STREAMFLOW GAIN-AND-LOSS AND SUSPENDED-SEDIMENT CHARACTERISTICS OF THE SOUTH PLATTE RIVER AND THREE IRRIGATION CANALS NEAR FORT MORGAN, COLORADO

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CONVERSION FACTORS

Inch-pound units used in this report may be converted to SI (International System) units by using the following conversion factors:

Multiply	*By*	*To Obtain*
cubic foot per second (ft^3/s)	*0.02832*	*cubic meter per second*
degree Fahrenheit (°F)	*5/9(°F-32)*	*degree Celsius (°C)*
inch (in.)	*25.4*	*millimeter (mm)*
mile (mi)	*1.609*	*kilometer*
ton (short)	*0.9072*	*ton*

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ABSTRACT

A 2-year study during 1982-83 was made to document the streamflow gain-and-loss and suspended-sediment characteristics of the South Platte River, Fort Morgan Canal, Upper Platte and Beaver Canal, and the Lower Platte and Beaver Canal near Fort Morgan, Colo., prior to possible construction of the proposed Narrows Reservoir. Six streamflow gain-and-loss investigations, conducted in 1982 along a 25.8-mile reach of the South Platte River, indicate an average downstream gain in discharge of 150 cubic feet per second during the irrigation season.

The Fort Morgan Canal and the Lower Platte and Beaver Canal had decreasing discharges in the downstream direction. The Upper Platte and Beaver Canal had a slight increase in discharge at the second measurement site and decreases in the third and fourth measurement sites. Irrigation practices and some loss to the ground-water system account for the general decrease in discharge.

Suspended-sediment data were collected at the streamflow-gaging station 06758500 South Platte River near Weldona and on the three irrigaton canals: Fort Morgan Canal, Upper Platte and Beaver Canal, and Lower Platte and Beaver Canal. The data indicate that relations exist between the suspended-sediment concentrations at the South Platte River station and the suspended-sediment concentrations at the most upstream measurement site on each canal. Relations between suspended-sediment discharge and water discharge were developed at all canal measurement sites.

For all the canals, suspended-sediment discharge decreased in a downstream direction. Slight increases in the suspended sediment occurred at the second measurement site on the Upper Platte and Beaver Canal and at the third measurement site on the Lower Platte and Beaver Canal. Laboratory analyses indicate that 75 percent of the suspended sediment is silt and clay size (particles finer than 0.062 millimeters).

INTRODUCTION

The proposed Narrows Reservoir is the major component of the U.S. Bureau of Reclamation's Narrows Unit, South Platte Division, Missouri River Basin Project. The Narrows Unit was originally authorized as part of the Missouri River Basin Project by the Flood Control Act of 1944, as amended. The reservoir is to be a multipurpose development having irrigation and flood control as its main benefits. Irrigation water would be made available for use in Adams, Logan, Morgan, Sedgewick, Washington, and Weld counties (fig. 1) to increase overall agricultural output. Flood protection would be provided for downstream communities and adjacent farms. Fish and wildlife habitat and recreational opportunity are expected to be enhanced by the reservoir development.

Purpose and Scope

Streamflow gain-and-loss and suspended-sediment characteristics of the South Platte River, Fort Morgan Canal, Upper Platte and Beaver Canal, and Lower Platte and Beaver Canal may be affected by construction of the proposed Narrows Reservoir. Information on the existing water discharge and suspended-sediment transport conditions are being collected to establish a data base for future comparisons.

In March 1982, the U.S. Geological Survey and the U.S. Bureau of Reclamation reinstated the data-collection program for baseline data in the vicinity of the proposed Narrows Reservoir. The earlier data-collection program of 1977-79 emphasized the collection of streamflow gain-and-loss data on the South Platte River. The 1982 program supplements the 1977-79 program and includes: additional streamflow gain-and-loss investigations along the main stem of the South Platte River, daily suspended-sediment measurements at the streamflow-gaging station 06758500 South Platte River near Weldona and twice-monthly suspended-sediment measurements at 12 canal sites in the vicinity (fig. 2). Main-stem measurements were made at the streamflow-gaging station 06758500 South Platte River near Weldona because it is located at the Narrows, a natural constriction in the river valley, which is upstream from the proposed dam site. In 1983, daily suspended-sediment measurements were also made at each canal site. The program was discontinued in October 1983. A low level suspended-sediment sampling program was reinstated in April 1984.

Acknowledgments

The author wishes to thank Jack Bain, Lindy Crumley, Dave Kendrick, Everett Matheney, and Herb Strauch for their assistance in collection of daily suspended-sediment data. The author also acknowledges the Colorado District Sediment Laboratory of the U.S. Geological Survey for their analyses of the suspended-sediment data.

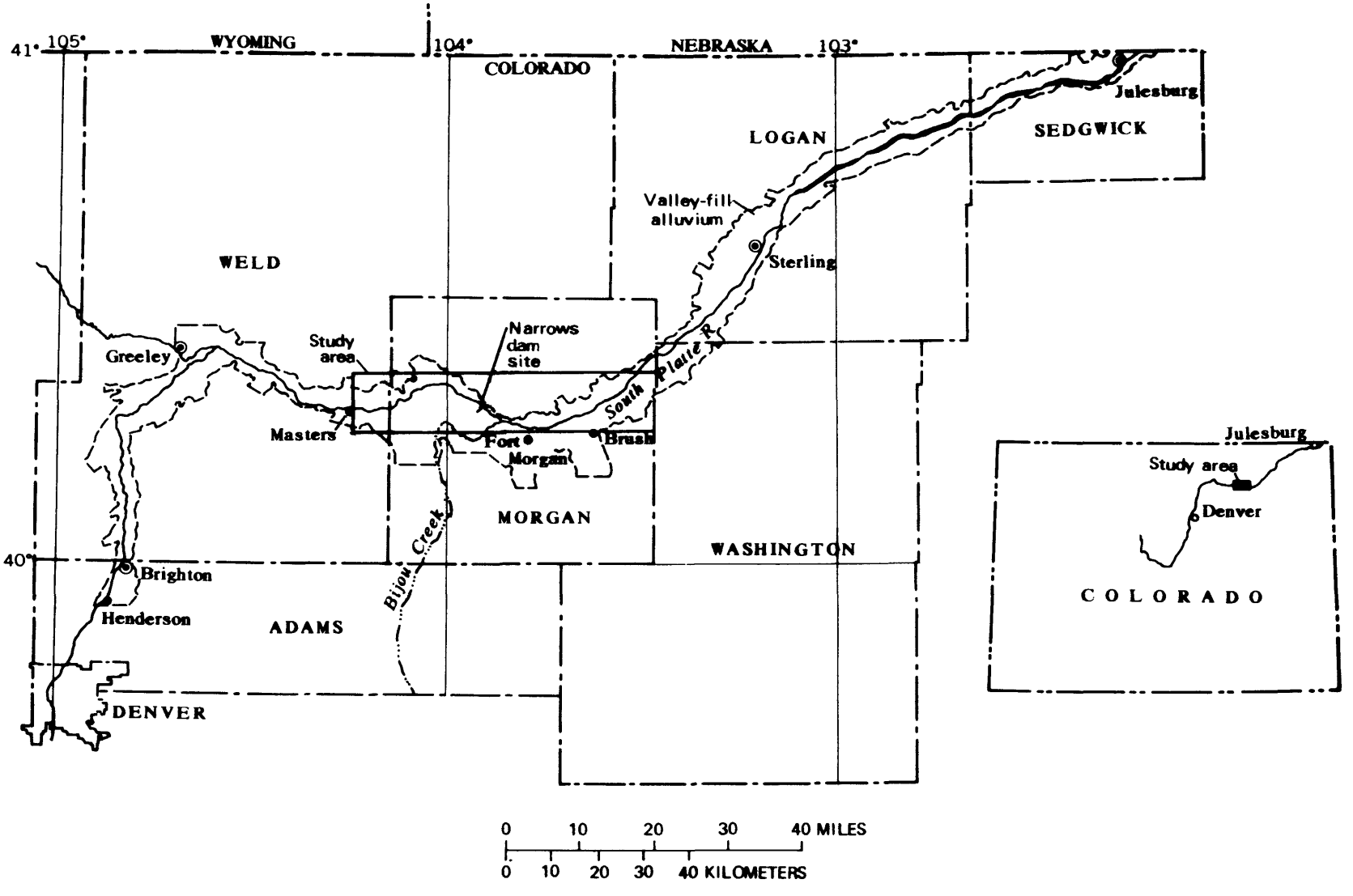

Figure 1.--Map showing location of study area.

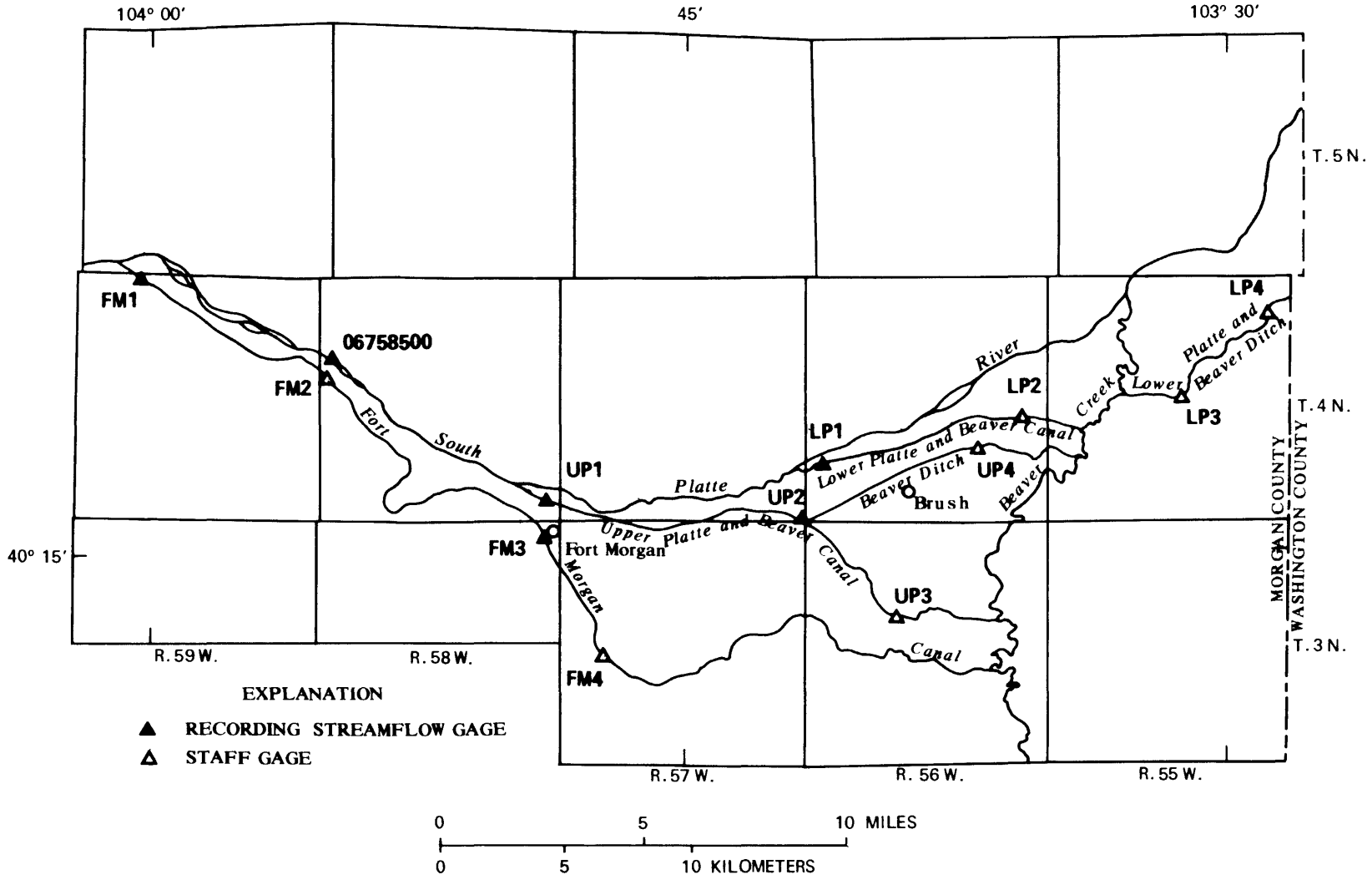

Figure 2. Map showing location of suspended-sediment sampling sites.

SOUTH PLATTE RIVER GAIN-AND-LOSS INVESTIGATIONS

Irrigation-return flows have been a significant part of the surface-water diversion network of the South Platte River system. Streamflow data collection on the South Platte River upstream and downstream from the canals is important to adequately define the surface-water network. Reservoir construction might alter the magnitude and distribution of irrigation diversion and return flows, and reservoir release is required to provide downstream users with an equal amount of water as that received prior to construction.

To supplement data collected during irrigation years November 1, 1976 to October 31, 1979 (Minges, 1983), six sets of streamflow gain-and-loss measurements were made during the 1982 irrigation season (April 1 to October 31) at selected sites along a 25.8-mile reach of the South Platte River. The reach extends from the streamflow-gaging station 06756995 South Platte River at Masters to immediately downstream from the mouth of Bijou Creek (fig. 3). The investigations were conducted approximately monthly to document irrigation season conditions in 1982. During each investigation, the flow was measured in 1 day at about 15 sites by four hydrographers working in a downstream direction. More detailed description of methods of streamflow gain-and-loss data collection and analyses are described by Minges (1983).

The gains and losses defined in the 1982 investigations and the average gains and losses of the 1977-79 investigations are presented by subreach and total reach in table 1. The 1982 streamflow gain for the total reach is within 5 percent of the 1977-79 gain for the total reach.

Relation of Gains in River Discharge to Saturated Aquifer Thickness

As in the 1977-79 (Minges, 1983) investigations, 1982 data indicate that average streamflow gains in the individual subreaches are related to the saturated thickness of the alluvial aquifer in the valley fill beneath the river. The largest gain in discharge is in the most upstream reach and these gains decrease in a downstream direction. The saturated thickness of the aquifer beneath the river is greatest at the upstream end of the study reach and decreases in a downstream direction with some local variation (Hurr and others, 1972).

In 1982, three main-stem measurements sites were eliminated; therefore, each subreach is longer than those used in the 1977 through 1979 measurements. Both studies show that the greatest gain in discharge per mile is at the upper end of the study reach. Eliminating the July 1982 data, which has only two subreaches, the average gains in discharge per mile were 10.0 ft^3/s in subreach 1, 2.6 ft^3/s in subreach 2, and 2.0 ft^3/s in subreach 3. The 1982 streamflow measurements also indicate that there is a relation between the gains or losses in surface flow and the saturated thickness of the aquifer.

Discussion of Results

Monthly streamflow gains or losses in each subreach and in the total study reach are shown in table 1. Averages of monthly streamflow gains or

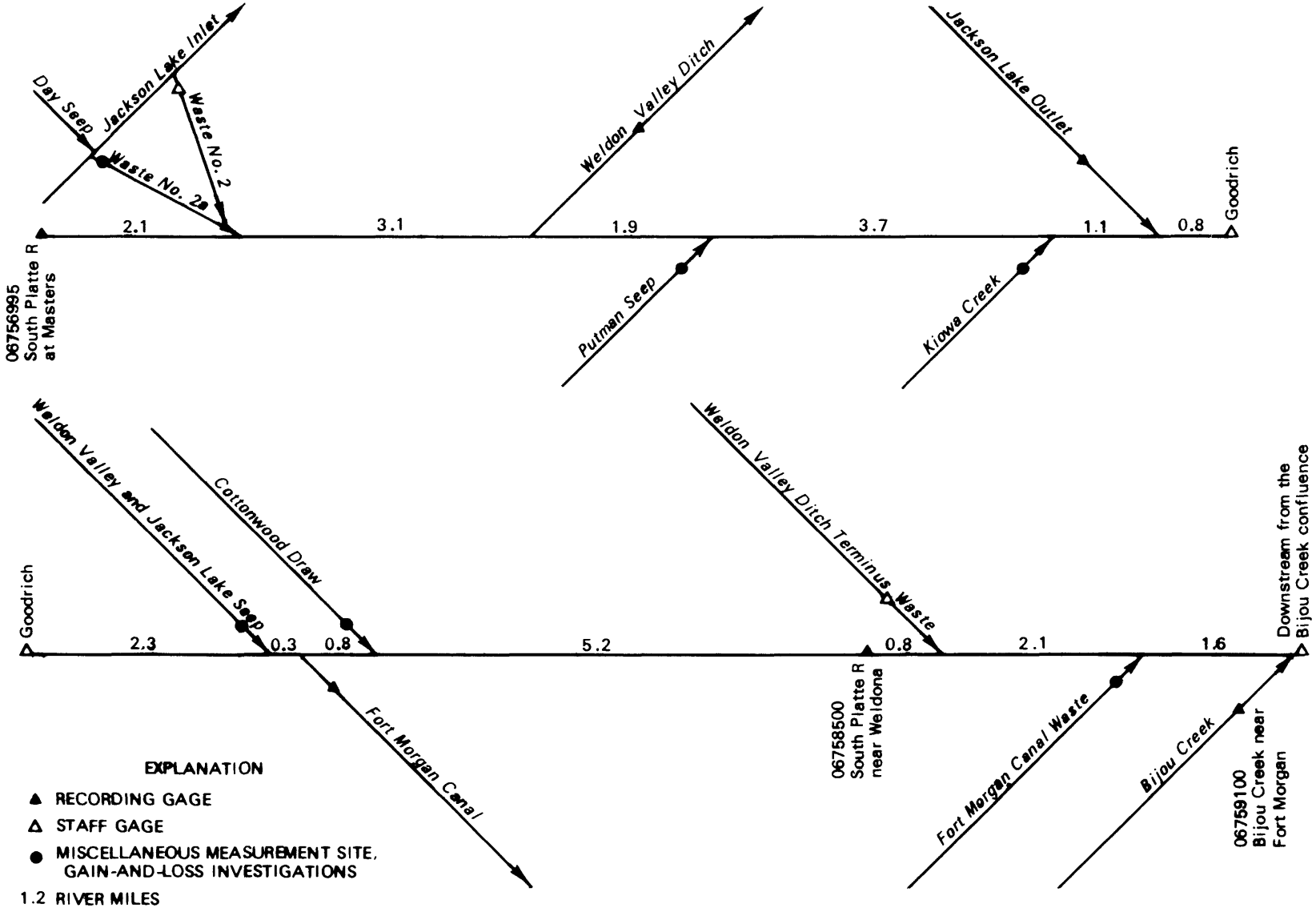

Figure 3.--Schematic diagram of streamflow gain-and-loss investigations of the South Platte River from the streamflow-gaging station 06756995 South Platte River at Masters to a site downstream from the mouth of Bijou Creek.

losses in 1982 and in 1977-79 (Minges, 1983) are also shown. Measured gains for the total reach ranged from 112 ft^3/s on July 20, 1982 to 194 ft^3/s on August 13, 1982. This range is equivalent to the range observed in the 1977-79 data (Minges, 1983). The average for all 1982 investigations is within 5 percent of the 1977-79 average for all investigations. Variations between investigations at the same site also occurred. Streamflow gains at the most upstream site ranged from 69 ft^3/s on September 1, 1982 to 180 ft^3/s on October 5, 1982.

