05	<0.05	<0.05
07-15-97	--	1570	7.1	12.5	4.9	62	--	--	--	--
WASHINGTON COUNTY										
07-16-97	143	1310	6.8	13.0	0.09	<0.05	--	--	--	--
07-18-97	316	655	7.5	13.0	8.1	<0.05	--	--	--	--
07-18-97	131	370	7.2	11.5	3.0	<0.05	--	--	--	--
07-18-97	161	307	7.2	12.5	11	1.9	--	--	--	--
07-30-97	144	--	--	--	--	9.4	<0.05	<0.05	<0.05	<0.05
07-24-97	398	1990	7.2	13.0	0.05	<0.05	--	--	--	--
07-21-97	330	700	7.1	14.5	0.02	<0.05	--	--	--	--
07-21-97	164	723	6.7	12.0	0.67	4.3	--	--	--	--
07-21-97	245	800	6.6	14.5	0.02	0.51	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Papio-Missouri Study--Continued

	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)	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- AZINE WATER DISS REC (µ G/L) (38535)	SIM- MAZINE, WATER, DISS, REC (µ G/L) (04035)
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SARPY COUNTY

07-16-97	E0.05	E0.04	<0.05	E0.03	<0.05	<0.05	<0.05	<0.05	<0.05
07-17-97	E0.07	0.12	0.12	0.08	<0.05	E0.05	<0.05	<0.05	<0.05
07-17-97	E0.14	0.17	0.07	0.30	<0.05	E0.05	<0.05	<0.05	<0.05
07-14-97	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--
07-17-97	0.30	0.25	0.11	0.55	0.06	E0.04	<0.05	<0.05	E0.04
07-17-97	0.24	0.11	0.06	0.28	<0.05	<0.05	<0.05	<0.05	<0.05
07-16-97	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	--	--	--	--	--
07-16-97	--	--	--	--	--	--	--	--	--
07-14-97	--	--	--	--	--	--	--	--	--
07-25-97	--	--	--	--	--	--	--	--	--
08-06-97	--	--	--	--	--	--	--	--	--
07-23-97	--	--	--	--	--	--	--	--	--
07-22-97	E0.12	0.07	E0.04	0.08	<0.05	E0.04	<0.05	<0.05	E0.04
07-14-97	--	--	--	--	--	--	--	--	--
07-17-97	--	--	--	--	--	--	--	--	--
07-14-97	<0.20	0.08	<0.05	0.07	0.07	<0.05	<0.05	<0.05	<0.05

THURSTON COUNTY[illegible]**WASHINGTON COUNTY**[illegible]

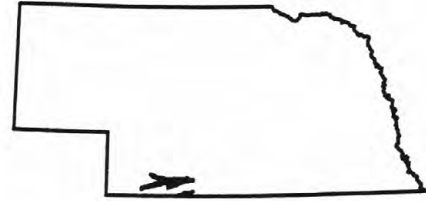
CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPECIAL PROTECTION AREA (SPA) MIDDLE REPUBLICAN RIVER

COUNTIES: Hitchcock, Red Willow



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)
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HITCHCOCK COUNTY

400818101124001	2N 35W13AAAD1	40 08 18 N	101 12 40 W	112SDGV	07-21-97	1200	2788
400818101124002	2N 35W13AAAD2			112SDGV	07-21-97	1225	2788
401655100583201	4N 32W30DCBB1	40 16 55 N	100 58 32 W	112SDGV	07-21-97	1045	2867
401655100583202	4N 32W30DCBB2			112SDGV	07-21-97	1105	2867

RED WILLOW COUNTY

400357100135201	1N 26W11CBBB1	40 03 57 N	100 13 52 W	112SDGV	07-22-97	1025	2366
400357100135202	1N 26W11CBBB2			112SDGV	07-22-97	1040	2366
401016100391801	2N 30W1ACDD1	40 10 16 N	100 39 18 W	112SDGV	07-22-97	1150	2493
401016100391802	2N 30W1ACDD2			112SDGV	07-22-97	1210	2493
401016100391803	2N 30W1ACDD3			112SDGV	07-22-97	1225	2493
401454100215401	3N 27W9AAAA1	40 14 54 N	100 21 54 W	112SDGV	07-22-97	0830	2368
				112SDGV	07-22-97	0840	2368
401454100215402	3N 27W9AAAA2			112SDGV	07-22-97	0850	2368
				112SDGV	07-22-97	0900	2368
401412100364201	3N 29W8DDBA1	40 14 12 N	100 36 42 W	121OGLL	07-21-97	1505	2605
401412100364202	3N 29W8DDBA2			121OGLL	07-21-97	1535	2605
401412100364203	3N 29W8DDBA3			112SDGV	07-21-97	1615	2605

DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	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 WATER (°C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, DIS-SOLVED NO ₂ +NO ₃ (MG/L AS N) (00631)
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HITCHCOCK COUNTY

07-21-97	46.00	2.0	695	1370	7.3	13.5	0.13	1	14
07-21-97	30.00	1.5	695	1540	7.3	14.0	0.25	3	22
07-21-97	61.00	2.0	695	1200	7.3	14.0	4.2	45	11
07-21-97	45.00	2.0	695	1120	7.3	14.0	5.8	61	11

RED WILLOW COUNTY

07-22-97	64.00	1.5	705	705	7.3	15.0	0.13	1	0.02
07-22-97	36.00	1.0	705	1130	7.4	15.0	0.15	2	4.2
07-22-97	72.00	1.5	705	1120	7.2	14.5	0.17	2	30
07-22-97	55.00	1.5	705	1100	7.2	15.0	0.18	2	20
07-22-97	36.00	1.0	705	1080	7.1	15.5	4.1	45	9.7
07-22-97	40.00	1.0	705	570	7.7	14.0	6.3	67	1.3
07-22-97	40.00	1.0	705	570	7.7	14.0	6.3	67	1.6
07-22-97	32.00	1.0	705	606	7.4	14.0	7.5	79	3.7
07-22-97	32.00	1.0	705	606	7.4	14.0	7.5	79	4.3
07-21-97	174.00	2.0	695	518	7.5	16.0	7.2	80	3.8
07-21-97	159.00	2.0	695	640	7.4	16.0	8.5	95	11
07-21-97	135.00	1.5	695	960	7.4	16.0	8.5	95	27

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPECIAL PROTECTION AREA (SPA)
UPPER BIG BLUE RIVER BASIN
(Registered and domestic wells)

COUNTIES: Adams, Fillmore, Hamilton,
 Polk, Saline, Seward, York



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME
ADAMS COUNTY					
404107098282201	8N 10W5CC 1	40 41 07 N	098 28 22 W	07-29-97	1515
FILLMORE COUNTY					
402701097460801	6N 4W33AA1	40 27 01 N	097 46 08 W	07-22-97	1620
403443097443601	7N 4W14BCAA1	40 34 43 N	097 44 36 W	07-22-97	1730
403814097264601	8N 1W29AADC1	40 38 14 N	097 26 46 W	07-29-97	1240
403904097335001	8N 2W20AACC1	40 39 04 N	097 33 50 W	07-22-97	1503
HAMILTON COUNTY					
404653098103301	10N 8W1ABAA1	40 46 53 N	098 10 33 W	07-29-97	1700
POLK COUNTY					
411129097314401	14N 2W15ABBB1	41 11 29 N	097 31 44 W	09-03-97	1516
SALINE COUNTY					
404930097091401	8N 2E13C1	40 49 30 N	097 09 19 W	08-05-97	1344
SEWARD COUNTY					
404511097204001	9N 1E17B1	40 45 11 N	097 20 40 W	07-29-97	1053
405822097193201	12N 1E33BBAC1	40 58 22 N	097 19 32 W	07-31-97	1425
YORK COUNTY					
404404097312401	9N 2W22DABA1	40 44 04 N	097 31 24 W	07-22-97	1401

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPA-Upper Big Blue River Basin (Registered and domestic wells)--Continued

DATE	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER ($^{\circ}$ C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	NITROGEN, NO ₂ +NO ₃ DISSOLVED (MG/L AS N) (00631)
ADAMS COUNTY								
07-29-97	110SDGV	2037	161	1200	6.7	12.0	3.9	25
FILLMORE COUNTY								
07-22-97	110SDGV	1680	145	560	6.9	12.0	8.2	10
07-22-97	110SDGV	1678	188	1560	6.7	13.5	5.1	30
07-29-97	110SDGV	1608	--	669	7.0	13.0	0.60	0.16
07-22-97	110SDGV	1639	273	609	6.8	12.0	2.5	7.2
HAMILTON COUNTY								
07-29-97	110SDGV	1877	201	632	7.1	12.5	6.3	6.2
POLK COUNTY								
09-03-97	110SDGV	1688	220	881	6.8	13.0	2.9	30
SALINE COUNTY								
08-05-97	110SDGV	1496	220	895	6.8	12.5	10	15
SEWARD COUNTY								
07-29-97	110SDGV	1515	208	463	6.9	13.0	1.2	0.75
07-31-97	110SDGV	--	109	556	7.0	12.0	1.1	0.31
YORK COUNTY								
07-22-97	110SDGV	1611	300	641	6.9	12.5	4.9	6.8

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPECIAL PROTECTION AREA (SPA)
UPPER BIG BLUE RIVER BASIN
(Monitoring wells)

COUNTIES: Butler, Clay, Fillmore, Hamilton,
 Polk, Seward, York



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME
BUTLER COUNTY					
410459097155601	13N 1E24CAAB1	41 04 59 N	097 15 56 W	01-13-96	1220
				01-21-97	1440
				03-18-97	1510
				05-20-97	1150
410459097155602	13N 1E24CAAB2			11-13-96	1230
				01-21-97	1445
				03-18-97	1520
				05-20-97	1220
CLAY COUNTY					
403549098012501	7N 6W8ABBB1	40 35 49 N	098 01 25 W	11-12-96	1135
				01-22-97	1020
				03-18-97	1110
				05-19-97	1420
403549098012502	7N 6W8ABBB2			11-12-96	1145
				01-22-97	1030
				03-18-97	1120
				05-19-97	1430
FILLMORE COUNTY					
403603097340301	7N 2W5DBCD1	40 36 03 N	097 34 03 W	11-12-96	1020
				01-22-97	1130
				03-18-97	1230
				05-19-97	1520
403603097340302	7N 2W5DBCD2			11-12-96	1040
				01-22-97	1140
				03-18-97	1240
				05-19-97	1530
HAMILTON COUNTY					
405220097535201	10N 5W4BBAA1	40 52 20 N	097 53 52 W	11-12-96	1410
				01-21-97	1120
				03-17-97	1120
				05-19-97	1310
405220097535202	10N 5W4BBAA2			11-12-96	1420
				01-21-97	1130
				03-17-97	1350
				05-19-97	1320
405220098111201	10N 8W1BBBA1	40 52 20 N	098 11 12 W	11-12-96	1301
				01-21-97	1030
				03-17-97	1020
				05-19-97	1020
405220098111202	10N 8W1BBBA2			11-12-96	1309
				01-21-97	1040
				03-17-97	1030
				05-19-97	1030

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPA-Upper Big Blue River Basin (Monitoring wells)--Continued