Table 1.--*Summary of streamflow gain-and-loss investigations of the South Platte River from streamflow-gaging station 06756995 South Platte River at Masters to a site downstream from the mouth of Bijou Creek*

Date of Investigation	Subreach gains (+) or losses (-), in cubic feet per second; values in parentheses are gains (+) or losses (-) per river mile			
	Subreaches and lengths in river miles[1]			Total reach
	06756995 to Goodrich 12.7	Goodrich to 06758500 8.6	06758500 to downstream from Bijou Creek confluence 4.5	06756995 to downstream from Bijou Creek confluence 25.8
May 7, 1982	104(8.2)	19(2.2)	-5(-1.1)	118(4.6)
June 4, 1982	107(8.4)	38(4.4)	47(10.4)	192(7.4)
July 20, 1982	-------109(5.1)-------		3(0.7)	112(4.3)
Aug. 13, 1982	172(13.5)	19(2.2)	3(0.7)	194(7.5)
Sep. 1, 1982	69(5.4)	64(7.4)	-20(-4.4)	113(4.4)
Oct. 5, 1982	180(14.2)	-27(-3.1)	19(4.2)	172(6.7)
Averages for May, June, Aug., Sept., Oct., investigations	126(10.0)	23(2.6)	8.8(2.0)	[2]158(6.1)
Averages for 1982 irrigation year investigations	-------142(6.7)-------		7.8(1.8)	[2]150(5.8)
Averages for 1977, 1978, 1979 investigations[3]	[4]97(7.6)	[4]33(3.8)	[4]13(2.9)	[4]143(6)

[1]Stream subreaches are shown in figure 3.
[2]Total of average subreach value.
[3]From Minges (1983).
[4]Does not include values for combined subreaches.

One possible explanation for this range in streamflow gain or loss, especially at the end of the irrigation season, is augmentation, which is the process of recharging the ground-water system by running water in the irrigation canals after the irrigation season has ended. Some water flowing in the canal is lost through infiltration and is added to the aquifer as recharge. Eventually, some of this water flows back into the river. Augmentation might affect the ground-water contribution to the South Platte River. Other possible reasons for the variation in gain or loss are discussed by Minges (1983).

CANAL GAIN-AND-LOSS INVESTIGATIONS

Streamflow gain-and-loss investigations, as conducted on the South Platte River, were not conducted on the irrigation canals. Approximately monthly, the Fort Morgan Canal and the Upper Platte and Beaver Canal were checked for irrigation diversions and return flow. Inflows and outflows on the canals were checked to determine where irrigation water was being used. The Lower Platte and Beaver Canal could not be checked because of its inaccessibility. Water flowing in a channel was measured or estimated; if any overland flow from the farmers' fields occurred, it could not be measured. During the course of the season, the few ditches that were measured did not have sufficient flow to account for differences in canal flow.

Comparisons of discharge between successive measurement sites on each canal (fig. 2) were made to determine if the canal was gaining or losing flow in a downstream direction. The means of the daily instantaneous discharge at each measurement site were calculated. On each day, the difference in instantaneous discharge between the upstream site and the downstream site were compared. Instantaneous discharge had to be used because daily mean discharge was not available. The tests for significance in differences of daily instantaneous discharge, at the 95-percent confidence level, between successive measurement sites were performed according to the methods in Snedecor and Cochran (1967).

On the Fort Morgan Canal, the statistical analysis (table 2) indicates the significant differences in the daily instantaneous discharge between FM1 and FM2, between FM2 and FM3, and between FM3 and FM4. These differences are due to decreases in discharge in a downstream direction. The difference in the daily instantaneous discharge between FM1 and FM2 is minor.

On the Upper Platte and Beaver Canal, this analysis indicates that there was no significant difference in daily instantaneous discharge between UP1 and UP2. The mean daily instantaneous discharge at UP2 was greater than at UP1 but the difference was less than the standard error of the mean. Daily instantaneous discharge between UP2 and UP3, and between UP3 and UP4 could not be compared, because the irrigation canal splits below UP2, and UP3 and UP4 are on different branches of the canal. On the Lower Platte and Beaver Canal, the analysis indicated significant decreases in a downstream direction in daily instantaneous discharge between all measurement sites.

This statistical analysis of comparison of daily instantaneous discharge between successive measurement sites on each canal indicates the tendency of the canals to lose flow in a downstream direction. This tendency for dis-

charge to decrease in a downstream direction could be due to irrigation practices or to infiltration into the canal bed. Even with the measurement of canal inflows and outflows, the question of whether the differences are due to irrigation practices or to actual canal leakage was not answered.

Table 2.--*Summary of canal gain-and-loss statistics*

[n is number of data points used in the analysis]

Reach as defined by site numbers	Reach length (miles)	n	Mean of differences in discharge	Standard error of the differences
Fort Morgan Canal				
FM1 - FM2	5.40	193	3.08	1.47
FM2 - FM3	9.55	191	22.68	1.96
FM3 - FM4	3.09	23	41.98	9.99
Upper Platte and Beaver Canal				
UP1 - UP2	7.20	172	-0.43	1.82
Lower Platte and Beaver Canal				
LP1 - LP2	4.50	152	6.04	0.60
LP2 - LP3	6.04	149	27.11	1.32
LP3 - LP4	3.72	189	14.65	0.44

SUSPENDED-SEDIMENT INVESTIGATIONS

Suspended-sediment data were collected to document existing sediment-load characteristics at streamflow-gaging station 06758500 South Platte River near Weldona and at four sites each on the Fort Morgan Canal, the Upper Platte and Beaver Canal, and the Lower Platte and Beaver Canal (fig. 3). In 1982, the suspended-sediment samples were collected daily by an observer at station 06758500, and approximately twice monthly by the U.S. Geological Survey at all the measurement sites. In 1983, suspended-sediment samples were collected daily by observers at all sites and twice monthly by the U.S. Geological Survey.

Documentation of the sediment-load characteristics is necessary to define a baseline sediment transport because these sites would likely be affected by construction of the proposed reservoir. As the stream enters the reservoir, the flow velocities decrease toward zero and the suspended sediment settles out. Impoundment and subsequent release of the water could result in significantly lower suspended-sediment load immediately downstream from the dam. As a result, "clean" water is released to the downstream users and may affect the channels of the South Platte River and irrigation canals below the dam.

In 1982-83, approximately twice monthly, the U.S. Geological Survey collected suspended-sediment samples using the equal-width-increment (EWI) method (U.S. Office of Water Data Coordination, 1977; Guy and Norman, 1970). The 1982 samples were analyzed in the laboratory of the U.S. Bureau of Reclamation. These data are not presented in tables in this report but they were used in some of the analyses. The 1983 samples were analyzed in the laboratories of the U.S. Geological Survey.

Equal-width-increment measurements were made to obtain a representative sample of the true suspended-sediment concentration. An attempt was made to relate the multi-vertical concentration determined from the EWI measurements to the concentration measured at a single vertical. Ideally, these two values are equal when the single-vertical sample is taken at the location in the cross section where the single-vertical concentration equals the average concentration of the stream. When these values widely differed, coefficients were applied to the single-vertical sample concentration so that it equaled the EWI measured concentration.

Full particle-size analyses were conducted on each EWI sample in which sample volume and suspended-sediment concentration were sufficiently large, and in which algae concentrations were sufficiently small. Results of full particle-size analyses for all measurement sites are in table 3. Results of suspended-sediment analyses for the 12 canal sites for all type measurements are in tables 7-18 in the Supplemental Data section at the end of the report. Both sets of analyses show that, in general, greater than 75 percent of the suspended sediment in the canals is silt and clay size (particles finer than 0.062 millimeters).

Suspended-Sediment Discharge Water Discharge Relations

The suspended-sediment measurements were made near the proposed dam site at streamflow-gaging station 06758500 South Platte River near Weldona. A continuous record of daily suspended-sediment concentration was made and daily suspended-sediment discharges were calculated (table 4, in the Supplemental Data section at the end of the report). Suspended-sediment concentrations were measured at this station because it is located at the Narrows, a natural constriction in the river valley, which is upstream from the proposed dam site. Also, it is at a key location in the network and is representative of the conditions at the diversions to the three canal systems.

Attempts were made to develop two regression relationships between the suspended-sediment concentration and suspended-sediment discharge (dependent variables) and water discharge. The equations, if defined, could be used for estimating suspended-sediment concentrations and suspended-sediment discharge when only water-discharge data are available. Logarithms of suspended-sediment concentrations were regressed against logarithms of water discharge. The suspended-sediment discharge versus water discharge relation was developed in a similar manner; logarithms of suspended-sediment discharge were regressed against logarithms of water discharge.

The relations defined are not presented because the poor correlations resulting from the differences between the 1982 and 1983 data cause the rela-

Table 3.--*Particle-size distribution of suspended-sediment, irrigation year 1983*

[°C, degrees Celsius; ft/^{3}s, cubic foot per second; mg/L, milligrams per liter; p, pipet; s, sieve; v, visual accumulation tube]

Station	Date	Time	Water Temperature (°C)	Discharge (ft^3/s)	Concentration (mg/L)	Sediment Discharge (tons per day)	Percent finer than the size (in millimeters) indicated									Method of analysis
							0.002	0.004	0.016	0.062	0.125	0.250	0.500	1.00	2.00	
FM1	8-17	0940	23.5	132	258	100.0	36	45	74	96	99	100	---	---	---	p,s
FM2	7-20	1250	27.0	130	274	96.2	32	39	64	78	80	83	90	95	100	p,s
FM2	8-17	1400	26.0	136	272	99.9	34	42	79	97	99	99	99	100	---	p,s
FM3	7-20	1125	25.0	109	232	68.3	45	54	80	98	100	---	---	---	---	p,s
FM3	8-17	2300	26.0	116	312	97.7	34	42	80	97	99	100	---	---	---	p,s
FM4	8-4	0900	24.0	92	293	72.8	30	45	78	95	99	100	---	---	---	p,s
UP1	8-18	0725	22.5	130	150	52.6	---	---	---	99	100	---	---	---	---	v,s
UP1	9-1	0645	20.5	137	115	42.5	---	---	---	89	97	98	100	---	---	v,s
UP2	8-18	1420	25.0	138	210	78.2	---	---	---	87	96	100	---	---	---	v,s
UP2	9-1	1410	23.0	135	141	51.4	---	---	---	80	93	99	100	---	---	v,s
UP2	9-15	1500	18.5	86	95	22.2	---	---	---	65	98	100	---	---	---	v,s
UP4	9-1	1135	22.5	40	174	18.6	---	---	---	89	96	99	100	---	---	v,s
LP2	8-19	0955	22.5	131	233	82.4	---	---	---	86	94	100	---	---	---	v,s
LP2	9-2	1020	22.0	110	285	84.6	---	---	---	81	94	100	---	---	---	v,s
LP4	9-16	0825	16.0	36	193	18.9	---	---	---	87	88	89	90	90	100	s
06758500	4-28	1440	14.0	6,760	763	13,900	---	---	---	55	66	86	97	100	---	s
06758500	5-10	1440	20.5	4,840	630	8,230	---	---	---	49	56	79	96	100	---	s
06758500	7-5	1300	26.0	8,740	472	11,100	---	---	---	52	61	80	96	100	---	s
06758500	8-18	1630	27.5	1,660	243	1,090	---	---	---	69	75	89	99	100	---	s
06758500	9-1	1520	26.0	1,420	581	2,230	---	---	---	29	34	41	51	75	90	s
06758500	9-15	1605	20.5	1,190	148	476	---	---	---	57	71	90	99	100	---	s

tions to have little practical value. The large standard error in both equations is primarily due to scatter in the concentration data. The scatter partially results from differences in water discharge between 1982 and 1983. The average streamflow and, in general, the suspended-sediment concentrations were lower in 1982 than in 1983. The discharge in the fall of 1983 was unusually large and, because it did not result from direct runoff, concentrations were small. This caused the 1983 water year data to be nonlinear as shown in figure 4. Defining equations to reflect these complex relations for the South Platte River station was beyond the scope of this study.

South Platte River-Canal Relations

A major concern with the construction of the proposed Narrows Reservoir is the potential effect on canals of water released with low suspended-sediment concentrations. To examine the potential of this problem, relations between suspended-sediment concentrations in the canals and suspended-sediment concentrations in the South Platte River were determined. Logarithms of the suspended-sediment concentrations measured at the upstream site of each canal, FM1, UP1, and LP1, were regressed against the logarithms of the suspended-sediment concentrations measured at streamflow-gaging station 06758500 South Platte River near Weldona.

Regression equations presented in table 5 indicate that suspended-sediment concentrations in the canals are closely related to suspended-sediment concentrations in the river. The correlation coefficients and the standard errors for the Upper Platte and Beaver Canal and the Lower Platte and Beaver Canal indicate the good relation between suspended-sediment concentration in the canals to suspended-sediment concentration in the South Platte River. The correlation coefficient is lower and the standard error is higher in the relation for the Fort Morgan Canal indicating the relation between suspended-sediment concentration in the Fort Morgan Canal and the suspended-sediment concentration in the South Platte River was weakest. The Fort Morgan Canal has its-intake upstream from the streamflow-gaging station 06758500 South Platte River near Weldona. Less suspended sediment was moving upstream from the intake than downstream from the intake. Because the concentrations in the canals and the river are closely related, lower suspended-sediment concentrations in the South Platte River may cause a reduction in suspended-sediment concentration in the three irrigation canals.

Additional regression relations were developed between suspended-sediment discharge and water discharge for all the canal sites. The correlation coefficients and standard errors were poor. To improve the equations, the logarithms of the suspended-sediment discharge were regressed against the logarithms of the South Platte River water discharge and the canal water discharge. The correlation coefficients and the standard errors improved when the South Platte River water discharge was added to the equations (table 6).

The multiple-regression equations in table 6 suggest that suspended-sediment concentrations in the canals are dependent upon the suspended-sediment concentrations and water discharge in the South Platte River. Water discharge in the canals is often independent of water discharge in the South

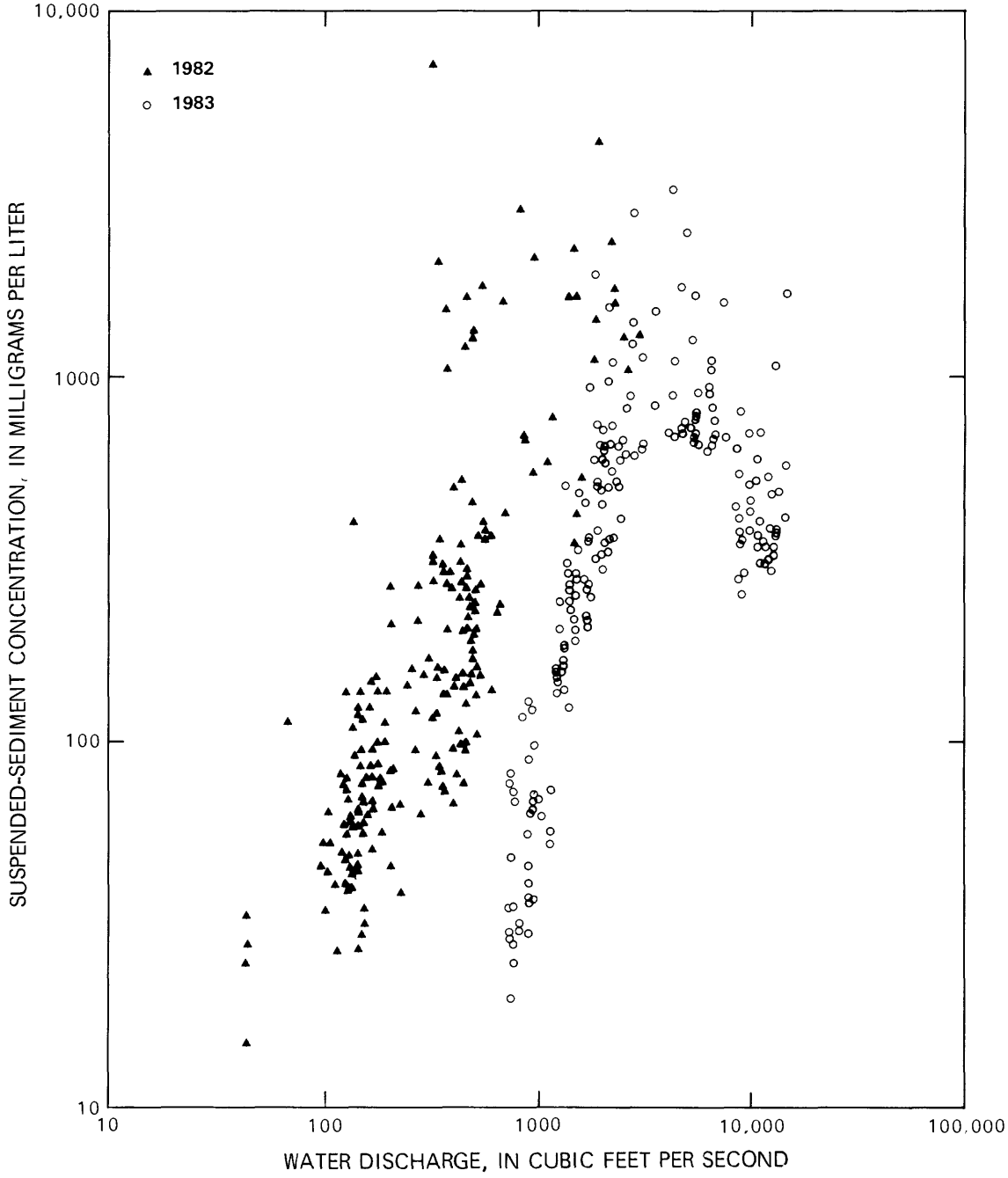

Figure 4.--Graph of suspended-sediment concentration versus water discharge at streamflow-gaging station 06758500 South Platte River near Weldona.

Platte River because the canals carry an amount of water that has been allocated. The suspended-sediment concentration in the canals, however, will be higher when the water discharge in the South Platte River is higher because the concentration and discharge of suspended sediment in the South Platte River increase with water discharge (table 5).

Table 5.--*Summary of regression relations for suspended sediment between streamflow-gaging station 06758500 South Platte River near Weldona and the upstream measurement site on each canal*

[n, number of data points used in regression analysis; r, correlation coefficient; se, standard error, in percent; C_c, sediment concentration of the canal, in milligrams per liter; C_{sp}, sediment concentration of the South Platte River, in milligrams per liter]

Site	n	Regression equation	r	se
FM1	185	$C_c = 4.69\ C_{sp}^{0.598}$	0.63	61
UP1	188	$C_c = 4.21\ C_{sp}^{0.636}$	.83	46
LP1	198	$C_c = 3.76\ C_{sp}^{0.673}$	.87	43

Discussion of Results

Suspended-sediment concentrations and suspended-sediment discharges increased with water discharge at all measurement sites on the three canals and at streamflow-gaging station 06758500 South Platte River near Weldona. Particle size analyses indicate that, in general, 75 percent of the suspended sediment in the canals was silt and clay size (particles finer than 0.062 millimeters).

Regression relations between suspended-sediment concentration and water discharge and suspended-sediment discharge and water discharge were attempted for the South Platte River at streamflow-gaging station 06758500 South Platte River near Weldona. Those equations, if defined, could be used to estimate suspended-sediment concentrations and suspended-sediment discharge when suspended-sediment data are not available but water-discharge data are available. The complexity of the relations between suspended-sediment discharge and water discharge in 1982-83 precluded defining a single regression relation that applies to both years; developing such a relation was beyond the scope of this study.

Table 6.--*Summary of multiple-regression relations for 1982-83 suspended-sediment data for all canal sites*

[n, number of data points used in regression analysis; r, correlation coefficient; se, standard error, in percent; Q_s, suspended-sediment load, in tons per day; Q_c, canal discharge in cubic feet per second; Q_{sp}, South Platte River discharge, in cubic feet per second]

Site	n	Regression equation	r	se	Range of water discharge	
					Minimum	Maximum
FM1	179	$Q_s = 0.0005\ Q_c^{1.68} Q_{sp}^{0.485}$	0.91	50	31	253
FM2	180	$Q_s = 0.0001\ Q_c^{1.87} Q_{sp}^{0.555}$	.94	46	15	214
FM3	185	$Q_s = 0.00007\ Q_c^{2.00} Q_{sp}^{0.532}$	.91	76	16	193
FM4	21	$Q_s = 0.0016\ Q_c^{2.03} Q_{sp}^{0.168}$	.92	73	17	149
UP1	182	$Q_s = 0.0001\ Q_c^{1.78} Q_{sp}^{0.629}$	.95	34	36	230
UP2	138	$Q_s = 0.00005\ Q_c^{2.15} Q_{sp}^{0.521}$	.87	62	37	178
UP3	147	$Q_s = 0.0050\ Q_c^{1.46} Q_{sp}^{0.403}$	.78	84	0.1	28
UP4	142	$Q_s = 0.00002\ Q_c^{2.86} Q_{sp}^{0.524}$	.85	77	10	56
LP1	196	$Q_s = 0.00004\ Q_c^{2.15} Q_{sp}^{0.539}$	.96	33	24	183
LP2	146	$Q_s = 0.00003\ Q_c^{2.25} Q_{sp}^{0.526}$	.95	34	20	159
LP3	191	$Q_s = 0.000002\ Q_c^{2.59} Q_{sp}^{0.776}$	.90	65	20	114
LP4	187	$Q_s = 0.000008\ Q_c^{2.43} Q_{sp}^{0.734}$	.90	67	16	99

There was correlation between suspended-sediment concentrations in the South Platte River and in the upstream measurement sites on the Fort Morgan Canal, Upper Platte and Beaver Canal, and Lower Platte and Beaver Canal. Correlation coefficients were 0.63 on the Fort Morgan Canal, 0.83 on the Upper Platte and Beaver Canal, and 0.87 on the Lower Platte and Beaver Canal.

Water discharge in the canal and water discharge in the South Platte River were used to compute suspended-sediment load in the irrigation canals. This multiple-regression relation indicates that suspended-sediment discharge in the irrigation canals, although dependent on canal water discharge, can be better estimated by also using water discharge of the South Platte River. This is due to the fact that suspended-sediment supply to the canals changes as the South Platte River suspended-sediment discharge changes and, therefore, suspended-sediment discharge in the canals increases with water discharge in the South Platte River.

SUMMARY

Streamflow gain-and-loss and suspended-sediment characteristics of the South Platte River, Fort Morgan Canal, Upper Platte and Beaver Canal, and Lower Platte and Beaver Canal were investigated. Information on the water discharge and suspended-sediment transport conditions are needed to determine the possible effects of the proposed reservoir on these characteristics during and after construction.

Six streamflow gain-and-loss investigations conducted in 1982 along the South Platte River indicate an average downstream gain in discharge of 150 ft^3/s during irrigation season and support an earlier study conducted during 1977, 1978, and 1979 (Minges, 1983). The ability of the river to gain (or lose) water is related to the saturated thickness of the aquifer in the valley-fill alluvium. The greater the saturated thickness of the aquifer, the greater the ability of the river to gain water.

The Fort Morgan Canal and the Lower Platte and Beaver Canal have decreasing discharges in the downstream direction. The Upper Platte and Beaver Canal has a slight increase in discharge at the second site and decreases in the lower two, which are below a split in the canal. Irrigation practices and some loss to the ground-water system account for the general decrease in discharge.

Suspended-sediment data were collected at the streamflow-gaging station 06758500 South Platte River near Weldona and on three irrigaton canals: Fort Morgan Canal, Upper Platte and Beaver Canal, and Lower Platte and Beaver Canal. The data indicate relations between the suspended-sediment concentrations at the South Platte River station and the suspended-sediment concentrations at the most upstream measurement site on each canal. Relations between suspended-sediment discharge and water discharge were developed at all canal measurement sites. For all the canals, suspended-sediment discharge decreased in downstream direction. Slight increases in the suspended sediment occurred at the second measurement site on the Upper Platte and Beaver Canal and at the third measurement site on the Lower Platte and Beaver Canal. Laboratory analyses indicate the suspended sediment in the canals is greater than 75 percent silt and clay size (particles finer than 0.062 millimeters).

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SUPPLEMENTAL DATA

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500
South Platte River near Weldona

[ft^3/s, cubic foot per second; mg/l, milligrams per liter; tons/day, tons per day]

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		APRIL			MAY			JUNE	
1	165	80	36	98	53	14	204	66	36
2	160	80	35	104	53	15	226	67	41
3	159	80	34	117	50	16	263	95	67
4	158	80	34	122	59	19	308	77	64
5	155	80	33	127	56	19	285	64	49
6	154	79	33	131	44	16	185	57	28
7	155	62	26	130	45	16	180	78	38
8	142	45	17	136	110	40	178	79	38
9	131	40	14	148	115	46	164	51	23
10	126	40	14	147	95	38	153	35	14
11	124	48	16	142	64	25	142	27	10
12	149	70	28	141	45	17	148	30	12
13	96	46	12	151	68	28	150	60	24
14	42	34	3.9	454	1220	1340	203	269	160
15	42	25	2.8	960	550	1430	308	170	141
16	42	15	1.7	336	119	118	441	200	238
17	43	15	1.7	204	46	25	432	250	292
18	43	28	3.3	147	57	23	376	135	137
19	67	115	24	122	76	25	359	135	131
20	146	86	34	135	400	146	441	272	324
21	167	65	29	138	92	34	359	304	320
22	166	68	30	142	46	18	200	84	45
23	140	59	22	136	59	22	142	49	19
24	127	70	24	118	81	26	128	49	17
25	125	74	25	124	79	26	104	65	18
26	124	41	14	130	61	21	843	2900	10100
27	113	27	8.2	173	76	35	1920	1440	7860
28	111	41	12	244	143	94	1620	530	2320
29	102	45	12	225	39	24	1490	350	1410
30	98	35	9.3	153	32	13	1510	420	1710
31	---	---	---	148	77	31	---	---	---
TOTAL	3572	---	588.9	5783	---	3760	13462	---	25686

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500 South Platte River near Weldona--Continued

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		JULY			AUGUST			SEPTEMBER	
1	2310	1750	10900	869	690	1620	503	135	183
2	2540	1280	8780	436	350	412	447	142	171
3	3000	1300	10500	276	270	201	398	96	103
4	2670	1040	7500	326	276	243	344	86	80
5	1850	1110	5540	376	206	209	335	92	83
6	1110	580	1740	363	290	284	360	74	72
7	461	266	331	479	250	323	401	68	74
8	204	210	116	603	370	602	458	96	119
9	135	110	40	494	230	307	459	128	159
10	178	138	66	333	152	137	449	154	187
11	165	146	65	291	154	121	508	160	219
12	145	138	54	274	216	7260	539	153	223
13	126	138	47	263	122	87	647	228	398
14	142	118	45	320	8050	6960	1180	780	2490
15	143	122	47	402	500	543	2240	2330	9610
16	188	114	58	387	292	305	2320	1590	2350
17	186	100	50	427	310	357	1930	4400	22900
18	163	86	38	438	520	615	1480	2250	8990
19	173	100	47	566	360	550	963	2140	5560
20	159	124	53	377	272	277	688	1610	2990
21	172	152	71	323	324	283	549	1760	2610
22	193	138	72	325	314	276	496	1280	1710
23	176	86	41	699	426	804	496	458	613
24	168	84	38	462	294	367	499	240	323
25	165	86	38	395	266	284	502	198	268
26	165	96	43	334	160	144	483	236	308
27	256	160	111	342	160	148	501	240	325
28	551	398	637	486	176	231	477	146	188
29	870	670	1670	496	176	236	458	99	122
30	1550	1660	6950	492	178	236	422	108	123
31	1410	1650	6280	480	154	200	---	---	---
TOTAL	21724	---	61968	13134	---	24622	21532	---	63551

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500 South Platte River near Weldona--Continued

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		OCTOBER			NOVEMBER			DECEMBER	
1	407	142	156	392			783		
2	402	142	154	443			811		
3	423	147	168	470			790		
4	418	150	169	518			783		
5	412	150	167	588			790		
6	407	82	90	588			888		
7	438	98	116	583			881		
8	443	78	93	572			888		
9	464	1650	2070	566			946		
10	501	1350	1830	572			916		
11	665	240	431	600			846		
12	600	140	227	623			946		
13	518	105	147	600			1130		
14	523	368	520	588			1050		
15	572	375	579	528			1100		
16	545	270	397	518			1030		
17	491	168	223	534			946		
18	464	222	278	545			923		
19	459	285	353	588			916		
20	464	202	253	617			895		
21	512	202	279	623			874		
22	512	262	362	623			867		
23	480	188	244	629			881		
24	325	117	103	671			874		
25	348	2070	1940	647			860		
26	348	357	335	629			818		
27	363	158	155	629			881		
28	358	75	72	629			978		
29	353	84	80	677			1000		
30	368	1540	1530	764			1060		
31	372	1050	1050	---			1070		
TOTAL	13955	---	14571	17554			28421		

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500 South Platte River near Weldona--Continued

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		APRIL			MAY			JUNE	
1	1830	590	2920	6790	680	12500	11100	401	12000
2	1920	735	3810	6790	678	12400	12400	382	12800
3	1970	650	3460	6660	645	11600	12000	355	11500
4	1910	505	2600	6320	627	10700	11600	347	10900
5	1910	510	2630	5700	650	10000	12100	314	10300
6	2000	595	3210	5590	692	10400	12600	292	9930
7	2060	582	3240	5210	725	10200	13500	480	17500
8	2060	622	3460	4900	748	9900	13000	340	11900
9	2080	638	3580	4740	1750	22400	11900	309	9930
10	2080	638	3580	4770	718	9250	11400	309	9510
11	2210	650	3880	4800	700	9070	11500	310	9630
12	2250	730	4430	4870	702	9230	11900	310	9960
13	2360	634	4040	5620	795	12100	12800	323	11200
14	2450	650	4300	5590	775	11700	14600	410	16200
15	2620	815	5770	5730	897	13900	15300	1680	69400
16	2600	610	4280	5480	760	11200	13000	1060	37200
17	2430	410	2690	5480	660	9770	11100	700	21000
18	2240	361	2180	6480	935	16400	10100	505	13800
19	2150	360	2090	8850	804	19200	10000	425	11500
20	2070	350	1960	9040	806	19700	10900	368	10800
21	2010	325	1760	9990	698	18800	12200	314	10300
22	2240	550	3330	10700	514	14800	13500	380	13900
23	3610	1500	14600	8660	440	10300	13300	370	13300
24	5560	1650	24800	8930	407	9810	12400	341	11400
25	6660	1100	19800	8970	379	9180	11800	339	10800
26	6380	900	15500	9080	349	8560	11000	339	10100
27	6690	822	14800	9470	290	7420	11600	351	11000
28	6850	755	14000	9240	254	6340	12800	475	16400
29	6890	685	12700	8850	281	6710	14900	570	22900
30	6690	680	12300	9200	353	8770	13100	364	12900
31	---	---	---	10000	380	10300	---	---	---
TOTAL	96780	---	201700	222500	---	362610	369400	---	459960

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500 South Platte River near Weldona--Continued

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		JULY			AUGUST			SEPTEMBER	
1	12200	527	17400	2340	510	3220	1350	500	1820
2	10900	593	17500	2030	298	1630	1550	480	2010
3	9990	454	12200	1720	270	1250	1380	288	1070
4	8890	536	12900	1690	262	1200	1330	178	639
5	8660	629	14700	1650	278	1240	1330	139	499
6	7690	680	14100	2010	490	2660	1400	124	469
7	5450	680	10000	3050	1120	9220	1470	218	865
8	4360	690	8120	3100	640	5360	1540	334	1390
9	4340	889	10400	2810	610	4630	1400	242	915
10	4480	1100	13300	2150	332	1930	1320	181	645
11	5340	1260	18200	1700	218	1000	1310	161	569
12	7380	1590	31700	1500	190	769	1270	157	538
13	6540	1040	18400	1420	230	882	1190	153	492
14	4160	706	7930	1710	360	1660	1180	151	481
15	3150	651	5540	2010	450	2440	1200	150	486
16	2520	672	4570	2430	590	3870	1210	158	516
17	2200	969	5760	2180	498	2930	1270	242	830
18	2200	1550	9210	1700	353	1620	1320	166	592
19	2270	1090	6680	1490	252	1010	1260	138	469
20	2020	717	3910	1500	207	838	1250	148	499
21	1780	935	4490	1670	450	2030	1260	203	691
22	1860	1890	9490	1900	378	1940	1230	137	455
23	2840	2800	21500	1890	317	1620	1130	74	226
24	4380	3250	38400	1770	250	1190	1130	57	174
25	5080	2470	33900	1710	209	965	1120	53	160
26	3590	836	8100	1670	220	992	1130	53	162
27	2790	1390	10500	1510	277	1130	1010	63	172
28	2770	1220	9120	1510	288	1170	978	70	185
29	2740	881	6520	1400	269	1020	946	70	179
30	2380	644	4140	1360	308	1130	946	70	179
31	2410	505	3290	1400	261	987	---	---	---
TOTAL	147360	---	391970	57980	---	63533	37410	---	18377

Table 4.--Daily mean discharge and suspended-sediment data at streamflow-gaging station 06758500 South Platte River near Weldona--Continued

	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984								
DAY	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (ft^3/s)	MEAN CONCEN-TRATION (mg/l)	SEDIMENT DISCHARGE (tons/day)
		OCTOBER			NOVEMBER			DECEMBER	
1	954	72	185						
2	954	98	252						
3	938	125	317						
4	895	129	312						
5	846	117	267						
6	909	90	221						
7	938	66	167						
8	930	65	163						
9	923	65	162						
10	909	56	137						
11	909	41	101						
12	938	37	94						
13	916	37	92						
14	895	46	111						
15	777	69	145						
16	764	73	151						
17	738	48	96						
18	732	29	57						
19	738	20	40						
20	744	30	60						
21	758	28	57						
22	770	28	58						
23	818	32	71						
24	758	25	51						
25	738	82	163						
26	732	77	152						
27	818	31	68						
28	881	30	71						
29	902	36	88						
30	777	35	73						
31	732	35	69						
TOTAL	26031	---	4051						