DATE	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC 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)
BUTLER COUNTY								
11-13-96	110SDGV	1547	55	577	6.7	12.5	1.5	4.4
01-21-97	110SDGV	1547	55	571	7.0	12.0	2.8	4.2
03-18-97	110SDGV	1547	55	559	6.9	12.0	2.6	4.4
05-20-97	110SDGV	1547	55	568	6.8	13.0	--	4.1
11-13-96	110SDGV	1547	112	498	7.1	12.5	0.20	<0.05
01-21-97	110SDGV	1547	112	500	7.3	12.0	1.1	0.06
03-18-97	110SDGV	1547	112	491	7.1	12.5	0.40	<0.05
05-20-97	110SDGV	1547	112	500	7.1	13.0	--	<0.05
CLAY COUNTY								
11-12-96	110SDGV	1750	100	580	6.3	12.0	7.3	7.8
01-22-97	110SDGV	1750	100	624	6.5	11.5	6.1	8.3
03-18-97	110SDGV	1750	100	625	6.4	12.0	9.5	8.7
05-19-97	110SDGV	1750	100	640	6.5	13.0	--	8.6
11-12-96	110SDGV	1750	165	691	6.8	12.5	10	1.1
01-22-97	110SDGV	1750	165	689	7.1	12.0	3.8	1.1
03-18-97	110SDGV	1750	165	660	6.1	12.5	3.3	1.2
05-19-97	110SDGV	1750	165	664	6.9	13.5	--	1.2
FILLMORE COUNTY								
11-12-96	110SDGV	1669	150	706	7.0	13.0	0.60	1.9
01-22-97	110SDGV	1669	150	787	7.3	12.5	0.80	3.1
03-18-97	110SDGV	1669	150	769	6.5	12.5	0.90	3.5
05-19-97	110SDGV	1669	150	758	7.0	14.0	--	3.1
11-12-96	110SDGV	1669	247	507	6.9	12.5	0.70	0.06
01-22-97	110SDGV	1669	247	581	7.2	12.5	0.60	0.06
03-18-97	110SDGV	1669	247	568	5.9	12.5	0.5	<0.05
05-19-97	110SDGV	1669	247	568	7.0	13.5	--	<0.05
HAMILTON COUNTY								
11-12-96	110SDGV	1767	107	615	6.8	12.5	8.0	6.9
01-21-97	110SDGV	1767	107	614	7.0	12.0	8.0	6.3
03-17-97	110SDGV	1767	107	643	6.8	11.0	11	6.5
05-19-97	110SDGV	1767	107	574	6.9	13.0	--	6.1
11-12-96	110SDGV	--	195	522	6.8	13.0	3.8	3.7
01-21-97	110SDGV	--	195	515	7.1	12.5	4.8	3.6
03-17-97	110SDGV	--	195	518	6.9	10.0	5.0	3.1
05-19-97	110SDGV	--	195	495	7.0	13.0	--	2.9
11-12-96	110SDGV	1860	95	926	6.9	12.0	8.5	18
01-21-97	110SDGV	1860	95	922	7.0	12.0	8.2	19
03-17-97	110SDGV	1860	95	971	6.0	10.5	8.7	20
05-19-97	110SDGV	1860	95	986	7.3	12.5	--	21
11-12-96	110SDGV	1860	205	532	7.2	13.0	0.40	0.10
01-21-97	110SDGV	1860	205	522	7.3	13.0	1.1	0.10
03-17-97	110SDGV	1860	205	516	6.3	11.0	1.1	0.07
05-19-97	110SDGV	1860	205.00	509	7.6	13.0	--	0.08

CHEMICAL ANALYSES OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
SPA-Upper Big Blue River Basin (Monitoring wells)--Continued

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	DATE	TIME
POLK COUNTY					
410515097461401	13N 4W19AADA1	41 05 15 N	097 46 14 W	11-12-96	1600
				01-21-97	1310
				03-17-97	1430
				05-19-97	1140
410515097461402	13N 4W19AADA2			11-12-96	16
				01-21-97	1320
				03-17-97	1440
				05-19-97	1150
SEWARD COUNTY					
404928097173201	10N 1E22ADAD1	40 49 28 N	097 17 32 W	11-13-96	1020
				11-13-96	1041
				01-22-97	1320
				01-22-97	1321
				03-18-97	1350
				03-18-97	1351
				05-20-97	1010
404928097173202	10N 1E22ADAD2			05-20-97	1011
				11-13-96	1030
				01-22-97	1325
				03-18-97	1355
				05-20-97	1020
404928097173203	10N 1E22ADAD3			11-13-96	1040
				01-22-97	1330
				03-18-97	1400
				05-20-97	1040
YORK COUNTY					
405509097380901	11N 3W15DDDA1	40 55 09 N	097 38 09 W	11-13-96	1420
				01-21-97	1610
				03-19-97	0940
				05-20-97	1350
405509097380903	11N 3W15DDDA3			11-13-96	1430
				01-21-97	1620
				03-19-97	0950
				05-20-97	1420

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SPA-Upper Big Blue River Basin (Monitoring wells)--Continued

DATE	GEOLOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (μ S/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER ($^{\circ}$ C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	NITROGEN, NO ₂ +NO ₃ DISSOLVED (MG/L AS N) (00631)
POLK COUNTY								
11-12-96	110SDGV	1720	95	785	6.7	12.0	8.7	12
01-21-97	110SDGV	1720	95	881	7.1	12.0	10	13
03-17-97	110SDGV	1720	95	995	6.8	9.5	9.0	13
05-19-97	110SDGV	1720	95	997	7.1	12.5	--	12
11-12-96	110SDGV	1720	125	600	6.8	12.0	5.4	3.8
01-21-97	110SDGV	1720	125	599	7.1	12.0	5.0	3.9
03-17-97	110SDGV	1720	125	632	6.9	9.0	6.2	4.1
05-19-97	110SDGV	1720	125	608	7.0	12.5	--	3.9
SEWARD COUNTY								
11-13-96	110SDGV	1560	100	609	6.4	11.5	6.8	13
11-13-96	110SDGV	1560	100	609	6.4	11.5	6.8	13
01-22-97	110SDGV	1560	100	605	6.6	11.5	7.8	14
01-22-97	110SDGV	1560	100	605	6.6	11.5	7.8	14
03-18-97	110SDGV	1560	100	576	6.4	11.5	8.3	14
03-18-97	110SDGV	1560	100	576	6.4	11.5	8.3	14
05-20-97	110SDGV	1560	100	576	6.4	12.5	--	12
05-20-97	110SDGV	1560	100	576	6.4	12.5	--	12
11-13-96	110SDGV	1560	130	722	6.4	12.0	6.5	23
01-22-97	110SDGV	1560	130	726	6.7	11.5	7.6	21
03-18-97	110SDGV	1560	130	698	6.5	12.0	7.2	21
05-20-97	110SDGV	1560	130	565	6.5	13.0	--	19
11-13-96	110SDGV	1560	230	512	6.9	12.5	0.40	0.29
01-22-97	110SDGV	1560	230	558	7.2	10.0	0.70	0.28
03-18-97	110SDGV	1560	230	510	7.1	12.5	0.90	0.32
05-20-97	110SDGV	1560	230	490	6.9	14.0	--	0.27
YORK COUNTY								
11-13-96	110SDGV	1650	92	617	6.6	12.0	6.2	6.9
01-21-97	110SDGV	1650	92	628	6.9	12.0	6.8	7.1
03-19-97	110SDGV	1650	92	609	6.7	13.0	5.7	7.1
05-20-97	110SDGV	1650	92	655	6.6	13.0	--	7.8
11-13-96	110SDGV	1650	233	475	6.8	13.0	1.0	1.1
01-21-97	110SDGV	1650	233	484	7.1	12.5	2.0	1.1
03-19-97	110SDGV	1650	233	457	6.8	13.5	1.3	1.1
05-20-97	110SDGV	1650	233	475	6.8	13.5	--	1.0