Table 7.-Data collected at site 1, Fort Morgan Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
04-20-83	48.	173	60	13.5	---	1
04-21-83	45.	102	96	12.5	---	1
04-22-83	48.	197	79	10.5	---	1
04-23-83	45.	377	98	14.0	---	1
04-24-83	42.	559	79	12.0	---	1
04-25-83	34.	303	100	13.0	---	1
04-26-83	45.	315	84	15.0	---	1
04-27-83	45.	319	95	12.0	---	1
04-28-83	45.	282	95	15.0	690	3
04-28-83	45.	295	89	15.0	690	2
04-28-83	45.	274	90	13.5	---	1
04-29-83	34.	281	69	15.0	---	1
04-30-83	32.	235	92	11.5	---	1
05-01-83	39.	260	92	12.0	---	1
05-02-83	39.	221	96	12.0	---	1
05-03-83	39.	99	99	16.5	---	1
05-04-83	46.	221	96	12.5	---	1
05-05-83	43.	81	89	20.5	---	1
05-06-83	42.	242	97	14.0	---	1
05-07-83	42.	95	88	10.5	---	1
05-08-83	43.	109	94	12.0	---	1
05-09-83	41.	211	95	18.0	---	1
05-10-83	39.	206	98	15.0	---	2
05-10-83	39.	200	98	15.0	---	3
05-10-83	41.	42	86	19.0	---	1
05-11-83	41.	68	92	12.0	---	1
05-12-83	41.	136	90	10.5	---	1
05-13-83	42.	149	89	10.0	---	1
05-14-83	41.	205	76	10.5	---	1
05-15-83	39.	68	94	10.5	---	1

Table 7.-Data collected at site 1, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-16-83	39.	219	86	11.5	---	1
05-17-83	39.	115	91	9.5	---	1
05-18-83	41.	139	93	9.5	---	1
05-19-83	46.	334	86	11.0	---	1
05-20-83	49.	248	77	10.5	---	1
05-21-83	45.	292	90	12.0	---	1
05-22-83	48.	397	93	13.5	---	1
05-23-83	45.	226	94	19.5	---	1
05-24-83	45.	226	95	18.5	---	1
05-25-83	45.	200	94	16.5	---	1
05-26-83	54.	184	96	18.5	---	1
05-27-83	56.	195	93	17.0	---	1
05-28-83	61.	216	93	18.0	---	1
05-29-83	67.	204	93	18.5	---	1
05-30-83	69.	206	92	14.0	---	1
06-01-83	61.	156	95	17.0	---	1
06-02-83	57.	158	94	----	---	1
06-03-83	54.	161	93	22.0	---	1
06-04-83	42.	174	94	19.5	---	1
06-05-83	43.	175	92	13.0	---	1
06-06-83	41.	228	98	17.0	---	1
06-07-83	41.	174	97	14.5	---	1
06-08-83	39.	183	98	18.5	---	1
06-09-83	42.	157	97	16.5	---	1
06-10-83	41.	214	99	16.0	---	1
06-11-83	41.	195	98	19.0	---	1
06-12-83	43.	152	99	17.0	---	1
06-13-83	45.	184	96	16.5	---	1
06-14-83	34.	153	98	17.5	---	1
06-15-83	35.	190	99	16.5	---	1
06-16-83	37.	187	80	19.5	---	1
06-17-83	35.	126	99	17.0	---	1
06-18-83	35.	120	100	18.0	---	1
06-19-83	33.	83	98	18.5	---	1
06-20-83	32.	90	98	24.0	---	1

Table 7.-Data collected at site 1, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-21-83	31.	118	75	23.5	---	1
06-22-83	39.	165	87	19.5	---	1
06-23-83	38.	250	87	21.0	---	1
06-24-83	87.	227	84	23.5	---	1
06-25-83	87.	231	86	23.0	---	1
06-26-83	74.	185	93	18.5	---	1
06-27-83	111.	252	90	15.5	---	1
06-28-83	56.	165	95	15.0	---	1
06-29-83	58.	320	97	16.0	---	1
06-30-83	103.	331	89	21.5	---	1
07-01-83	158.	262	69	20.5	---	1
07-02-83	198.	315	85	19.5	---	1
07-03-83	212.	326	90	19.0	---	1
07-04-83	225.	271	--	19.0	---	1
07-05-83	225.	267	--	23.0	---	1
07-06-83	208.	258	78	20.0	430	3
07-06-83	208.	296	73	20.0	430	2
07-06-83	225.	339	--	19.5	---	1
07-07-83	230.	269	--	20.5	---	1
07-08-83	198.	351	--	20.5	---	1
07-09-83	127.	246	--	25.5	---	1
07-10-83	124.	299	--	21.5	---	1
07-11-83	154.	365	--	21.5	---	1
07-12-83	158.	324	--	21.5	---	1
07-13-83	161.	398	--	20.0	---	1
07-14-83	161.	267	--	23.0	---	1
07-15-83	124.	286	--	24.0	---	1
07-16-83	117.	249	--	21.0	---	1
07-18-83	85.	232	--	26.0	---	1
07-19-83	144.	356	--	28.0	---	1
07-20-83	133.	188	--	24.0	890	3
07-20-83	133.	261	--	24.0	890	2
07-20-83	140.	407	--	24.5	---	1
07-21-83	133.	330	--	25.0	---	1
07-22-83	147.	248	--	24.5	---	1

Table 7.-Data collected at site 1, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-23-83	151.	385	--	25.5	---	1
07-24-83	158.	627	--	24.0	---	1
07-25-83	253.	548	--	25.5	---	1
07-26-83	165.	458	--	22.5	---	1
07-27-83	165.	306	90	24.0	---	1
07-28-83	225.	290	91	23.5	---	1
07-29-83	212.	476	--	23.0	---	1
07-30-83	185.	408	--	23.5	---	1
07-31-83	189.	272	--	23.0	---	1
08-01-83	189.	274	--	23.5	---	1
08-02-83	185.	269	--	24.5	---	1
08-03-83	164.	276	--	22.0	950	2
08-03-83	164.	246	--	22.0	950	3
08-03-83	169.	195	83	28.0	---	1
08-04-83	169.	289	90	25.0	---	1
08-05-83	169.	265	89	25.5	---	1
08-06-83	169.	273	92	25.5	---	1
08-07-83	120.	475	95	27.0	---	1
08-08-83	124.	676	88	25.0	---	1
08-09-83	169.	---	--	28.0	---	1
08-10-83	185.	281	92	28.0	---	1
08-11-83	173.	185	98	27.5	---	1
08-12-83	194.	206	89	27.0	---	1
08-13-83	194.	170	--	26.0	---	1
08-14-83	169.	171	--	24.5	---	1
08-15-83	130.	258	--	25.0	---	1
08-16-83	137.	257	--	25.0	---	1
08-17-83	127.	394	--	24.0	---	1
08-17-83	132.	295	--	23.5	909	2
08-18-83	181.	243	94	25.0	---	1
08-19-83	185.	178	93	25.5	---	1
08-20-83	151.	182	94	24.5	---	1
08-21-83	133.	226	92	24.5	---	1
08-22-83	165.	327	94	25.5	---	1
08-23-83	189.	311	91	24.5	---	1

Table 7.-Data collected at site 1, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-24-83	194.	233	94	23.5	----	1
08-25-83	161.	146	98	25.0	----	1
08-26-83	133.	172	92	24.5	----	1
08-27-83	130.	221	84	25.0	----	1
08-28-83	133.	184	90	23.5	----	1
08-30-83	147.	233	92	24.5	----	1
08-31-83	151.	169	90	22.5	----	1
08-31-83	145.	190	77	20.0	1100	2
08-31-83	145.	198	--	20.0	1100	3
09-01-83	158.	154	--	23.5	----	1
09-02-83	198.	186	--	23.0	----	1
09-03-83	165.	197	--	23.5	----	1
09-04-83	169.	139	--	22.0	----	1
09-05-83	154.	135	--	20.5	----	1
09-06-83	130.	186	--	23.0	----	1
09-07-83	45.	36	--	20.5	----	1
09-08-83	43.	153	--	20.0	----	1
09-09-83	42.	87	--	23.0	----	1
09-10-83	39.	102	--	19.5	----	1
09-12-83	67.	77	--	21.0	----	1
09-13-83	65.	48	--	20.5	----	1
09-14-83	67.	41	81	18.0	----	1
09-14-83	65.	62	--	16.0	1000	3
09-14-83	65.	80	--	16.0	1000	2
09-15-83	65.	32	78	17.5	----	1
09-16-83	63.	34	74	17.5	----	1
09-17-83	63.	50	82	16.5	----	1
09-18-83	32.	25	89	18.0	----	1
09-19-83	67.	---	--	17.5	----	1
09-20-83	65.	---	--	14.0	----	1
09-21-83	67.	26	74	11.0	----	1
09-22-83	56.	28	72	9.0	----	1
09-23-83	56.	---	--	15.0	----	1
09-24-83	37.	50	76	19.0	----	1
09-25-83	37.	24	57	15.0	----	1
09-26-83	38.	---	--	16.0	----	1
09-27-83	45.	67	70	19.5	----	1

Table 8.-Data collected at site 2, Fort Morgan Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample;
3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
04-21-83	51.	33	83	12.5	---	1
04-22-83	53.	100	78	11.0	---	1
04-23-83	47.	91	96	16.5	---	1
04-24-83	53.	138	83	11.0	---	1
04-25-83	42.	144	98	12.0	---	1
04-26-83	42.	98	87	17.0	---	1
04-27-83	51.	151	99	11.5	---	1
04-28-83	40.	137	96	13.0	---	1
04-28-83	34.	112	91	16.0	680	2
04-28-83	34.	116	100	16.0	680	3
04-29-83	43.	148	92	12.5	---	1
04-30-83	28.	116	98	10.5	---	1
05-01-83	42.	115	96	11.0	---	1
05-02-83	40.	186	94	11.5	---	1
05-03-83	43.	94	97	17.0	---	1
05-04-83	44.	117	95	13.0	---	1
05-05-83	44.	95	94	22.0	---	1
05-06-83	44.	124	95	----	---	1
05-07-83	44.	82	96	11.0	---	1
05-08-83	44.	116	95	12.5	---	1
05-09-83	38.	137	88	22.0	---	1
05-10-83	34.	90	99	22.5	---	2
05-10-83	34.	82	96	22.5	---	3
05-10-83	40.	48	90	18.5	---	1
05-11-83	34.	89	95	12.5	---	1
05-12-83	40.	116	98	10.5	---	1
05-13-83	42.	136	97	9.5	---	1
05-14-83	34.	124	95	9.5	---	1
05-15-83	34.	50	90	11.5	---	1
05-17-83	40.	89	93	9.5	---	1

Table 8.-Data collected at site 2, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-18-83	42.	119	93	10.0	---	1
05-19-83	44.	333	90	11.5	---	1
05-20-83	55.	232	94	11.0	---	1
05-21-83	60.	292	95	12.0	---	1
05-22-83	58.	403	95	12.5	---	1
05-23-83	42.	269	97	22.5	---	1
05-24-83	49.	289	97	19.5	---	1
05-25-83	44.	250	97	16.5	---	1
05-26-83	78.	249	98	19.0	---	1
05-27-83	80.	258	97	18.0	---	1
05-28-83	94.	269	96	19.0	---	1
05-29-83	96.	240	96	18.5	---	1
05-30-83	78.	242	96	14.5	---	1
05-31-83	76.	206	96	16.0	---	1
06-01-83	40.	250	100	18.5	---	1
06-02-83	40.	210	98	17.0	---	1
06-03-83	40.	180	98	22.5	---	1
06-04-83	32.	180	98	24.0	---	1
06-05-83	34.	206	93	13.5	---	1
06-06-83	32.	204	96	22.0	---	1
06-07-83	32.	193	98	16.0	---	1
06-08-83	32.	155	98	22.5	---	1
06-09-83	32.	172	99	17.5	---	1
06-10-83	32.	206	100	19.5	---	1
06-11-83	34.	148	99	21.5	---	1
06-12-83	42.	162	100	18.5	---	1
06-13-83	40.	154	100	17.0	---	1
06-14-83	16.	149	98	18.5	---	1
06-15-83	22.	191	99	17.0	---	1
06-16-83	22.	150	100	19.0	---	1
06-17-83	21.	132	97	18.5	---	1
06-18-83	16.	101	100	19.5	---	1
06-19-83	15.	80	99	20.0	---	1
06-20-83	18.	85	99	26.0	---	1
06-21-83	62.	100	92	25.0	---	1

Table 8.-Data collected at site 2, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-22-83	34.	188	89	21.0	---	1
06-24-83	96.	287	90	25.0	---	1
06-25-83	96.	218	87	25.0	---	1
06-26-83	62.	151	97	20.0	---	1
06-27-83	130.	249	90	16.5	---	1
06-29-83	104.	290	96	16.5	---	1
06-30-83	108.	318	96	23.0	---	1
07-01-83	164.	250	93	20.5	---	1
07-02-83	170.	319	83	20.0	---	1
07-03-83	174.	310	92	19.5	---	1
07-05-83	212.	234	87	20.0	---	1
07-06-83	214.	315	--	20.0	---	1
07-06-83	193.	188	92	25.5	430	2
07-06-83	193.	210	91	25.5	430	3
07-07-83	213.	321	91	20.5	---	1
07-08-83	163.	359	88	22.0	---	1
07-09-83	152.	258	88	27.0	---	1
07-10-83	151.	248	84	23.5	---	1
07-11-83	160.	259	--	23.0	---	1
07-12-83	146.	305	91	22.0	---	1
07-13-83	148.	366	94	20.5	---	1
07-14-83	158.	537	--	24.0	---	1
07-15-83	145.	276	--	25.5	---	1
07-16-83	129.	225	83	21.5	---	1
07-17-83	71.	186	92	25.5	---	1
07-18-83	120.	234	87	28.0	---	1
07-19-83	154.	350	--	28.5	---	1
07-20-83	160.	440	94	25.0	---	1
07-20-83	130.	281	--	27.0	950	2
07-21-83	162.	389	81	24.5	---	1
07-22-83	163.	146	--	25.0	---	1
07-23-83	151.	422	--	25.5	---	1
07-24-83	152.	505	--	24.0	---	1
07-25-83	157.	570	--	26.0	---	1
07-26-83	151.	435	--	22.5	---	1

Table 8.-Data collected at site 2, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-27-83	199.	318	94	24.5	---	1
07-28-83	185.	289	--	23.5	---	1
07-29-83	174.	502	--	23.5	---	1
07-30-83	168.	374	--	24.0	---	1
07-31-83	164.	298	--	23.0	---	1
08-01-83	159.	225	87	24.0	---	1
08-02-83	156.	278	92	25.0	---	1
08-03-83	152.	306	--	24.0	758	2
08-03-83	152.	442	--	24.0	758	3
08-03-83	152.	185	88	----	---	1
08-04-83	152.	259	88	25.5	---	1
08-05-83	151.	242	94	25.0	---	1
08-06-83	161.	245	94	25.0	---	1
08-07-83	138.	430	--	27.5	---	1
08-08-83	142.	606	94	25.5	---	1
08-09-83	157.	303	88	28.0	---	1
08-10-83	158.	291	91	28.5	---	1
08-11-83	166.	213	76	28.0	---	1
08-12-83	157.	196	88	27.5	---	1
08-13-83	160.	165	--	25.5	---	1
08-14-83	152.	173	--	25.5	---	1
08-15-83	145.	266	--	25.0	---	1
08-16-83	145.	284	--	25.0	---	1
08-17-83	144.	388	--	24.5	---	1
08-17-83	136.	281	--	26.0	934	2
08-18-83	151.	286	93	24.5	---	1
08-19-83	158.	194	94	25.0	---	1
08-20-83	152.	176	91	24.5	---	1
08-21-83	145.	236	92	24.0	---	1
08-22-83	154.	377	93	25.5	---	1
08-23-83	158.	376	85	24.0	---	1
08-24-83	160.	274	84	24.0	---	1
08-25-83	152.	172	92	25.5	---	1
08-26-83	151.	164	90	25.0	---	1
08-27-83	152.	175	93	24.0	---	1

Table 8.-Data collected at site 2, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-28-83	148.	132	84	24.0	----	1
08-29-83	136.	213	66	26.0	----	1
08-31-83	144.	233	74	23.0	----	1
08-31-83	141.	229	74	21.5	1200	2
08-31-83	141.	211	--	21.5	1200	3
09-01-83	138.	173	89	24.0	----	1
09-02-83	138.	187	89	23.0	----	1
09-03-83	145.	212	82	24.0	----	1
09-04-83	151.	212	82	22.5	----	1
09-05-83	142.	132	89	20.5	----	1
09-06-83	136.	139	83	23.5	----	1
09-07-83	118.	129	93	19.5	----	1
09-08-83	95.	94	93	21.0	----	1
09-09-83	89.	81	87	24.5	----	1
09-10-83	53.	118	79	19.5	----	1
09-12-83	60.	56	76	21.0	----	1
09-13-83	60.	48	82	21.0	----	1
09-14-83	59.	44	73	16.0	1150	3
09-14-83	59.	44	--	16.0	1150	2
09-14-83	60.	45	83	18.5	----	1
09-15-83	60.	43	73	18.0	----	1
09-16-83	58.	43	82	17.5	----	1
09-17-83	58.	51	83	17.0	----	1
09-18-83	96.	68	66	17.5	----	1
09-19-83	67.	---	--	18.0	----	1
09-20-83	62.	52	58	14.5	----	1
09-21-83	60.	27	74	10.5	----	1
09-22-83	44.	24	60	9.5	----	1
09-23-83	53.	22	72	15.5	----	1
09-24-83	24.	33	83	19.0	----	1
09-25-83	32.	20	66	15.0	----	1
09-26-83	32.	25	66	16.0	----	1
09-27-83	28.	16	81	19.0	----	1

Table 9.-Data collected at site 3, Fort Morgan Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
04-20-83	43.	33	62	16.0	---	1
04-21-83	38.	26	87	13.0	---	1
04-22-83	39.	27	79	11.0	---	1
04-23-83	44.	23	89	12.0	---	1
04-24-83	44.	34	81	12.5	---	1
04-25-83	42.	37	97	17.5	---	1
04-26-83	49.	47	90	11.5	---	1
04-27-83	38.	53	96	13.0	---	1
04-28-83	25.	40	87	14.0	---	1
04-29-83	25.	61	96	12.0	640	2
04-29-83	25.	47	95	12.0	640	3
04-29-83	34.	54	95	12.0	---	1
04-30-83	22.	34	98	11.5	---	1
05-01-83	24.	65	94	10.5	---	1
05-02-83	25.	207	97	12.0	---	1
05-03-83	31.	46	94	12.5	---	1
05-04-83	27.	36	90	15.0	---	1
05-05-83	34.	33	79	20.0	---	1
05-06-83	31.	53	88	13.5	---	1
05-07-83	30.	62	97	10.5	---	1
05-08-83	31.	36	97	13.0	---	1
05-09-83	29.	45	79	20.0	---	1
05-10-83	28.	55	71	19.0	---	1
05-11-83	25.	39	86	13.5	---	1
05-12-83	26.	103	96	10.5	---	1
05-13-83	25.	37	84	10.0	---	2
05-13-83	25.	23	95	10.0	---	3
05-13-83	26.	66	98	9.5	---	1
05-14-83	26.	62	98	8.0	---	1
05-15-83	29.	61	67	11.0	---	1

Table 9.-Data collected at site 3, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-16-83	29.	57	86	10.0	---	1
05-17-83	28.	46	99	9.0	---	1
05-18-83	28.	56	100	6.5	---	1
05-19-83	37.	76	99	13.0	---	1
05-20-83	36.	100	92	12.5	---	1
05-21-83	35.	240	87	11.5	---	1
05-22-83	38.	201	99	12.5	---	1
05-23-83	29.	190	98	22.0	---	1
05-24-83	32.	144	96	20.0	---	1
05-25-83	31.	143	95	18.0	---	1
05-26-83	44.	252	96	18.0	---	1
05-27-83	44.	176	94	18.5	---	1
05-28-83	51.	234	93	19.0	---	1
05-29-83	55.	101	92	19.5	---	1
05-30-83	56.	214	96	16.0	---	1
05-31-83	67.	167	92	12.0	---	1
06-01-83	31.	122	94	15.5	---	1
06-02-83	19.	157	95	15.0	---	1
06-03-83	28.	283	98	20.0	---	1
06-04-83	26.	184	91	22.5	---	1
06-05-83	38.	1410	98	13.5	---	1
06-06-83	28.	165	98	20.0	---	1
06-07-83	25.	230	99	18.0	---	1
06-08-83	27.	189	99	24.0	---	1
06-09-83	22.	674	100	24.0	---	1
06-10-83	22.	123	96	22.5	---	1
06-11-83	30.	199	97	22.0	---	1
06-12-83	29.	169	98	20.0	---	1
06-13-83	32.	145	98	17.0	---	1
06-14-83	31.	175	97	18.0	---	1
06-15-83	19.	113	96	18.5	---	1
06-16-83	21.	128	96	22.0	---	1
06-17-83	18.	112	96	19.5	---	1
06-18-83	16.	90	95	20.5	---	1
06-19-83	16.	85	98	20.0	---	1

Table 9.-Data collected at site 3, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-20-83	33.	415	98	26.5	---	1
06-21-83	24.	58	99	25.5	---	1
06-22-83	30.	114	91	22.5	---	1
06-23-83	32.	157	84	23.5	---	1
06-24-83	32.	418	84	20.0	---	1
06-25-83	22.	317	85	25.0	---	1
06-26-83	26.	162	82	21.5	---	1
06-27-83	21.	320	99	17.0	---	1
06-28-83	70.	228	97	16.0	---	1
06-29-83	66.	137	98	19.0	---	1
06-30-83	52.	357	96	23.5	---	1
07-01-83	109.	466	96	20.0	---	1
07-02-83	143.	362	92	20.0	---	1
07-03-83	187.	270	92	19.5	---	1
07-04-83	151.	328	88	18.5	---	1
07-05-83	164.	288	92	20.0	---	1
07-06-83	172.	310	94	20.0	---	1
07-06-83	169.	270	89	23.5	425	2
07-06-83	169.	299	86	23.5	425	3
07-07-83	172.	273	93	21.0	---	1
07-08-83	148.	296	92	22.0	---	1
07-09-83	109.	310	94	23.0	---	1
07-10-83	107.	228	84	24.0	---	1
07-11-83	122.	325	93	22.5	---	1
07-12-83	167.	570	--	20.5	---	1
07-13-83	159.	498	94	20.5	---	1
07-14-83	169.	384	90	24.0	---	1
07-15-83	151.	234	92	24.0	---	1
07-16-83	94.	288	94	21.0	---	1
07-17-83	44.	368	90	25.0	---	1
07-18-83	29.	282	93	23.5	---	1
07-19-83	50.	385	--	25.0	---	1
07-20-83	126.	350	--	24.0	---	1
07-20-83	109.	284	--	25.0	830	2
07-21-83	100.	192	--	24.5	---	1

Table 9.-Data collected at site 3, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-22-83	105.	131	94	25.0	----	1
07-23-83	113.	351	94	26.0	----	1
07-24-83	133.	939	--	21.0	----	1
07-25-83	138.	793	--	----	----	1
07-26-83	141.	534	--	22.5	----	1
07-27-83	169.	329	90	26.5	----	1
07-28-83	151.	330	95	23.5	----	1
07-30-83	122.	361	--	24.0	----	1
07-31-83	131.	325	--	23.5	----	1
08-01-83	133.	276	--	24.5	----	1
08-02-83	131.	258	--	23.5	----	1
08-03-83	136.	402	--	25.0	1000	2
08-03-83	136.	374	--	25.0	1000	3
08-03-83	131.	204	91	24.0	----	1
08-04-83	133.	221	87	25.0	----	1
08-05-83	133.	226	84	25.0	----	1
08-06-83	159.	242	85	25.5	----	1
08-07-83	82.	370	81	27.5	----	1
08-08-83	85.	372	88	26.0	----	1
08-09-83	126.	362	88	28.5	----	1
08-10-83	159.	281	81	29.0	----	1
08-11-83	177.	240	77	27.5	----	1
08-12-83	169.	207	86	27.5	----	1
08-13-83	174.	198	81	25.5	----	1
08-14-83	141.	187	86	25.0	----	1
08-15-83	119.	254	86	24.5	----	1
08-16-83	115.	222	90	24.5	----	1
08-17-83	105.	252	85	24.5	----	1
08-17-83	116.	326	--	26.0	950	2
08-18-83	133.	297	82	24.5	----	1
08-19-83	109.	233	91	25.0	----	1
08-20-83	143.	208	94	25.0	----	1
08-21-83	96.	184	90	24.5	----	1
08-22-83	111.	326	92	26.0	----	1
08-23-83	172.	353	92	24.0	----	1

Table 9.-Data collected at site 3, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-24-83	151.	241	88	24.0	----	1
08-25-83	122.	224	84	24.0	----	1
08-26-83	103.	231	86	25.0	----	1
08-27-83	94.	151	86	24.5	----	1
08-28-83	101.	203	--	23.0	----	1
08-29-83	111.	246	--	26.5	----	1
08-29-83	105.	196	--	26.5	----	1
08-30-83	124.	228	--	22.5	----	1
08-30-83	122.	226	--	22.5	----	1
08-31-83	115.	264	--	23.0	----	1
08-31-83	128.	169	--	23.0	1100	2
08-31-83	128.	240	--	23.0	1100	3
09-01-83	16.	113	--	23.5	----	1
09-02-83	33.	151	--	23.5	----	1
09-03-83	113.	124	--	25.0	----	1
09-04-83	124.	115	--	23.5	----	1
09-05-83	115.	111	--	21.0	----	1
09-06-83	92.	101	--	20.5	----	1
09-07-83	83.	135	--	20.0	----	1
09-08-83	44.	81	--	20.5	----	1
09-09-83	22.	44	--	21.5	----	1
09-10-83	20.	82	--	20.0	----	1
09-11-83	19.	77	97	19.5	----	1
09-12-83	22.	39	86	21.0	----	1
09-13-83	25.	39	97	16.0	----	1
09-14-83	23.	32	98	17.0	----	1
09-14-83	53.	35	96	17.0	1100	2
09-14-83	53.	29	88	17.0	1100	3
09-15-83	29.	33	93	18.0	----	1
09-16-83	27.	34	70	16.5	----	1
09-17-83	25.	27	89	17.0	----	1
09-18-83	33.	25	80	17.0	----	1
09-19-83	39.	20	82	16.5	----	1
09-20-83	35.	11	85	14.5	----	1
09-21-83	51.	12	94	10.0	----	1

Table 9.-Data collected at site 3, Fort Morgan Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-22-83	36.	11	80	10.0	---	1
09-23-83	39.	10	84	11.5	---	1
09-24-83	32.	15	85	13.5	---	1
09-25-83	19.	9	64	15.5	---	1
09-26-83	18.	6	46	16.0	---	1
09-27-83	16.	17	84	16.0	---	1

Table 10.-Data collected at site 4, Fort Morgan Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
04-29-83	25.	34	84	14.0	700	2
04-29-83	25.	34	96	14.0	700	3
05-11-83	22.	36	86	13.0	----	2
05-11-83	22.	33	88	13.0	----	3
07-07-83	86.	354	91	22.5	450	2
07-07-83	86.	359	85	22.5	450	3
07-21-83	17.	172	--	25.0	950	2
07-21-83	17.	94	--	25.0	950	3
08-04-83	92.	326	--	24.0	808	2
08-18-83	110.	312	--	24.5	975	3
08-18-83	110.	312	--	24.5	975	2
09-01-83	74.	155	--	22.5	1100	2
09-01-83	74.	175	--	22.5	1100	3
09-15-83	25.	17	--	15.5	1300	3

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-11-83	48.	221	99	13.5	---	2
05-11-83	48.	194	98	13.5	---	3
05-13-83	56.	297	86	10.0	---	1
05-14-83	56.	238	92	9.0	---	1
05-15-83	50.	230	92	10.1	---	1
05-16-83	50.	219	94	10.0	---	1
05-17-83	49.	312	86	9.5	---	1
05-18-83	50.	224	90	8.0	---	1
05-19-83	51.	400	90	9.5	---	1
05-20-83	49.	296	93	11.0	---	1
05-21-83	49.	361	89	10.5	---	1
05-22-83	50.	384	97	13.5	---	1
05-23-83	36.	228	100	15.0	---	1
05-24-83	45.	306	89	15.5	---	1
05-25-83	50.	231	88	16.0	---	1
05-26-83	46.	254	95	16.0	---	1
05-27-83	48.	217	94	17.0	---	1
05-28-83	46.	391	78	17.5	---	1
05-29-83	41.	203	82	17.0	---	1
05-30-83	59.	220	81	15.0	---	1
05-31-83	57.	219	92	12.0	---	1
06-01-83	59.	---	---	12.5	---	1
06-02-83	59.	296	74	13.5	---	1
06-03-83	41.	242	84	14.0	---	1
06-04-83	46.	218	86	10.0	---	1
06-05-83	50.	220	78	15.0	---	1
06-06-83	43.	295	95	11.5	---	1
06-07-83	51.	260	96	14.5	---	1
06-08-83	50.	288	97	15.0	---	1
06-09-83	46.	233	96	17.0	---	1

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-10-83	50.	207	95	18.0	---	1
06-11-83	50.	207	96	16.5	---	1
06-12-83	50.	214	90	18.5	---	1
06-13-83	50.	---	--	----	---	1
06-14-83	46.	212	94	14.5	---	1
06-15-83	46.	309	96	15.5	---	1
06-16-83	49.	249	97	17.0	---	1
06-17-83	57.	231	96	17.0	---	1
06-18-83	51.	235	89	18.0	---	1
06-19-83	51.	246	95	20.0	---	1
06-20-83	56.	218	92	19.5	---	1
06-21-83	51.	256	95	20.5	---	1
06-22-83	45.	282	90	20.5	---	1
06-23-83	94.	---	--	20.0	---	1
06-24-83	94.	---	--	19.0	---	1
06-25-83	72.	300	86	19.5	---	1
06-27-83	72.	274	85	16.0	---	1
06-28-83	50.	261	78	14.5	---	1
06-29-83	56.	367	85	16.0	---	1
06-30-83	56.	289	76	19.0	---	1
07-01-83	61.	241	82	19.5	---	1
07-02-83	72.	322	68	20.0	---	1
07-03-83	89.	340	67	19.0	---	1
07-04-83	87.	319	77	19.0	---	1
07-05-83	87.	316	78	19.0	---	1
07-06-83	152.	301	73	19.5	---	1
07-07-83	185.	287	79	20.5	---	1
07-07-83	230.	314	66	21.0	---	2
07-07-83	230.	294	77	21.0	---	3
07-08-83	209.	299	81	22.0	---	1
07-09-83	205.	289	79	21.5	---	1
07-10-83	205.	428	68	22.0	---	1
07-11-83	116.	423	76	20.0	---	1
07-12-83	120.	471	80	19.0	---	1
07-13-83	176.	393	87	20.0	---	1

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-14-83	165.	266	84	21.0	---	1
07-15-83	157.	245	84	21.0	---	1
07-16-83	140.	224	82	19.0	---	1
07-17-83	137.	188	91	20.0	---	1
07-18-83	134.	158	--	19.5	---	1
07-19-83	162.	221	92	22.0	---	1
07-20-83	158.	201	88	22.0	---	1
07-21-83	152.	236	--	22.0	---	1
07-21-83	163.	166	88	22.0	920	2
07-21-83	163.	132	--	22.0	920	3
07-22-83	162.	273	--	21.5	---	1
07-23-83	165.	378	--	21.5	---	1
07-24-83	152.	544	--	21.5	---	1
07-25-83	160.	630	--	21.0	---	1
07-26-83	160.	528	--	21.5	---	1
07-27-83	152.	344	--	22.5	---	1
07-28-83	120.	313	--	21.5	---	1
07-29-83	120.	350	91	19.0	---	1
07-30-83	116.	258	88	21.5	---	1
07-31-83	116.	332	--	20.0	---	1
08-01-83	120.	251	--	21.5	---	1
08-02-83	157.	198	--	21.0	---	1
08-03-83	152.	161	--	21.0	---	1
08-04-83	140.	199	--	22.0	---	1
08-04-83	139.	265	--	22.0	808	2
08-04-83	139.	251	--	22.0	808	3
08-05-83	138.	191	78	22.5	---	1
08-06-83	113.	315	86	28.0	---	1
08-07-83	110.	393	90	23.0	---	1
08-08-83	110.	519	88	22.5	---	1
08-09-83	110.	304	90	22.5	---	1
08-10-83	104.	225	83	21.5	---	1
08-11-83	90.	187	84	21.5	---	1
08-12-83	126.	152	86	22.0	---	1
08-13-83	126.	126	90	22.0	---	1

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-14-83	123.	134	86	21.0	----	1
08-15-83	130.	199	86	21.0	----	1
08-16-83	126.	233	89	22.0	----	1
08-17-83	126.	307	91	22.5	----	1
08-18-83	126.	195	85	22.0	----	1
08-18-83	130.	164	--	22.5	1025	2
08-19-83	126.	164	--	22.0	----	1
08-20-83	126.	110	--	22.5	----	1
08-22-83	130.	455	88	21.5	----	1
08-23-83	116.	230	86	20.0	----	1
08-24-83	116.	202	80	20.0	----	1
08-25-83	106.	187	76	22.0	----	1
08-26-83	106.	151	82	----	----	1
08-27-83	106.	152	82	21.0	----	1
08-28-83	106.	135	73	20.5	----	1
08-29-83	106.	157	72	21.0	----	1
08-30-83	123.	206	--	----	----	1
08-31-83	127.	170	83	----	----	1
09-01-83	130.	159	67	----	----	1
09-01-83	137.	101	72	20.5	1350	2
09-02-83	131.	136	86	21.0	----	1
09-06-83	89.	73	74	17.5	----	1
09-07-83	74.	---	--	17.5	----	1
09-08-83	77.	143	78	20.0	----	1
09-09-83	77.	124	71	19.5	----	1
09-10-83	77.	112	81	20.0	----	1
09-11-83	77.	95	81	19.5	----	1
09-12-83	77.	87	67	16.0	----	1
09-13-83	74.	76	77	15.0	----	1
09-14-83	74.	73	87	15.5	----	1
09-15-83	74.	156	--	16.0	----	1
09-15-83	70.	74	--	15.0	1400	2
09-15-83	70.	65	--	15.0	1400	3
09-16-83	74.	95	76	15.0	----	1
09-17-83	72.	99	86	16.0	----	1

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-18-83	74.	143	78	15.5	----	1
09-19-83	74.	101	78	----	----	1
09-20-83	74.	66	91	10.0	----	1
09-21-83	74.	71	82	9.0	----	1
09-22-83	74.	---	--	10.0	----	1
09-23-83	74.	70	70	10.5	----	1
09-24-83	74.	55	77	14.5	----	1
09-25-83	74.	63	82	12.0	----	1
09-26-83	63.	51	92	15.0	----	1
09-27-83	57.	65	75	15.0	----	1
09-28-83	57.	65	85	16.0	----	1
09-29-83	57.	67	77	15.5	----	1
09-30-83	57.	62	76	14.0	----	1
10-01-83	57.	68	78	15.0	----	1
10-02-83	57.	60	83	13.5	----	1
10-03-83	57.	63	84	13.0	----	1
10-04-83	57.	48	82	13.0	----	1
10-05-83	57.	55	87	12.0	----	1
10-06-83	57.	94	92	13.0	----	1
10-07-83	49.	70	78	13.5	----	1
10-08-83	49.	57	80	13.0	----	1
10-09-83	49.	45	90	12.0	----	1
10-10-83	49.	52	68	12.5	----	1
10-11-83	49.	44	91	11.0	----	1
10-12-83	49.	34	--	10.0	----	1
10-13-83	49.	39	--	9.0	----	1
10-14-83	49.	34	--	10.0	----	1
10-15-83	46.	50	--	9.0	----	1
10-16-83	46.	56	--	9.5	----	1
10-17-83	46.	33	--	9.0	----	1
10-18-83	46.	40	--	11.0	----	1
10-19-83	46.	37	--	11.0	----	1
10-24-83	46.	45	--	10.5	----	1
10-25-83	46.	21	--	6.0	----	1
10-25-83	43.	19	--	12.5	1400	2

Table 11.-Data collected at site 1, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
10-25-83	43.	15	74	12.5	1400	3
10-26-83	46.	29	--	7.0	----	1
10-27-83	46.	46	--	8.0	----	1
10-28-83	46.	83	--	9.0	----	1
10-29-83	46.	85	77	7.5	----	1
10-30-83	46.	61	--	8.0	----	1
10-31-83	46.	44	--	8.5	----	1