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

REPUBLICAN RIVER BASIN GROUND-WATER QUALITY

COUNTIES: Franklin, Frontier, Furnas, Gosper, Harlan, Kearney,
Nuckolls, Phelps, Red Willow, Webster
(These wells were sampled as part of the Republican River
Ground-Water Modeling Study)



WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)
FRANKLIN COUNTY								
400330099053001	1N 16W14AB1	40 03 36 N	099 05 50 W	112SDGV	10250016	08-18-97	1410	80
400700099021501	2N 15W29ABBC1	40 07 00 N	099 02 15 W	110SDGV	10250016	08-19-97	0845	140
401415098513201	3N 14W11DDAA1	40 14 13 N	098 51 34 W	110SDGV	10250016	08-18-97	1235	230
				110SDGV	10250016	08-18-97	1240	230
FRONTIER COUNTY								
402547100083401	5N 25W 3AA1	40 25 47 N	100 08 34 W	121OGLL	10250009	08-04-97	1530	137
402607100081001	5N 25W 3AA2	40 26 07 N	100 08 10 W	121OGLL	10250009	08-04-97	1600	142
402610100123701	5N 26W 1AAAA1	40 26 20 N	100 12 37 W	121OGLL	10250009	08-05-97	1440	137
				121OGLL	10250009	08-05-97	1445	137
				121OGLL	10250009	08-05-97	1450	137
402155100213701	5N 27W35BBAA1	40 21 55 N	100 21 37 W	121OGLL	10250004	08-05-97	1345	136
402542100320301	5N 28W 5CBCB1	40 25 42 N	100 32 03 W	121OGLL	10250004	08-05-97	1000	393
402332100385201	5N 29W20BBBC1	40 23 31 N	100 38 46 W	121OGLL	10250007	08-07-97	0915	364
				121OGLL	10250007	08-07-97	0920	364
402403100421401	5N 30W14CBBB1	40 24 03 N	100 42 14 W	121OGLL	10250007	08-05-97	0800	368
402721099595701	6N 24W25CCBB1	40 27 21 N	099 59 57 W	121OGLL	10250009	08-05-97	1545	230
				121OGLL	10250009	08-05-97	1550	230
402804100001701	6N 24W26AABB1	40 28 04 N	100 00 17 W	121OGLL	10250009	08-05-97	1630	219
402831100122301	6N 25W19BCDC1	40 28 31 N	100 12 23 W	121OGLL	10250009	08-04-97	1430	90
402725100123401	6N 26W25DADD1	40 27 25 N	100 12 34 W	110SDGV	10250008	08-04-97	1245	87
402732100124701	6N 26W25DBAD1	40 27 32 N	100 12 47 W	121OGLL	10250008	08-04-97	1345	156
402644100222301	6N 27W34CAAA1	40 26 44 N	100 22 23 W	121OGLL	10250008	08-05-97	1115	283
				121OGLL	10250008	08-05-97	1120	283
402623100215601	6N 27W34DDBD1	40 26 23 N	100 21 56 W	121OGLL	10250008	08-05-97	1230	240
402732100315301	6N 28W29CBBB1	40 27 32 N	100 31 53 W	121OGLL	10250004	08-08-97	0840	430
402824100372601	6N 29W21BDDC1	40 28 28 N	100 37 28 W	121OGLL	10250007	08-05-97	0930	400
403504100042501	7N 24W17BBAB1	40 35 04 N	100 04 25 W	121OGLL	10250009	08-06-97	1420	371
403553100112701	7N 25W 6DDDD1	40 36 01 N	100 11 24 W	121OGLL	10250009	08-06-97	1600	377
403230100115701	7N 25W31ABBB1	40 32 30 N	100 11 57 W	121OGLL	10250009	08-05-97	1500	307
				121OGLL	10250009	08-05-97	1510	307
				121OGLL	10250009	08-06-97	1505	307
403448100172901	7N 26W17ADBB1	40 34 48 N	100 17 29 W	121OGLL	10250008	08-06-97	1645	305
403623100254801	7N 27W 6DBBB1	40 36 23 N	100 25 48 W	121OGLL	10250008	08-07-97	1320	240
403514100231701	7N 27W9DCAA1	40 35 14 N	100 23 17 W	121OGLL	10250008	08-07-97	1400	303
403201100432101	7N 30W33ADAD1	40 32 05 N	100 43 33 W	121OGLL	10250007	08-08-97	0930	475
403831100194301	8N 27W24DCDD1	40 38 31 N	100 19 43 W	121OGLL	10250008	08-06-97	1245	340
404159100275201	8N 28W 2ABBB1	40 41 59 N	100 27 52 W	121OGLL	10250008	08-07-97	1430	463
				121OGLL	10250008	08-07-97	1435	463
403751100301301	8N 28W28DCBB1	40 37 51 N	100 30 13 W	121OGLL	10250008	08-07-97	1730	277
403821100371101	8N 29W28ABCC1	40 38 21 N	100 37 11 W	121OGLL	10250008	08-07-97	1130	468
FURNAS COUNTY								
400133099580101	1N 23W30BCBC1	40 01 33 N	099 58 02 W	110SDGV	10250011	08-20-97	1630	60
400759099440801	2N 21W18DCCC1	40 07 58 N	099 44 14 W	110SDGV	10250014	08-20-97	1500	70
				110SDGV	10250014	08-20-97	1505	70
				110SDGV	10250014	08-20-97	1510	70
400832099515601	2N 23W13ACBB1	40 08 32 N	099 51 56 W	110SDGV	10250014	08-21-97	0935	65

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Republican River Basin Ground-Water Quality--Continued

DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	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)
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FRANKLIN COUNTY

08-18-97	1878	1210	7.3	14.0	--	--	--	--	--	--	--	--
08-19-97	2020	484	7.6	--	6.0	--	--	--	--	--	--	--
08-18-97	2107	508	7.0	13.5	--	--	--	--	--	--	--	--
08-18-97	2107	508	7.0	13.5	--	210	66	10	17	15	0.5	6.9

FRONTIER COUNTY

08-04-97	2422	560	7.1	17.5	--	--	--	--	--	--	--	--
08-04-97	2422	610	7.2	17.0	--	--	--	--	--	--	--	--
08-05-97	2456	620	7.5	14.0	--	--	--	--	--	--	--	--
08-05-97	2456	620	7.5	14.0	--	290	88	18	13	8	0.3	11
08-05-97	2456	620	7.5	14.0	--	--	--	--	--	--	--	--
08-05-97	2550	562	7.3	14.0	--	--	--	--	--	--	--	--
08-05-97	2750	468	7.7	16.5	--	--	--	--	--	--	--	--
08-07-97	2764	460	7.5	15.0	--	--	--	--	--	--	--	--
08-07-97	2764	460	7.5	15.0	--	210	56	17	13	11	0.4	11
08-05-97	2782	467	7.3	16.5	--	--	--	--	--	--	--	--
08-05-97	2462	505	7.2	14.0	--	--	--	--	--	--	--	--
08-05-97	2462	505	7.2	14.0	--	260	79	16	5.8	4	0.2	9.1
08-05-97	2462	510	7.5	14.5	--	--	--	--	--	--	--	--
08-04-97	2422	575	7.0	15.5	--	--	--	--	--	--	--	--
08-04-97	2420	758	6.9	16.5	--	--	--	--	--	--	--	--
08-04-97	2486	594	6.9	17.5	--	--	--	--	--	--	--	--
08-05-97	2580	470	7.7	14.5	--	--	--	--	--	--	--	--
08-05-97	2580	470	7.7	14.5	--	210	56	18	12	10	0.4	12
08-05-97	2640	480	7.1	15.0	--	--	--	--	--	--	--	--
08-08-97	2800	460	7.4	15.0	--	--	--	--	--	--	--	--
08-05-97	2815	446	7.2	15.5	--	--	--	--	--	--	--	--
08-06-97	2602	533	7.4	15.0	--	--	--	--	--	--	--	--
08-06-97	2645	530	7.5	14.5	--	--	--	--	--	--	--	--
08-05-97	2630	500	7.4	15.0	--	--	--	--	--	--	--	--
08-05-97	2630	500	7.4	15.0	--	--	--	--	--	--	--	--
08-06-97	2630	500	7.4	15.0	--	--	--	--	--	--	--	--
08-06-97	2662	459	7.6	16.0	--	--	--	--	--	--	--	--
08-07-97	2650	455	7.3	15.0	--	--	--	--	--	--	--	--
08-07-97	2655	435	7.5	15.0	--	--	--	--	--	--	--	--
08-08-97	2907	430	7.5	15.0	--	--	--	--	--	--	--	--
08-06-97	2750	445	7.3	16.0	--	--	--	--	--	--	--	--
08-07-97	2728	398	7.4	15.5	--	--	--	--	--	--	--	--
08-07-97	2728	398	7.4	15.5	--	180	52	11	8.4	9	0.3	10
08-07-97	2540	390	7.8	17.0	--	--	--	--	--	--	--	--
08-07-97	2776	433	7.5	16.0	--	--	--	--	--	--	--	--

FURNAS COUNTY

08-20-97	2226	1280	7.3	12.5	2.2	--	--	--	--	--	--	--
08-20-97	2125	663	7.2	13.5	3.1	--	--	--	--	--	--	--
08-20-97	2125	663	7.2	13.5	3.1	310	96	17	14	9	0.4	8.2
08-20-97	2125	663	7.2	13.5	3.1	--	--	--	--	--	--	--
08-21-97	2170	627	7.8	15.5	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
 Republican River Basin Ground-Water Quality--Continued

DATE	ALKA- LITY 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)	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)	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)	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)
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FRANKLIN COUNTY

08-18-97	--	--	--	--	--	--	13	--	--	--	--
08-19-97	--	--	--	--	--	--	2.2	--	--	--	--
08-18-97	--	--	--	--	--	--	7.5	--	--	--	--
08-18-97	162	36	20	0.2	38	323	--	7.1	--	5	<1

FRONTIER COUNTY

08-04-97	--	--	--	--	--	--	4.7	--	--	--	--
08-04-97	--	--	--	--	--	--	5.5	--	--	--	--
08-05-97	--	--	--	--	--	--	4.3	--	--	--	--
08-05-97	273	20	11	0.4	<0.1	344	--	4.4	--	<3	<1
08-05-97	--	--	--	--	--	--	4.4	--	--	--	--
08-05-97	--	--	--	--	--	--	8.6	--	--	--	--
08-05-97	--	--	--	--	--	--	3.9	--	--	--	--
08-07-97	--	--	--	--	--	--	3.2	--	--	--	--
08-07-97	208	14	4.2	0.9	<0.1	240	--	--	--	<3	<1
08-05-97	--	--	--	--	--	--	5.7	--	--	--	--
08-05-97	--	--	--	--	--	--	3.2	--	--	--	--
08-05-97	234	11	3.4	0.4	62	327	--	--	--	<3	<1
08-05-97	--	--	--	--	--	--	2.7	--	--	--	--
08-04-97	--	--	--	--	--	--	4.0	--	--	--	--
08-04-97	--	--	--	--	--	--	3.7	--	--	--	--
08-04-97	--	--	--	--	--	--	7.9	--	--	--	--
08-05-97	--	--	--	--	--	--	3.9	--	--	--	--
08-05-97	212	15	5.1	1	70	315	--	--	--	<3	<1
08-05-97	--	--	--	--	--	--	5.6	--	--	--	--
08-08-97	--	--	--	--	--	--	3.1	--	--	--	--
08-05-97	--	--	--	--	--	--	3.2	--	--	--	--
08-06-97	--	--	--	--	--	--	4.0	--	--	--	--
08-06-97	--	--	--	--	--	--	5.9	--	--	--	--
08-05-97	--	--	--	--	--	--	3.1	--	--	--	--
08-05-97	--	--	--	--	--	--	3.1	--	--	--	--
08-06-97	--	--	--	--	--	--	--	3.2	--	--	--
08-06-97	--	--	--	--	--	--	4.4	--	--	--	--
08-07-97	--	--	--	--	--	--	3.7	--	--	--	--
08-07-97	--	--	--	--	--	--	3.2	--	--	--	--
08-08-97	--	--	--	--	--	--	5.0	--	--	--	--
08-06-97	--	--	--	--	--	--	3.4	--	--	--	--
08-07-97	--	--	--	--	--	--	3.3	--	--	--	--
08-07-97	180	13	2.8	0.6	67	273	--	--	--	<3	<1
08-07-97	--	--	--	--	--	--	2.5	--	--	--	--
08-07-97	--	--	--	--	--	--	7.0	--	--	--	--