Table 12.-Data collected at site 2, Upper Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample;
3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-11-83	43.	174	94	10.0	---	2
05-13-83	44.	354	82	9.0	---	1
05-14-83	45.	239	79	15.0	---	1
05-15-83	44.	---	--	9.0	---	1
05-16-83	44.	---	--	9.0	---	1
05-17-83	44.	236	80	8.5	---	1
05-18-83	41.	325	84	16.0	---	1
05-19-83	44.	332	80	13.0	---	1
05-20-83	41.	---	--	15.5	---	1
05-21-83	43.	473	82	17.0	---	1
05-22-83	45.	484	67	16.0	---	1
05-23-83	58.	676	70	20.5	---	1
05-24-83	53.	288	82	17.5	---	1
05-25-83	56.	311	68	22.0	---	1
05-26-83	54.	843	83	22.5	---	1
05-27-83	52.	305	89	23.0	---	1
05-28-83	55.	289	88	23.5	---	1
05-29-83	50.	293	87	20.0	---	1
05-30-83	69.	237	72	16.5	---	1
05-31-83	68.	237	90	14.0	---	1
06-01-83	74.	234	88	16.5	---	1
06-02-83	70.	263	93	16.5	---	1
06-03-83	53.	134	85	17.0	---	1
06-04-83	52.	196	68	18.0	---	1
06-08-83	63.	292	95	22.0	---	1
06-09-83	56.	248	98	20.5	---	1
06-10-83	61.	257	93	21.0	---	1
06-11-83	61.	241	91	21.0	---	1
06-12-83	61.	228	94	22.0	---	1
06-13-83	60.	202	95	17.5	---	1

Table 12.-Data collected at site 2, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-14-83	56.	227	96	17.0	---	1
06-15-83	60.	298	96	24.0	---	1
06-16-83	55.	249	94	25.0	---	1
06-17-83	65.	235	96	24.0	---	1
06-18-83	61.	240	95	25.5	---	1
06-19-83	61.	239	90	22.0	---	1
06-20-83	60.	209	95	25.0	---	1
06-21-83	60.	252	95	27.0	---	1
06-22-83	64.	233	96	23.0	---	1
06-23-83	113.	351	89	22.0	---	1
06-24-83	105.	314	90	23.0	---	1
06-25-83	89.	319	92	23.0	---	1
06-26-83	83.	286	88	20.5	---	1
06-27-83	86.	296	89	18.0	---	1
06-28-83	73.	301	88	18.4	---	1
06-30-83	68.	270	88	21.0	---	1
07-01-83	77.	262	88	25.0	---	1
07-02-83	113.	357	77	23.0	---	1
07-03-83	95.	307	86	20.5	---	1
07-04-83	92.	295	89	23.0	---	1
07-05-83	92.	286	83	22.0	---	1
07-06-83	166.	306	79	24.0	---	1
07-07-83	169.	332	66	24.0	535	2
07-08-83	172.	324	--	27.0	---	1
07-09-83	174.	438	--	26.5	---	1
07-10-83	174.	354	80	25.0	---	1
07-11-83	76.	374	88	21.5	---	1
07-12-83	154.	489	92	24.0	---	1
07-14-83	162.	290	78	27.0	---	1
07-15-83	135.	278	89	26.5	---	1
07-16-83	121.	352	--	25.0	---	1
07-18-83	121.	374	--	21.5	---	1
07-19-83	152.	407	--	28.0	---	1
07-20-83	144.	455	--	28.0	---	1
07-21-83	148.	415	--	29.5	---	1

Table 12.-Data collected at site 2, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-21-83	156.	314	--	25.0	980	3
07-21-83	156.	373	--	25.0	980	2
07-22-83	148.	384	--	27.0	----	1
07-23-83	142.	546	--	25.0	----	1
07-25-83	121.	598	88	27.0	----	1
07-27-83	106.	438	--	24.5	----	1
07-28-83	152.	381	--	25.0	----	1
07-29-83	121.	421	--	26.0	----	1
07-30-83	115.	397	--	24.0	----	1
08-01-83	122.	360	--	25.0	----	1
08-02-83	144.	258	76	27.0	----	1
08-04-83	145.	341	--	24.0	1000	3
08-04-83	145.	271	--	24.0	1000	2
08-06-83	86.	280	75	25.0	----	1
08-07-83	108.	542	88	28.5	----	1
08-08-83	95.	464	87	28.5	----	1
08-09-83	97.	393	81	25.0	----	1
08-10-83	106.	264	79	28.5	----	1
08-12-83	128.	285	--	27.5	----	1
08-13-83	124.	220	--	26.5	----	1
08-15-83	117.	250	--	24.5	----	1
08-16-83	133.	348	--	27.0	----	1
08-17-83	124.	331	--	28.5	----	1
08-18-83	127.	251	--	27.0	----	1
08-18-83	138.	221	71	25.0	1000	2
08-19-83	128.	254	73	26.5	----	1
08-20-83	129.	220	68	27.0	----	1
08-22-83	117.	337	80	26.0	----	1
08-23-83	113.	274	82	25.5	----	1
08-24-83	113.	255	76	23.0	----	1
08-25-83	100.	249	71	24.0	----	1
08-27-83	105.	228	62	26.0	----	1
08-30-83	128.	190	74	25.0	----	1
08-31-83	130.	175	77	25.0	----	1
09-01-83	135.	135	62	23.0	1250	2

Table 12.-Data collected at site 2, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-02-83	122.	190	69	26.5	----	1
09-04-83	122.	146	74	23.5	----	1
09-05-83	97.	238	64	23.0	----	1
09-06-83	98.	148	78	19.5	----	1
09-08-83	89.	124	71	25.0	----	1
09-09-83	87.	126	78	25.0	----	1
09-10-83	83.	138	72	22.5	----	1
09-12-83	90.	---	--	18.5	----	1
09-14-83	94.	---	--	19.0	----	1
09-15-83	87.	125	64	18.5	1200	2
09-15-83	94.	150	80	20.0	----	1
09-16-83	92.	98	60	22.0	----	1
09-18-83	94.	120	67	17.0	----	1
09-19-83	92.	61	59	17.5	----	1
09-21-83	94.	49	77	14.0	----	1
09-22-83	86.	31	72	15.0	----	1
09-23-83	87.	33	65	17.0	----	1
10-01-83	76.	130	86	17.0	----	1
10-03-83	84.	63	64	17.0	----	1
10-05-83	64.	392	64	14.0	----	1
10-07-83	56.	92	69	14.5	----	1
10-10-83	69.	34	78	14.0	----	1
10-11-83	55.	16	80	12.0	----	1
10-14-83	53.	113	--	10.0	----	1
10-17-83	36.	127	--	10.0	----	1
10-21-83	37.	25	--	13.0	----	1
10-24-83	38.	33	--	10.0	----	1
10-25-83	41.	24	--	7.5	----	1
10-25-83	40.	12	--	7.5	1400	2
10-25-83	40.	8	--	7.5	1400	3
10-26-83	40.	33	--	7.5	----	1
10-27-83	43.	19	--	14.0	----	1

Table 13.-Data collected at site 3, Upper Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-12-83	13.	140	86	12.5	---	2
05-12-83	13.	118	95	12.5	---	3
05-13-83	16.	153	76	9.5	---	1
05-14-83	17.	195	75	15.5	---	1
05-15-83	17.	172	92	9.5	---	1
05-16-83	17.	207	82	8.5	---	1
05-17-83	17.	208	54	8.0	---	1
05-18-83	17.	296	88	17.5	---	1
05-19-83	18.	238	64	17.5	---	1
05-20-83	17.	237	80	15.5	---	1
05-21-83	17.	286	74	16.5	---	1
05-22-83	17.	348	80	15.5	---	1
05-23-83	17.	280	82	24.0	---	1
05-24-83	17.	285	92	16.0	---	1
05-25-83	17.	237	70	22.5	---	1
05-26-83	18.	328	80	25.5	---	1
05-27-83	17.	318	90	23.5	---	1
05-28-83	16.	168	92	22.5	---	1
05-29-83	20.	108	95	20.0	---	1
05-30-83	16.	135	98	16.5	---	1
05-31-83	18.	134	99	14.5	---	1
06-01-83	17.	128	99	15.5	---	1
06-02-83	9.4	182	87	16.5	---	1
06-03-83	9.3	178	86	17.0	---	1
06-04-83	15.	129	77	18.0	---	1
06-05-83	10.	186	94	15.5	---	1
06-08-83	10.	218	97	17.0	---	1
06-09-83	10.	150	96	20.0	---	1
06-10-83	10.	144	96	21.0	---	1
06-11-83	16.	174	76	21.0	---	1

Table 13.-Data collected at site 3, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-12-83	17.	190	85	22.5	---	1
06-13-83	17.	173	92	17.0	---	1
06-14-83	22.	174	91	17.0	---	1
06-15-83	8.4	231	91	26.0	---	1
06-16-83	8.4	177	96	25.0	---	1
06-17-83	9.2	214	97	24.0	---	1
06-18-83	16.	205	93	25.5	---	1
06-19-83	8.4	198	96	22.0	---	1
06-20-83	7.2	161	99	27.0	---	1
06-21-83	15.	182	97	29.0	---	1
06-22-83	15.	165	98	22.0	---	1
06-23-83	12.	300	98	22.0	---	1
06-24-83	19.	273	75	24.0	---	1
06-25-83	19.	288	90	23.0	---	1
06-26-83	18.	287	79	21.0	---	1
06-27-83	18.	285	86	23.0	---	1
06-28-83	16.	258	93	19.0	---	1
06-30-83	16.	251	86	20.0	---	1
07-01-83	15.	234	84	26.0	---	1
07-02-83	23.	273	83	25.5	---	1
07-03-83	17.	374	84	20.0	---	1
07-04-83	16.	337	87	24.0	---	1
07-05-83	15.	231	97	22.0	---	1
07-06-83	18.	813	85	24.0	---	1
07-07-83	17.	329	86	27.0	---	2
07-07-83	17.	345	87	27.0	---	3
07-08-83	20.	396	89	27.5	---	1
07-09-83	19.	349	90	22.0	---	1
07-11-83	16.	271	92	21.5	---	1
07-12-83	17.	394	98	24.0	---	1
07-13-83	20.	333	91	24.5	---	1
07-14-83	19.	320	93	27.0	---	1
07-15-83	15.	184	94	27.0	---	1
07-16-83	11.	334	--	25.5	---	1
07-18-83	16.	355	--	26.0	---	1

Table 13.-Data collected at site 3, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-19-83	21.	415	--	27.5	---	1
07-20-83	24.	425	--	28.5	---	1
07-21-83	25.	295	85	26.0	980	2
07-21-83	25.	413	--	26.0	980	3
07-21-83	23.	352	--	28.0	---	1
07-22-83	22.	346	--	28.0	---	1
07-23-83	17.	389	--	25.0	---	1
07-25-83	26.	551	--	28.5	---	1
07-26-83	18.	520	--	----	---	1
07-27-83	23.	445	--	28.5	---	1
07-28-83	23.	443	--	25.5	---	1
07-29-93	23.	459	--	----	---	1
07-30-83	25.	399	--	24.0	---	1
08-01-83	24.	315	--	26.5	---	1
08-02-83	24.	350	86	27.0	---	1
08-04-83	26.	316	--	24.0	925	2
08-04-83	26.	404	--	24.0	925	3
08-06-83	24.	376	86	29.0	---	1
08-07-83	26.	387	82	29.5	---	1
08-08-83	23.	441	84	30.0	---	1
08-09-83	23.	372	90	29.5	---	1
08-10-83	21.	---	--	29.5	---	1
08-11-83	18.	281	86	28.5	---	1
08-12-83	18.	293	92	28.0	---	1
08-13-83	19.	271	89	27.0	---	1
08-15-83	16.	212	94	28.0	---	1
08-16-83	18.	278	91	27.5	---	1
08-17-83	16.	321	91	29.5	---	1
08-18-83	17.	277	94	29.5	---	1
08-19-83	18.	238	88	28.0	---	1
08-20-83	18.	213	91	28.0	---	1
08-22-83	15.	246	96	26.5	---	1
08-23-83	16.	250	98	25.5	---	1
08-24-83	16.	232	93	27.0	---	1
08-25-83	19.	219	81	27.5	---	1

Table 13.-Data collected at site 3, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-26-83	17.	172	90	27.0	----	1
08-27-83	17.	197	92	21.0	----	1
08-29-83	18.	220	74	26.0	----	1
08-30-83	18.	247	84	25.0	----	1
08-31-83	16.	234	70	25.5	----	1
09-01-83	17.	120	--	22.0	1000	3
09-01-83	17.	155	90	22.0	1000	2
09-02-83	16.	238	85	27.0	----	1
09-04-83	19.	224	80	24.0	----	1
09-05-83	16.	178	82	23.5	----	1
09-06-83	18.	208	82	23.0	----	1
09-08-83	16.	151	71	24.5	----	1
09-12-83	13.	---	--	20.0	----	1
09-14-83	14.	40	61	19.0	----	1
09-15-83	15.	58	64	16.0	1200	3
09-15-83	15.	121	51	16.0	1200	2
09-15-83	15.	168	77	20.0	----	1
09-16-83	15.	69	71	22.0	----	1
09-18-83	13.	76	70	23.0	----	1
09-19-83	13.	56	77	28.5	----	1
09-21-83	13.	23	66	14.5	----	1
09-22-83	15.	21	75	15.0	----	1
09-24-83	18.	---	--	19.5	----	1
09-25-83	16.	57	52	19.0	----	1
09-26-83	15.	46	63	19.0	----	1
09-27-83	16.	---	--	21.0	----	1
09-28-83	14.	32	60	20.5	----	1
09-30-83	14.	58	61	17.5	----	1
10-01-83	12.	112	79	17.0	----	1
10-03-83	13.	80	83	17.0	----	1
10-05-83	14.	151	77	13.0	----	1
10-07-83	13.	71	54	14.5	----	1
10-08-83	15.	165	95	15.0	----	1
10-10-83	15.	36	62	14.0	----	1
10-11-83	17.	18	83	12.0	----	1

Table 13.-Data collected at site 3, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
10-14-83	17.	66	--	10.5	----	1
10-17-83	11.	71	--	10.0	----	1
10-21-83	18.	23	--	13.0	----	1
10-24-83	18.	17	--	9.5	----	1
10-25-83	19.	14	--	6.0	----	1
10-25-83	9.1	10	--	11.0	1400	2
10-25-83	9.1	14	92	11.0	1400	3
10-26-83	19.	15	--	7.0	----	1
10-27-83	20.	14	--	14.0	----	1

Table 14.-Data collected at site 4, Upper Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample;
3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-12-83	20.	142	92	15.0	---	2
05-12-83	20.	138	96	15.0	---	3
05-13-83	23.	204	---	9.5	---	1
05-14-83	23.	201	76	15.5	---	1
05-15-83	22.	189	80	9.5	---	1
05-16-83	22.	212	64	9.0	---	1
05-17-83	22.	268	73	8.5	---	1
05-18-83	22.	226	73	16.5	---	1
05-19-83	22.	226	84	11.0	---	1
05-20-83	22.	224	86	16.0	---	1
05-21-83	22.	297	100	17.0	---	1
05-22-83	22.	267	98	16.0	---	1
05-23-83	19.	253	84	15.5	---	1
05-24-83	21.	215	96	16.5	---	1
05-25-83	22.	245	73	23.0	---	1
05-26-83	21.	281	90	24.0	---	1
05-27-83	22.	156	86	23.0	---	1
05-28-83	21.	139	91	22.0	---	1
05-29-83	20.	253	89	22.0	---	1
05-30-83	24.	223	95	16.0	---	1
05-31-83	23.	185	99	13.5	---	1
06-01-83	24.	215	93	15.5	---	1
06-02-83	24.	272	68	17.0	---	1
06-03-83	20.	192	85	17.5	---	1
06-04-83	21.	197	88	18.5	---	1
06-05-83	22.	185	90	15.0	---	1
06-08-83	22.	273	92	18.0	---	1
06-09-83	21.	246	94	21.0	---	1
06-10-83	22.	258	96	20.0	---	1
06-11-83	22.	254	93	21.0	---	1

Table 14.-Data collected at site 4, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-12-83	22.	233	82	22.0	---	1
06-13-83	22.	202	87	22.5	---	1
06-14-83	21.	195	95	17.5	---	1
06-15-83	21.	278	90	22.5	---	1
06-16-83	22.	252	94	25.0	---	1
06-17-83	23.	264	94	22.0	---	1
06-18-83	22.	253	94	20.5	---	1
06-20-83	23.	221	96	28.0	---	1
06-21-83	22.	228	95	29.0	---	1
06-22-83	21.	192	97	22.5	---	1
06-23-83	30.	356	93	25.5	---	1
06-24-83	30.	---	--	24.0	---	1
06-25-83	26.	285	88	20.0	---	1
06-27-83	26.	240	91	18.0	---	1
06-28-83	22.	321	94	25.0	---	1
06-30-83	23.	242	91	21.0	---	1
07-01-83	24.	274	96	27.0	---	1
07-02-83	26.	385	90	25.0	---	1
07-03-83	29.	362	81	20.0	---	1
07-04-83	29.	279	91	23.0	---	1
07-05-83	29.	271	96	24.0	---	1
07-06-83	42.	488	85	23.0	---	1
07-07-83	54.	468	75	25.5	530	2
07-07-83	54.	503	75	25.5	530	3
07-08-83	53.	361	87	28.0	---	1
07-11-83	35.	331	90	21.5	---	1
07-12-83	35.	485	88	24.0	---	1
07-13-83	46.	501	79	26.5	---	1
07-13-83	46.	354	74	26.5	---	1
07-14-83	44.	---	--	27.0	---	1
07-16-83	39.	379	--	25.5	---	1
07-18-83	38.	489	84	27.0	---	1
07-19-83	44.	358	87	28.5	---	1
07-20-83	43.	316	--	29.0	---	1
07-21-83	40.	387	--	26.0	980	2