FURNAS COUNTY

08-20-97	--	--	--	--	--	--	7.3	--	--	--	--
08-20-97	--	--	--	--	--	--	7.0	--	--	--	--
08-20-97	273	32	15	0.4	58	433	--	6.5	--	<3	<1
08-20-97	--	--	--	--	--	--	6.9	--	--	--	--
08-21-97	--	--	--	--	--	--	1.8	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Republican River Basin Ground-Water Quality--Continued

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)
FURNAS COUNTY								
400632100070201	2N 25W26CB1	40 06 32 N	100 07 02 W	110SDGV	10250014	08-18-97	1745	59
401456099591701	3N 24W11AAAB1	40 14 54 N	099 59 21 W	121OGLL	10250009	08-20-97	1725	241
				121OGLL	10250009	08-20-97	1730	241
401826099421201	4N 21W16CCCC1	40 18 26 N	099 42 20 W	121OGLL	10250009	08-22-97	0750	150
401559099462801	4N 22W35CAD1	40 15 59 N	099 46 28 W	110SDGV	10250009	08-21-97	0830	55
401916099515501	4N 23W13BAAA1	40 19 16 N	099 51 55 W	110SDGV	10250009	08-19-97	1530	125
				110SDGV	10250009	08-19-97	1535	125
				110SDGV	10250009	08-19-97	1540	125
401923100114801	4N 25W 7CCBB1	40 19 23 N	100 11 48 W	112SDGV	10250008	08-19-97	1845	95
GOSPER COUNTY								
402317099500301	5N 22W20ADCB1	40 23 17 N	099 50 03 W	121OGLL	10250009	08-05-97	1100	260
402549099531201	5N 23W 1CBBB1	40 25 49 N	099 53 12 W	110SDGV	10250009	08-05-97	1315	205
				110SDGV	10250009	08-05-97	1320	205
402343099545701	5N 23W15DCCB1	40 23 46 N	099 54 54 W	121OGLL	10250009	08-18-97	1330	250
				121OGLL	10250009	08-18-97	1335	250
402304100023101	5N 24W21DACC1	40 23 04 N	100 02 31 W	110SDGV	10250009	08-05-97	1545	185
403032099520701	6N 21W 7BBBC1	40 30 34 N	099 45 19 W	112SDGV	10250009	08-08-97	1000	242
				112SDGV	10250009	08-08-97	1005	242
402643099432401	6N 21W32DBAA1	40 26 43 N	099 43 24 W	121OGLL	10250009	08-08-97	1130	315
403051099514201	6N 22W 6CDBA1	40 30 51 N	099 51 42 W	121OGLL	10250009	08-05-97	1415	370
402726099461700	6N 22W25CBCB1	40 27 32 N	099 46 25 W	121OGLL	10250009	08-08-97	1045	342
402820099563601	6N 23W21CBCB1	40 28 20 N	099 56 36 W	121OGLL	10250009	08-05-97	1515	260
403312099473001	7N 22W26BBBB1	40 33 12 N	099 47 30 W	121OGLL	10250009	08-05-97	0900	320
				121OGLL	10250009	08-05-97	0905	320
				121OGLL	10250009	08-05-97	0910	320
403326099582301	7N 23W19CADD1	40 33 30 N	099 58 22 W	121OGLL	10250009	08-20-97	0830	290
HARLAN COUNTY								
400027099234801	1N 18W31CAAB1	40 00 27 N	099 23 48 W	110SDGV	10250015	08-19-97	1215	59
400246099273001	1N 19W15CCDD1	40 02 46 N	099 27 30 W	121OGLL	10250015	08-19-97	1300	165
400705099132101	2N 17W27ABAB1	40 07 05 N	099 13 21 W	110SDGV	10250009	08-19-97	1015	135
				110SDGV	10250009	08-19-97	1020	135
400903099301201	2N 19W 7DBD1	40 09 03 N	099 30 12 W	110SDGV	10250009	08-20-97	1325	48
401202099220701	3N 18W29ADAD1	40 12 03 N	099 22 08 W	121OGLL	10250009	08-20-97	1250	260
KEARNEY COUNTY								
402418099035701	5N 16W13ADAA1	40 24 18 N	099 03 57 W	121OGLL	10250016	08-07-97	0900	208
NUCKOLLS COUNTY								
400102097582201	1N 6W27DDDD1	40 01 02 N	097 58 22 W	110SDGV	10250016	08-12-97	0830	42
				110SDGV	10250016	08-12-97	0835	42
400154098104201	1N 8W24CCCC1	40 01 54 N	098 10 42 W	110SDGV	10250016	08-12-97	1015	41

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Republican River Basin Ground-Water Quality--Continued

DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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)	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)
FURNAS COUNTY												
08-18-97	2309	740	7.4	13.5	--	--	--	--	--	--	--	--
08-20-97	2355	466	7.5	14.5	2.9	--	--	--	--	--	--	--
08-20-97	2355	466	7.5	14.5	2.9	220	58	19	7.4	6	0.2	8.8
08-22-97	2174	585	7.4	14.0	3.8	--	--	--	--	--	--	--
08-21-97	2092	1550	7.2	13.0	--	--	--	--	--	--	--	--
08-19-97	2220	767	7.1	14.0	3.3	--	--	--	--	--	--	--
08-19-97	2220	767	7.1	14.0	3.3	350	95	27	18	10	0.4	12
08-19-97	2220	767	7.1	14.0	3.3	--	--	--	--	--	--	--
08-19-97	2317	1150	7.0	13.5	3.1	--	--	--	--	--	--	--
GOSPER COUNTY												
08-05-97	2330	530	7.1	14.5	--	--	--	--	--	--	--	--
08-05-97	2409	515	7.1	13.5	--	--	--	--	--	--	--	--
08-05-97	2409	515	7.1	13.5	--	250	70	18	8.1	6	0.2	9.2
08-18-97	2355	538	7.5	14.5	2.2	--	--	--	--	--	--	--
08-18-97	2355	538	7.5	14.5	2.2	250	66	20	15	11	0.4	11
08-05-97	2400	573	6.7	13.0	--	--	--	--	--	--	--	--
08-08-97	2500	680	7.0	14.5	3.8	--	--	--	--	--	--	--
08-08-97	2500	680	7.0	14.5	--	350	110	19	9.2	5	0.2	11
08-08-97	2457	528	7.1	15.5	--	--	--	--	--	--	--	--
08-05-97	2530	530	7.0	14.5	--	--	--	--	--	--	--	--
08-08-97	2424	530	6.9	15.5	--	--	--	--	--	--	--	--
08-05-97	2445	507	7.8	14.0	--	--	--	--	--	--	--	--
08-05-97	2620	762	7.2	15.5	--	--	--	--	--	--	--	--
08-05-97	2620	762	7.2	15.5	--	370	110	23	14	7	0.3	12
08-05-97	2620	762	7.2	15.5	--	--	--	--	--	--	--	--
08-20-97	2592	531	7.4	15.0	2.5	--	--	--	--	--	--	--
HARLAN COUNTY												
08-19-97	1980	1700	7.1	14.5	--	760	230	43	60	14	1	21
08-19-97	2117	526	7.5	15.5	5.0	--	--	--	--	--	--	--
08-19-97	2069	905	7.5	14.0	--	--	--	--	--	--	--	--
08-19-97	2069	905	7.5	14.0	--	390	120	20	31	14	0.7	8.7
08-20-97	1992	1020	7.4	13.0	1.0	--	--	--	--	--	--	--
08-20-97	2175	533	7.1	13.5	3.2	--	--	--	--	--	--	--
KEARNEY COUNTY												
08-07-97	2202	858	6.9	14.5	--	--	--	--	--	--	--	--
NUCKOLLS COUNTY												
08-12-97	1550	912	7.4	13.0	2.7	--	--	--	--	--	--	--
08-12-97	1550	912	7.4	13.0	2.7	330	100	18	71	31	2	9.0
08-12-97	1589	893	7.3	12.0	0.09	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Republican River Basin Ground-Water Quality--Continued

DATE	ALKA- LITY 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)	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)	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)	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)
------	---	---	--	---	---	---	--	---	--	--	--

FURNAS COUNTY

08-18-97	--	--	--	--	--	--	13	--	--	--	--
08-20-97	--	--	--	--	--	--	2.8	--	--	--	--
08-20-97	225	10	4.5	0.6	67	310	--	--	--	<3	<1
08-22-97	--	--	--	--	--	--	4.2	--	--	--	--
08-21-97	--	--	--	--	--	--	2.2	--	--	--	--
08-19-97	--	--	--	--	--	--	10	--	--	--	--
08-19-97	269	46	32	0.5	70	505	--	9.8	--	9	3
08-19-97	--	--	--	--	--	--	10	--	--	--	--
08-19-97	--	--	--	--	--	--	0.04	--	--	--	--

GOSPER COUNTY

08-05-97	--	--	--	--	--	--	3.2	--	--	--	--
08-05-97	--	--	--	--	--	--	3.9	--	--	--	--
08-05-97	213	17	10	0.4	<0.1	279	--	4.0	--	<3	<1
08-18-97	--	--	--	--	--	--	3.0	--	--	--	--
08-18-97	240	23	12	0.9	71	363	--	--	--	<3	<1
08-05-97	--	--	--	--	--	--	4.8	--	--	--	--
08-08-97	--	--	--	--	--	--	4.5	--	--	--	--
08-08-97	221	100	16	0.3	<0.1	416	--	4.5	--	<3	<1
08-08-97	--	--	--	--	--	--	3.5	--	--	--	--
08-05-97	--	--	--	--	--	--	2.6	--	--	--	--
08-08-97	--	--	--	--	--	--	2.8	--	--	--	--
08-05-97	--	--	--	--	--	--	2.8	--	--	--	--
08-05-97	--	--	--	--	--	--	3.3	--	--	--	--
08-05-97	240	130	23	0.3	<0.1	473	--	3.2	--	<3	<1
08-05-97	--	--	--	--	--	--	3.3	--	--	--	--
08-20-97	--	--	--	--	--	--	2.7	--	--	--	--

HARLAN COUNTY

08-19-97	411	400	98	0.3	46	1150	1.0	--	--	2200	990
08-19-97	--	--	--	--	--	--	2.8	--	--	--	--
08-19-97	--	--	--	--	--	--	7.7	--	--	--	--
08-19-97	306	62	52	0.2	54	533	--	--	--	<3	<1
08-20-97	--	--	--	--	--	--	0.85	--	--	--	--
08-20-97	--	--	--	--	--	--	4.4	--	--	--	--

KEARNEY COUNTY

08-07-97	--	--	--	--	--	--	5.2	--	--	--	--
----------	----	----	----	----	----	----	-----	----	----	----	----

NUCKOLLS COUNTY

08-12-97	--	--	--	--	--	--	13	--	--	--	--
08-12-97	309	100	31	0.4	36	551	--	--	--	<3	<1
08-12-97	--	--	--	--	--	--	1.5	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
 Republican River Basin Ground-Water Quality--Continued