Table 14.-Data collected at site 4, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-21-83	40.	352	--	26.0	980	3
07-22-83	44.	352	79	28.0	----	1
07-23-83	44.	502	83	25.5	----	1
07-25-83	43.	583	90	27.5	----	1
07-26-83	43.	456	83	26.0	----	1
07-26-83	43.	457	89	26.0	----	1
07-27-83	42.	396	90	27.0	----	1
07-29-83	35.	506	--	27.0	----	1
08-01-83	35.	303	--	27.0	----	1
08-02-83	43.	404	--	27.5	----	1
08-04-83	42.	728	--	24.0	1100	3
08-05-83	49.	247	--	27.5	----	1
08-06-83	34.	285	--	28.5	----	1
08-07-83	34.	438	93	28.5	----	1
08-08-83	34.	495	--	29.0	----	1
08-09-83	34.	385	--	28.0	----	1
08-11-83	30.	366	82	27.0	----	1
08-12-83	37.	387	76	26.0	----	1
08-13-83	37.	257	83	27.0	----	1
08-15-83	37.	329	85	27.0	----	1
08-16-83	37.	347	84	27.0	----	1
08-17-83	37.	388	86	28.0	----	1
08-18-83	44.	311	--	24.5	937	3
08-18-83	37.	322	86	----	----	1
08-19-83	37.	302	80	27.5	----	1
08-20-83	37.	258	79	27.0	----	1
08-22-83	37.	274	83	27.0	----	1
08-23-83	35.	337	75	25.0	----	1
08-24-83	35.	228	87	26.0	----	1
08-25-83	33.	222	91	27.0	----	1
08-26-83	36.	206	87	23.5	----	1
08-27-83	33.	255	81	26.5	----	1
08-29-83	33.	255	81	26.5	----	1
08-30-83	36.	206	79	25.0	----	1
08-31-83	37.	218	78	24.5	----	1

Table 14.-Data collected at site 4, Upper Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-01-83	40.	191	--	----	----	1
09-02-83	38.	249	79	26.0	----	1
09-06-83	29.	217	73	22.5	----	1
09-08-83	27.	212	67	25.0	----	1
09-09-83	27.	193	78	26.0	----	1
09-10-83	27.	188	69	23.0	----	1
09-12-83	27.	141	69	20.5	----	1
09-14-83	27.	95	78	19.0	----	1
09-15-83	27.	121	--	17.0	1350	3
09-15-83	27.	128	81	17.0	1350	2
09-15-83	27.	68	76	20.0	----	1
09-16-83	27.	47	69	21.5	----	1
09-18-83	26.	50	66	17.0	----	1
09-19-83	26.	28	80	19.5	----	1
09-21-83	26.	25	61	14.0	----	1
09-22-83	26.	27	54	14.5	----	1
09-23-83	26.	---	--	17.5	----	1
09-24-83	26.	---	--	20.0	----	1
09-25-83	26.	---	--	20.5	----	1
09-26-83	24.	---	--	21.0	----	1
09-27-83	23.	---	--	18.0	----	1
09-28-83	23.	---	--	21.0	----	1
09-30-83	23.	38	62	17.0	----	1
10-03-83	23.	63	59	16.5	----	1
10-05-83	23.	108	69	13.0	----	1
10-08-83	22.	25	53	15.5	----	1
10-10-83	22.	11	94	----	----	1
10-11-83	22.	20	73	11.0	----	1
10-14-83	22.	60	--	11.0	----	1
10-17-83	21.	30	--	9.0	----	1
10-21-83	21.	16	--	10.0	----	1
10-24-83	21.	22	--	11.0	----	1
10-25-83	21.	12	--	5.0	----	1
10-25-83	17.	10	--	11.0	1370	2
10-25-83	17.	6	--	11.0	1370	3
10-26-83	21.	13	--	7.5	----	1
10-27-83	21.	7	--	12.0	----	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-11-83	78.	311	85	13.0	---	2
05-11-83	78.	303	85	13.0	---	3
05-14-83	71.	353	72	11.0	---	1
05-15-83	70.	314	84	10.5	---	1
05-16-83	65.	333	66	11.0	---	1
05-17-83	65.	310	78	10.5	---	1
05-18-83	71.	299	83	10.0	---	1
05-19-83	82.	600	77	11.5	---	1
05-20-83	83.	447	70	11.5	---	1
05-21-83	84.	517	75	12.0	---	1
05-22-83	93.	483	80	16.0	---	1
05-23-83	83.	311	82	17.0	---	1
05-24-83	71.	153	72	18.0	---	1
05-25-83	83.	317	79	17.5	---	1
05-26-83	77.	304	75	18.5	---	1
05-27-83	81.	306	80	19.0	---	1
05-28-83	140.	279	79	20.0	---	1
05-29-83	77.	283	80	19.5	---	1
05-30-83	75.	294	78	15.0	---	1
05-31-83	77.	260	85	13.0	---	1
06-01-83	77.	269	80	13.0	---	1
06-02-83	83.	267	87	16.0	---	1
06-03-83	83.	218	86	16.5	---	1
06-04-83	83.	245	83	18.0	---	1
06-05-83	83.	238	81	15.5	---	1
06-06-83	86.	278	88	13.5	---	1
06-07-83	83.	283	84	19.5	---	1
06-08-83	83.	277	88	17.0	---	1
06-09-83	83.	262	85	18.0	---	1
06-10-83	81.	276	82	21.0	---	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-11-83	81.	274	82	20.0	---	1
06-12-83	81.	242	84	20.0	---	1
06-13-83	81.	244	82	17.0	---	1
06-14-83	81.	281	88	17.0	---	1
06-15-83	83.	336	85	17.5	---	1
06-16-83	83.	282	87	18.0	---	1
06-17-83	78.	256	89	19.5	---	1
06-18-83	73.	258	86	20.5	---	1
06-19-83	71.	249	89	----	---	1
06-20-83	73.	332	84	----	---	1
06-21-83	71.	283	89	----	---	1
06-22-83	71.	209	84	16.5	---	1
06-22-83	71.	272	80	16.5	---	1
06-23-83	71.	272	78	----	---	1
06-24-83	73.	253	86	20.0	---	1
06-25-83	69.	268	85	21.0	---	1
06-26-83	71.	199	86	19.5	---	1
06-28-83	73.	274	74	15.0	---	1
06-29-83	76.	378	83	17.5	---	1
06-30-83	78.	325	73	20.0	---	1
07-01-83	73.	279	79	21.5	---	1
07-02-83	71.	233	79	20.0	---	1
07-03-83	71.	279	82	20.0	---	1
07-04-83	65.	295	86	18.0	---	1
07-05-83	64.	268	84	19.0	---	1
07-06-83	78.	258	83	20.0	---	1
07-07-83	86.	304	75	21.0	---	1
07-08-83	83.	342	75	24.0	---	1
07-08-83	83.	287	81	22.5	590	3
07-08-83	83.	315	77	22.5	590	2
07-09-83	131.	412	52	22.5	---	1
07-10-83	148.	367	77	23.0	---	1
07-11-83	164.	466	77	20.0	---	1
07-12-83	172.	583	71	20.5	---	1
07-13-83	172.	503	71	24.5	---	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-14-83	156.	305	80	22.0	----	1
07-15-83	164.	253	86	21.5	----	1
07-16-83	172.	325	69	21.0	----	1
07-17-83	164.	203	79	23.0	----	1
07-18-83	164.	221	78	20.5	----	1
07-19-83	164.	295	--	23.0	----	1
07-20-83	164.	224	92	22.5	----	1
07-21-83	156.	191	89	23.0	----	1
07-22-83	161.	224	--	22.0	1000	3
07-22-83	161.	208	87	22.0	1000	2
07-22-83	164.	218	81	22.5	----	1
07-23-83	172.	435	--	22.5	----	1
07-24-83	172.	664	--	22.5	----	1
07-25-83	164.	680	--	22.5	----	1
07-26-83	164.	563	--	22.0	----	1
07-27-83	164.	515	--	23.0	----	1
07-28-83	148.	396	--	22.0	----	1
07-29-83	156.	414	--	22.0	----	1
07-30-83	148.	277	--	22.0	----	1
07-31-83	148.	282	87	21.0	----	1
08-01-83	148.	223	88	23.0	----	1
08-02-83	148.	315	--	22.0	----	1
08-03-83	140.	236	--	22.0	----	1
08-04-83	140.	278	--	23.5	----	1
08-05-83	133.	233	--	22.5	1050	3
08-05-83	133.	260	--	22.5	1050	2
08-05-83	140.	223	--	23.0	----	1
08-06-83	140.	253	--	24.0	----	1
08-07-83	148.	423	--	25.0	----	1
08-08-83	156.	580	90	23.5	----	1
08-09-83	148.	350	--	23.0	----	1
08-10-83	148.	256	89	22.0	----	1
08-11-83	140.	182	86	22.0	----	1
08-12-83	140.	160	91	22.5	----	1
08-13-83	137.	146	--	23.0	----	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-14-83	140.	190	84	21.5	----	1
08-15-83	140.	249	--	24.0	----	1
08-16-83	140.	295	--	23.5	----	1
08-17-83	148.	362	--	23.5	----	1
08-18-83	140.	200	--	23.0	----	1
08-19-83	130.	196	--	22.0	1150	3
08-19-83	130.	187	--	22.0	1150	2
08-19-83	132.	197	89	22.5	----	1
08-20-83	128.	215	80	22.0	----	1
08-21-83	128.	278	86	24.0	----	1
08-22-83	137.	365	90	22.0	----	1
08-23-83	140.	363	89	21.0	----	1
08-24-83	125.	330	87	22.5	----	1
08-25-83	125.	188	88	22.0	----	1
08-26-83	122.	180	83	22.5	----	1
08-27-83	122.	176	90	22.0	----	1
08-28-83	122.	134	91	22.5	----	1
08-29-83	122.	170	86	21.5	----	1
08-30-83	119.	127	90	20.5	----	1
08-31-83	119.	156	92	22.0	----	1
09-01-83	110.	119	91	21.5	----	1
09-02-83	109.	250	--	21.0	1350	3
09-02-83	109.	276	--	21.0	1350	2
09-02-83	119.	234	89	23.0	----	1
09-03-83	116.	173	81	22.5	----	1
09-04-83	113.	124	82	21.5	----	1
09-05-83	110.	130	83	20.5	----	1
09-06-83	110.	118	77	23.0	----	1
09-07-83	116.	155	80	23.5	----	1
09-08-83	116.	183	84	19.5	----	1
09-09-83	119.	132	84	20.0	----	1
09-10-83	116.	116	81	20.0	----	1
09-11-83	110.	91	76	23.0	----	1
09-12-83	116.	107	76	16.5	----	1
09-13-83	116.	---	--	15.0	----	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-14-83	119.	118	--	16.0	----	1
09-15-83	119.	108	--	15.0	----	1
09-16-83	113.	163	--	15.0	1500	3
09-16-83	113.	156	74	15.0	1500	2
09-16-83	119.	126	--	15.0	----	1
09-18-83	125.	140	85	17.5	----	1
09-19-83	107.	103	76	19.0	----	1
09-20-83	96.	100	78	12.0	----	1
09-21-83	86.	102	79	11.0	----	1
09-22-83	83.	85	79	12.0	----	1
09-23-83	83.	76	75	14.5	----	1
09-24-83	83.	67	80	16.0	----	1
09-25-83	83.	61	76	21.5	----	1
09-26-83	83.	58	76	16.5	----	1
09-27-83	83.	84	73	17.5	----	1
09-28-83	83.	57	78	18.0	----	1
09-29-83	78.	72	76	15.5	----	1
09-30-83	78.	75	70	16.0	----	1
10-01-83	71.	63	76	17.0	----	1
10-02-83	71.	66	76	14.5	----	1
10-03-83	83.	71	76	14.5	----	1
10-04-83	59.	51	79	13.0	----	1
10-05-83	59.	62	71	12.0	----	1
10-06-83	59.	112	82	13.0	----	1
10-07-83	59.	82	81	13.5	----	1
10-08-83	59.	54	86	12.5	----	1
10-09-83	59.	45	76	13.5	----	1
10-10-83	59.	52	90	14.0	----	1
10-11-83	59.	64	92	19.0	----	1
10-12-83	57.	45	74	11.5	----	1
10-13-83	57.	40	--	16.0	----	1
10-14-83	49.	38	--	15.0	----	1
10-15-83	49.	34	--	16.5	----	1
10-16-83	49.	30	--	14.0	----	1
10-17-83	49.	35	--	17.0	----	1

Table 15.-Data collected at site 1, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
10-18-83	49.	42	--	16.0	----	1
10-19-83	49.	39	--	12.5	----	1
10-20-83	53.	30	--	14.0	----	1
10-21-83	51.	33	--	10.5	----	1
10-22-83	57.	21	94	15.5	----	1
10-23-83	55.	40	--	16.0	----	1
10-24-83	55.	28	--	12.0	----	1
10-25-83	53.	24	--	14.5	----	1
10-26-83	47.	42	--	8.0	1450	2
10-26-83	47.	22	--	8.0	1450	3
10-26-83	53.	30	--	10.5	----	1
10-27-83	53.	41	--	9.0	----	1
10-28-83	53.	82	86	10.5	----	1
10-29-83	55.	84	78	8.5	----	1
10-30-83	55.	50	94	9.5	----	1
10-31-83	53.	40	--	10.0	----	1

Table 16.-Data collected at site 2, Lower Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample;
3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-11-83	77.	252	97	12.0	---	2
05-11-83	77.	264	86	12.0	---	3
05-13-83	68.	306	82	10.5	---	1
05-14-83	71.	312	83	10.0	---	1
05-15-83	70.	305	82	10.5	---	1
05-16-83	64.	291	82	11.5	---	1
05-17-83	67.	348	83	10.0	---	1
05-18-83	67.	284	82	10.0	---	1
05-19-83	72.	465	82	11.0	---	1
05-20-83	81.	373	82	11.5	---	1
05-22-83	81.	460	87	----	---	1
05-23-83	78.	383	86	16.0	---	1
05-24-83	76.	394	82	17.5	---	1
05-25-83	75.	318	83	18.5	---	1
05-26-83	70.	355	83	18.5	---	1
05-27-83	72.	350	80	18.5	---	1
05-28-83	70.	332	84	19.5	---	1
05-29-83	70.	303	82	18.5	---	1
05-30-83	70.	291	78	15.0	---	1
05-31-83	70.	284	82	13.0	---	1
06-01-83	72.	276	81	13.0	---	1
06-02-83	74.	286	85	15.0	---	1
06-03-83	76.	364	87	16.5	---	1
06-04-83	76.	358	82	17.5	---	1
06-05-83	76.	284	82	15.5	---	1
06-06-83	78.	372	92	13.5	---	1
06-07-83	74.	332	83	20.0	---	1
06-08-83	76.	352	87	16.0	---	1
06-09-83	72.	332	84	18.0	---	1
06-10-83	72.	331	84	21.0	---	1

Table 16.-Data collected at site 2, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-11-83	72.	305	83	19.5	----	1
06-12-83	72.	350	79	19.0	----	1
06-13-83	72.	277	86	16.5	----	1
06-14-83	74.	295	86	16.0	----	1
06-15-83	74.	330	84	17.0	----	1
06-16-83	74.	305	86	18.0	----	1
06-17-83	72.	293	86	18.0	----	1
06-18-83	73.	280	86	20.5	----	1
06-19-83	68.	291	87	----	----	1
06-20-83	66.	346	83	----	----	1
06-21-83	65.	302	82	----	----	1
06-22-83	67.	301	82	----	----	1
06-23-83	72.	188	88	----	----	1
06-24-83	69.	305	86	20.0	----	1
06-25-83	68.	304	80	20.0	----	1
06-26-83	68.	268	87	19.0	----	1
06-27-83	68.	266	85	16.5	----	1
06-28-83	70.	277	84	15.0	----	1
06-29-83	71.	362	83	17.0	----	1
06-30-83	71.	318	82	20.0	----	1
07-01-83	68.	265	88	21.0	----	1
07-02-83	68.	267	87	19.5	----	1
07-03-83	66.	254	88	19.0	----	1
07-04-83	64.	291	91	17.5	----	1
07-05-83	63.	287	88	16.0	----	1
07-06-83	66.	236	85	19.0	----	1
07-07-83	91.	311	86	20.5	----	1
07-08-83	81.	320	90	24.0	----	1
07-08-83	78.	336	82	24.5	590	3
07-08-83	78.	334	85	24.5	590	2
07-09-83	133.	331	--	22.0	----	1
07-22-83	147.	294	--	22.5	----	1
07-22-83	147.	340	--	24.0	1030	2
08-05-83	123.	307	--	23.0	889	2
08-19-83	131.	233	86	23.0	----	3

Table 16.-Data collected at site 2, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-24-83	127.	294	80	22.5	----	1
08-25-83	127.	233	88	22.0	----	1
08-26-83	127.	236	75	22.5	----	1
08-27-83	127.	207	81	22.0	----	1
08-28-83	116.	175	79	22.0	----	1
08-29-83	124.	252	72	21.5	----	1
08-30-83	125.	179	84	21.0	----	1
08-31-83	117.	227	78	22.0	----	1
09-01-83	117.	172	80	21.5	----	1
09-02-83	122.	311	78	22.5	----	1
09-02-83	110.	902	--	22.0	1300	2
09-03-83	116.	165	--	22.5	----	1
09-04-83	113.	---	--	21.5	----	1
09-05-83	110.	140	--	20.0	----	1
09-06-83	108.	139	--	22.5	----	1
09-07-83	110.	157	--	18.0	----	1
09-08-83	116.	206	72	20.0	----	1
09-09-83	116.	164	--	20.5	----	1
09-10-83	113.	146	--	20.0	----	1
09-11-83	114.	113	69	24.5	----	1
09-12-83	110.	171	--	17.0	----	1
09-13-83	111.	174	--	15.0	----	1
09-14-83	111.	140	--	16.5	----	1
09-15-83	111.	145	--	15.0	----	1
09-16-83	111.	142	--	15.0	----	1
09-16-83	113.	---	--	17.0	----	3
09-16-83	113.	193	69	17.0	----	2
09-17-83	114.	109	73	23.5	----	1
09-18-83	119.	175	68	16.5	----	1
09-19-83	93.	138	76	18.5	----	1
09-20-83	94.	142	90	11.5	----	1
09-21-83	75.	104	66	10.5	----	1
09-22-83	79.	91	75	12.0	----	1
09-23-83	78.	68	74	13.0	----	1
09-24-83	77.	66	61	14.5	----	1