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	GEOLOGIC UNIT	HYDROLOGIC UNIT CODE	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)
PHELPS COUNTY								
402236099113700	5N 17W25BBDD1	40 22 33 N	099 11 38 W	110SDGV	10250016	08-07-97	1200	200
				110SDGV	10250016	08-07-97	1205	200
402550099183101	5N 18W 1DABB1	40 25 50 N	099 18 31 W	121OGLL	10250016	08-07-97	1400	180
402524099212701	5N 18W10BBAB1	40 25 24 N	099 21 27 W	121OGLL	10250016	08-06-97	1115	332
402505099260201	5N 19W12BCBB1	40 25 04 N	099 26 09 W	121OGLL	10250016	08-07-97	1500	460
402339099344501	5N 20W22BAAA1	40 23 39 N	099 34 45 W	121OGLL	10250009	08-06-97	1315	240
402129099372501	5N 20W32CBBB1	40 21 29 N	099 37 25 W	121OGLL	10250009	08-06-97	1230	264
				121OGLL	10250009	08-06-97	1240	264
402844099235401	6N 18W20BBCB1	40 28 44 N	099 23 54 W	110SDGV	10250016	08-06-97	1530	183
402704099184401	6N 18W36ABBC1	40 27 04 N	099 18 44 W	110SDGV	10250016	08-06-97	1615	204
402709099271601	6N 19W26CCCC1	40 27 09 N	099 27 16 W	121OGLL	10250016	08-06-97	1800	445
402711099324001	6N 20W25CCDD1	40 27 11 N	099 32 40 W	121OGLL	10250009	08-07-97	1530	260
RED WILLOW COUNTY								
400055100310601	1N 28W31AACA1	40 00 55 N	100 31 06 W	110SDGV	10250014	08-19-97	1600	66
400344100352001	1N 29W10CCAC1	40 03 44 N	100 35 20 W	121OGLL	10250014	08-19-97	1500	210
400546100165801	2N 26W32CAAA1	40 05 43 N	100 16 38 W	121OGLL	10250014	08-21-97	1155	234
400842100250501	2N 27W18BBO1	40 08 42 N	100 25 05 W	121OGLL	10250004	08-21-97	1115	220
400850100270001	2N 28W11DCCC1	40 08 54 N	100 26 58 W	121OGLL	10250004	08-21-97	1230	148
				121OGLL	10250004	08-21-97	1235	148
				121OGLL	10250004	08-21-97	1245	148
400944100375601	2N 29W 7AAAB1	40 09 44 N	100 37 56 W	110SDGV	10250004	08-19-97	1245	91
401025100402201	2N 30W 2ABDD1	40 10 25 N	100 40 22 W	110SDGV	10250004	08-21-97	0830	61
401516100114301	3N 26W 1DAAD1	40 15 16 N	100 11 43 W	110SDGV	10250004	08-21-97	1030	75
				110SDGV	10250004	08-21-97	1035	75
				110SDGV	10250004	08-21-97	1040	75
401439100210601	3N 27W10ACAA1	40 14 39 N	100 21 06 W	110SDGV	10250004	08-21-97	1130	51
401345100262401	3N 28W13BCBC1	40 13 45 N	100 26 24 W	110SDGV	10250004	08-20-97	1030	85
401313100362001	3N 29W21BBAA1	40 13 13 N	100 36 20 W	110SDGV	10250004	08-18-97	1700	162
401224100441301	3N 30W20CACC1	40 12 24 N	100 44 13 W	110SDGV	10250004	08-19-97	1025	65
401920100114901	4N 26W12DDDD1	40 19 20 N	100 11 49 W	110SDGV	10250008	08-20-97	1650	92
401719100222101	4N 27W28A1	40 17 19 N	100 22 13 W	121OGLL	10250004	08-20-97	1500	273
				121OGLL	10250004	08-20-97	1505	273
401732100252101	4N 28W25AAAA1	40 17 32 N	100 25 21 W	121OGLL	10250004	08-18-97	1910	205
401701100365601	4N 29W29DCAA1	40 17 01 N	100 36 56 W	121OGLL	10250004	08-18-97	1816	270
401644100451401	4N 30W31BABB1	40 16 44 N	100 45 14 W	121OGLL	10250004	08-20-97	0800	198
				121OGLL	10250004	08-20-97	0805	198
				121OGLL	10250004	08-20-97	0810	198
WEBSTER COUNTY								
400517098232301	1N 10W 1AABD1	40 05 17 N	098 23 23 W	110SDGV	10250016	08-11-97	1515	71
				110SDGV	10250016	08-11-97	1520	71
400629098185801	2N 9W27DBDD1	40 06 29 N	098 18 58 W	110SDGV	10250016	08-11-97	1430	140

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Republican River Basin Ground-Water Quality--Continued

PHELPS OUNTY

RED WILLOW COUNTY

WEBSTER COUNTY

08-11-97	1700	472	7.3	13.0	--	--	--	--	--	--	--	--
08-11-97	1700	472	7.3	13.0	--	180	58	8.5	26	24	0.9	4.8
08-11-97	1788	354	7.4	13.5	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Republican River Basin Ground-Water Quality--Continued

DATE	ALKA- LITY 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)	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)	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)	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)
------	---	---	--	---	---	---	--	---	--	--	--

PHELPS COUNTY

08-07-97	--	--	--	--	--	--	5.1	--	--	--	--
08-07-97	243	73	13	0.2	58	451	--	5.4	--	<3	3
08-07-97	--	--	--	--	--	--	14	--	--	--	--
08-06-97	--	--	--	--	--	--	12	--	--	--	--
08-07-97	--	--	--	--	--	--	12	--	--	--	--
08-06-97	--	--	--	--	--	--	4.6	--	--	--	--
08-06-97	--	--	--	--	--	--	3.1	--	--	--	--
08-06-97	--	--	--	--	--	--	3.5	--	--	--	--
08-06-97	--	--	--	--	--	--	6.8	--	--	--	--
08-06-97	--	--	--	--	--	--	8.5	--	--	--	--
08-06-97	--	--	--	--	--	--	2.8	--	--	--	--
08-07-97	--	--	--	--	--	--	7.5	--	--	--	--

RED WILLOW COUNTY

08-19-97	--	--	--	--	--	--	5.2	--	--	--	--
08-19-97	--	--	--	--	--	--	1.5	--	--	--	--
08-21-97	--	--	--	--	--	--	4.7	--	--	--	--
08-21-97	--	--	--	--	--	--	2.3	--	--	--	--
08-21-97	--	--	--	--	--	--	2.1	--	--	--	--
08-21-97	209	17	80	0.7	67	424	--	--	--	<3	1
08-21-97	209	17	81	0.7	64	419	--	--	--	<3	<1
08-19-97	--	--	--	--	--	--	4.6	--	--	--	--
08-21-97	--	--	--	--	--	--	25	--	--	--	--
08-21-97	--	--	--	--	--	--	20	--	--	--	--
08-21-97	345	120	28	0.7	56	728	--	20	--	<3	150
08-21-97	--	--	--	--	--	--	20	--	--	--	--
08-21-97	--	--	--	--	--	--	7.8	--	--	--	--
08-20-97	--	--	--	--	--	--	6.4	--	--	--	--
08-18-97	--	--	--	--	--	--	19	--	--	--	--
08-19-97	--	--	--	--	--	--	19	--	--	--	--
08-20-97	--	--	--	--	--	--	0.07	--	--	--	--
08-20-97	--	--	--	--	--	--	2.4	--	--	--	--
08-20-97	232	13	3.6	0.8	70	321	--	--	--	<3	1
08-18-97	--	--	--	--	--	--	4.8	--	--	--	--
08-18-97	--	--	--	--	--	--	1.9	--	--	--	--
08-20-97	--	--	--	--	--	--	12	--	--	--	--
08-20-97	269	43	16	0.7	70	482	--	12	--	<3	<1
08-20-97	--	--	--	--	--	--	12	--	--	--	--

WEBSTER COUNTY

08-11-97	--	--	--	--	--	--	7.4	--	--	--	--
08-11-97	182	21	15	0.3	44	287	--	--	--	<3	1
08-11-97	--	--	--	--	--	--	5.9	--	--	--	--

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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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