Table 16.-Data collected at site 2, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-25-83	74.	56	68	22.0	----	1
09-26-83	74.	47	65	17.5	----	1
09-27-83	73.	113	87	17.0	----	1
09-29-83	74.	96	58	15.5	----	1
09-30-83	74.	71	74	16.5	----	1
10-02-83	72.	59	77	14.5	----	1
10-03-83	73.	60	71	14.0	----	1
10-05-83	53.	51	86	12.0	----	1
10-06-83	52.	66	89	13.0	----	1
10-07-83	52.	74	76	13.5	----	1
10-08-83	52.	44	83	12.5	----	1
10-09-83	49.	28	75	19.5	----	1
10-10-83	49.	54	78	13.0	----	1
10-11-83	49.	34	69	11.5	----	1
10-12-83	49.	29	--	11.0	----	1
10-13-83	47.	69	--	16.5	----	1
10-14-83	49.	67	--	14.5	----	1
10-15-83	46.	41	--	16.0	----	1
10-16-83	46.	56	--	14.5	----	1
10-17-83	46.	45	--	16.0	----	1
10-18-83	46.	32	--	16.0	----	1
10-19-83	47.	43	--	10.5	----	1
10-20-83	47.	44	--	9.5	----	1
10-21-83	47.	43	--	9.5	----	1
10-22-83	47.	32	--	15.5	----	1
10-23-83	47.	33	--	10.5	----	1
10-24-83	46.	42	--	10.5	----	1
10-25-83	46.	28	--	8.0	----	1
10-26-83	46.	31	--	9.5	----	1
10-26-83	42.	23	--	8.5	1450	2
10-26-83	42.	25	--	8.5	1450	3
10-27-83	47.	37	--	9.0	----	1
10-28-83	47.	56	--	10.0	----	1
10-29-83	47.	76	--	9.5	----	1
10-30-83	49.	42	--	9.5	----	1
10-31-83	47.	40	--	10.0	----	1

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-12-83	42.	350	70	17.0	---	2
05-12-83	42.	307	78	17.0	---	3
05-13-83	38.	325	72	10.5	---	1
05-14-83	41.	320	79	10.0	---	1
05-16-83	46.	305	74	11.0	---	1
05-17-83	48.	---	--	10.0	---	1
05-18-83	47.	276	72	8.0	---	1
05-19-83	48.	357	80	11.0	---	1
05-20-83	52.	420	79	11.5	---	1
05-21-83	41.	443	81	11.5	---	1
05-22-83	43.	450	83	14.5	---	1
05-23-83	43.	442	77	15.0	---	1
05-24-83	40.	448	78	----	---	1
05-25-83	40.	416	76	18.5	---	1
05-26-83	41.	402	73	17.0	---	1
05-27-83	39.	418	74	18.0	---	1
05-28-83	39.	435	65	19.0	---	1
05-29-83	39.	356	71	18.0	---	1
05-30-83	55.	374	76	14.5	---	1
05-31-83	44.	401	72	12.5	---	1
06-01-83	46.	357	73	14.5	---	1
06-02-83	43.	405	86	15.0	---	1
06-03-83	45.	475	75	15.0	---	1
06-04-83	43.	437	82	18.5	---	1
06-05-83	43.	489	86	15.5	---	1
06-06-83	44.	418	83	13.0	---	1
06-07-83	46.	370	79	20.0	---	1
06-08-83	42.	373	79	15.0	---	1
06-09-83	42.	414	80	17.0	---	1
06-10-83	41.	438	77	18.5	---	1

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-11-83	41.	421	73	18.5	---	1
06-12-83	42.	330	78	19.0	---	1
06-13-83	43.	339	75	16.0	---	1
06-14-83	44.	322	74	14.0	---	1
06-15-83	43.	360	82	15.5	---	1
06-16-83	45.	382	74	17.5	---	1
06-17-83	45.	369	81	18.0	---	1
06-18-83	46.	353	76	19.0	---	1
06-19-83	45.	350	77	20.0	---	1
06-20-83	63.	333	82	----	---	1
06-21-83	61.	299	87	----	---	1
06-22-83	42.	372	82	----	---	1
06-23-83	35.	419	84	----	---	1
06-24-83	42.	344	81	20.0	---	1
06-25-83	41.	382	65	19.0	---	1
06-26-83	41.	326	64	19.5	---	1
06-27-83	43.	313	81	17.0	---	1
06-28-83	43.	312	76	15.0	---	1
06-29-83	41.	332	79	16.5	---	1
06-30-83	41.	331	86	19.0	---	1
07-01-83	38.	183	92	21.5	---	1
07-02-83	43.	247	83	20.0	---	1
07-03-83	46.	288	93	19.0	---	1
07-04-83	43.	238	88	17.0	---	1
07-05-83	41.	415	70	17.5	---	1
07-06-83	35.	336	78	19.0	---	1
07-07-83	58.	335	80	20.5	---	1
07-08-83	58.	438	81	22.0	---	1
07-08-83	60.	363	87	25.0	655	3
07-08-83	60.	408	82	25.0	655	2
07-09-83	65.	393	85	22.5	---	1
07-10-83	67.	356	91	24.0	---	1
07-11-83	93.	389	91	21.0	---	1
07-12-83	101.	336	91	20.0	---	1
07-13-83	88.	374	--	25.0	---	1

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-14-83	85.	326	90	22.0	----	1
07-15-83	95.	326	--	22.5	----	1
07-17-83	99.	255	86	21.0	----	1
07-18-83	105.	273	--	22.0	----	1
07-19-83	100.	362	--	23.0	----	1
07-20-83	102.	347	--	23.0	----	1
07-22-83	105.	240	90	23.5	----	1
07-22-83	92.	309	--	24.5	1050	2
07-22-83	92.	319	--	24.5	1050	3
07-25-83	86.	575	--	23.0	----	1
07-26-83	84.	530	--	23.0	----	1
07-27-83	70.	344	--	22.5	----	1
07-28-83	73.	440	--	22.5	----	1
07-29-83	70.	468	--	20.5	----	1
07-30-83	86.	442	86	22.5	----	1
07-31-83	87.	369	82	21.5	----	1
08-01-83	84.	330	--	22.5	----	1
08-02-83	75.	401	--	21.5	----	1
08-03-83	79.	363	--	22.5	----	1
08-04-83	81.	338	--	24.0	----	1
08-05-83	102.	345	--	24.0	----	1
08-05-83	102.	238	--	23.5	1175	3
08-05-83	102.	315	65	23.5	1175	2
08-06-83	104.	253	83	23.5	----	1
08-07-83	82.	311	--	24.0	----	1
08-08-83	85.	561	95	24.0	----	1
08-09-83	70.	381	--	23.5	----	1
08-10-83	70.	316	--	22.5	----	1
08-11-83	76.	285	--	23.0	----	1
08-12-83	79.	292	83	23.0	----	1
08-13-83	91.	293	78	23.5	----	1
08-14-83	82.	271	82	22.0	----	1
08-15-83	80.	343	84	23.0	----	1
08-16-83	85.	340	80	24.0	----	1
08-17-83	82.	361	91	23.5	----	1

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-18-83	79.	271	88	23.5	----	1
08-19-83	81.	320	--	24.0	----	1
08-19-83	84.	282	--	23.0	1200	3
08-19-83	84.	271	--	23.0	1200	2
08-20-83	80.	250	85	23.0	----	1
08-21-83	79.	263	83	25.0	----	1
08-22-83	84.	317	88	23.0	----	1
08-23-83	78.	302	84	21.5	----	1
08-24-83	82.	274	88	22.5	----	1
08-25-83	77.	239	86	22.5	----	1
08-26-83	93.	240	89	23.0	----	1
08-27-83	96.	293	79	22.0	----	1
08-28-83	78.	172	92	22.5	----	1
08-29-83	84.	192	90	22.0	----	1
08-30-83	70.	175	87	22.0	----	1
08-31-83	76.	211	85	22.5	----	1
09-01-83	73.	182	92	22.0	----	1
09-02-83	82.	262	82	23.0	----	1
09-02-83	79.	316	--	22.0	1250	3
09-02-83	79.	306	--	22.0	1250	2
09-03-83	80.	188	92	22.0	----	1
09-04-83	86.	218	84	21.0	----	1
09-05-83	81.	180	94	19.0	----	1
09-06-83	78.	120	95	19.0	----	1
09-07-83	71.	149	90	19.0	----	1
09-08-83	68.	136	94	20.0	----	1
09-09-83	65.	149	92	21.0	----	1
09-10-83	67.	164	91	21.0	----	1
09-11-83	68.	123	80	22.0	----	1
09-12-83	69.	132	82	17.5	----	1
09-13-83	66.	142	--	16.0	----	1
09-14-83	62.	107	--	17.0	----	1
09-15-83	68.	124	--	15.5	----	1
09-16-83	65.	115	--	15.5	----	1
09-16-83	59.	147	--	16.0	----	3

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-16-83	59.	185	82	16.0	---	2
09-17-83	70.	68	--	21.5	---	1
09-18-83	71.	84	--	17.5	---	1
09-19-83	68.	89	--	18.5	---	1
09-20-83	71.	68	--	10.5	---	1
09-21-83	66.	67	--	9.0	---	1
09-22-83	66.	47	--	12.5	---	1
09-23-83	58.	33	--	14.0	---	1
09-24-83	55.	68	--	15.0	---	1
09-25-83	58.	37	--	19.5	---	1
09-26-83	57.	33	--	17.5	---	1
09-27-83	59.	38	--	17.0	---	1
09-28-83	58.	40	--	16.0	---	1
09-29-83	57.	17	--	16.0	---	1
09-30-83	58.	30	--	17.0	---	1
10-01-83	52.	17	--	17.5	---	1
10-02-83	56.	33	--	15.5	---	1
10-03-83	61.	55	--	12.5	---	1
10-04-83	57.	100	—	13.0	---	1
10-05-83	52.	76	—	12.0	---	1
10-06-83	52.	78	--	13.0	---	1
10-07-83	54.	79	79	14.0	---	1
10-08-83	54.	59	90	13.0	---	1
10-10-83	40.	30	88	15.0	---	1
10-11-83	30.	34	87	12.0	---	1
10-12-83	32.	20	—	11.5	---	1
10-13-83	32.	17	—	13.0	---	1
10-14-83	32.	12	—	13.0	---	1
10-15-83	34.	21	--	13.0	---	1
10-16-83	35.	15	--	13.0	---	1
10-17-83	35.	10	--	13.0	---	1
10-18-83	35.	11	—	14.0	---	1
10-19-83	35.	16	--	12.0	---	1
10-20-83	35.	13	--	10.5	---	1
10-21-83	37.	11	—	11.5	---	1

Table 17.-Data collected at site 3, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
10-22-83	37.	18	--	9.0	----	1
10-23-83	37.	15	--	11.0	----	1
10-24-83	37.	17	--	11.5	----	1
10-25-83	35.	13	--	8.5	----	1
10-26-83	37.	11	--	9.5	----	1
10-26-83	21.	20	--	8.5	1450	2
10-26-83	21.	10	--	8.5	1450	3
10-27-83	37.	8	--	13.0	----	1
10-29-83	35.	8	--	11.5	----	1
10-31-83	33.	--	--	12.0	----	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal
[1, observer single-vertical sample; 2, U.S.G.S. single-vertical sample; 3, U.S.G.S. equal-width-increment sample]

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
05-12-83	27.	229	80	15.5	---	2
05-12-83	27.	276	83	15.5	---	3
05-13-83	23.	290	83	11.0	---	1
05-14-83	26.	---	--	9.0	---	1
05-16-83	32.	---	--	10.5	---	1
05-17-83	34.	312	74	10.0	---	1
05-18-83	33.	406	60	8.0	---	1
05-19-83	34.	309	66	11.5	---	1
05-19-83	35.	405	60	11.5	---	1
05-20-83	37.	442	75	11.5	---	1
05-21-83	27.	427	75	13.0	---	1
05-22-83	28.	430	76	14.5	---	1
05-23-83	29.	459	77	15.0	---	1
05-24-83	26.	410	80	16.0	---	1
05-25-83	26.	420	68	17.0	---	1
05-26-83	26.	390	70	17.5	---	1
05-27-83	25.	396	74	18.0	---	1
05-28-83	25.	260	77	19.5	---	1
05-29-83	25.	304	84	18.5	---	1
05-30-83	40.	307	71	15.0	---	1
05-31-83	30.	318	74	13.0	---	1
06-01-83	32.	359	70	13.0	---	1
06-02-83	29.	390	82	15.5	---	1
06-03-83	31.	550	79	15.5	---	1
06-04-83	29.	435	79	17.0	---	1
06-05-83	29.	498	87	15.5	---	1
06-06-83	30.	346	88	13.0	---	1
06-07-83	32.	304	77	20.0	---	1
06-08-83	28.	370	80	15.5	---	1
06-09-83	27.	333	78	18.0	---	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
06-10-83	27.	410	77	19.5	---	1
06-11-83	27.	326	85	19.5	---	1
06-12-83	28.	341	77	19.5	---	1
06-13-83	29.	324	73	16.5	---	1
06-14-83	30.	287	80	14.5	---	1
06-15-83	29.	330	87	17.0	---	1
06-16-83	31.	344	84	18.5	---	1
06-17-83	31.	325	81	18.5	---	1
06-18-83	31.	320	79	20.5	---	1
06-19-83	31.	392	74	----	---	1
06-20-83	48.	343	80	----	---	1
06-21-83	46.	357	82	----	---	1
06-22-83	28.	340	79	----	---	1
06-23-83	21.	311	86	----	---	1
06-24-83	27.	352	89	20.0	---	1
06-25-83	26.	332	83	20.0	---	1
06-26-83	26.	312	86	20.0	---	1
06-27-83	28.	586	90	17.0	---	1
06-28-83	28.	284	81	15.0	---	1
06-29-83	27.	332	82	17.0	---	1
06-30-83	26.	316	90	20.0	---	1
07-01-83	24.	294	80	21.0	---	1
07-02-83	29.	278	84	21.0	---	1
07-03-83	32.	310	82	20.0	---	1
07-04-83	29.	257	85	17.5	---	1
07-05-83	26.	286	84	20.0	---	1
07-06-83	21.	250	88	21.0	---	1
07-07-83	43.	396	66	22.0	---	1
07-08-83	43.	306	89	24.0	---	1
07-08-83	39.	284	97	23.5	600	3
07-08-83	39.	358	76	23.5	600	2
07-09-83	51.	358	--	22.5	---	1
07-10-83	52.	324	--	24.0	---	1
07-11-83	78.	417	--	21.0	---	1
07-12-83	86.	513	--	20.0	---	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
07-13-83	73.	501	--	25.0	----	1
07-14-83	70.	332	--	23.0	----	1
07-15-83	80.	428	--	23.0	----	1
07-17-83	84.	418	--	22.0	----	1
07-18-83	90.	387	--	22.0	----	1
07-19-83	85.	471	--	23.0	----	1
07-20-83	87.	396	--	24.0	----	1
07-22-83	90.	380	--	24.5	----	1
07-22-83	74.	386	--	25.0	1050	3
07-22-83	74.	347	--	25.0	1050	2
07-25-83	71.	624	--	23.5	----	1
07-26-83	69.	552	--	23.0	----	1
07-27-83	56.	474	--	23.0	----	1
07-28-83	59.	469	--	23.5	----	1
07-29-83	55.	456	--	21.0	----	1
07-30-83	72.	527	--	23.0	----	1
07-31-83	72.	427	--	21.5	----	1
08-01-83	69.	443	--	22.5	----	1
08-02-83	60.	443	90	22.0	----	1
08-03-83	64.	405	--	23.0	----	1
08-04-83	66.	410	--	25.5	----	1
08-05-83	93.	764	--	23.5	1050	3
08-05-83	93.	459	--	23.5	1050	2
08-05-83	87.	441	68	25.0	----	1
08-06-83	89.	416	--	24.0	----	1
08-07-83	67.	359	--	25.0	----	1
08-08-83	70.	633	90	25.5	----	1
08-10-83	56.	366	91	23.0	----	1
08-11-83	62.	325	91	24.0	----	1
08-12-83	65.	322	89	23.0	----	1
08-13-83	76.	374	79	23.5	----	1
08-14-83	67.	303	84	22.5	----	1
08-15-83	65.	365	--	23.5	----	1
08-16-83	70.	440	66	23.5	----	1
08-17-83	67.	480	77	24.0	----	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
08-18-83	64.	449	--	25.0	----	1
08-19-83	66.	383	--	23.5	1175	2
08-19-83	64.	366	--	25.0	----	1
08-20-83	65.	371	70	24.0	----	1
08-21-83	64.	304	83	24.5	----	1
08-22-83	69.	362	76	24.5	----	1
08-23-83	63.	379	87	22.5	----	1
08-24-83	67.	384	80	22.0	----	1
08-25-83	62.	308	83	24.0	----	1
08-26-83	78.	391	71	24.0	----	1
08-27-83	82.	382	64	24.0	----	1
08-28-83	63.	292	79	24.5	----	1
08-29-83	69.	267	86	22.5	----	1
08-30-83	55.	223	84	23.0	----	1
08-31-83	62.	200	88	22.0	----	1
09-01-83	58.	259	81	23.5	----	1
09-02-83	68.	326	76	23.5	----	1
09-02-83	69.	366	--	22.5	1250	3
09-02-83	69.	363	--	22.5	1250	2
09-03-83	65.	174	--	23.0	----	1
09-04-83	72.	296	--	22.5	----	1
09-05-83	66.	580	--	20.0	----	1
09-06-83	63.	183	--	19.0	----	1
09-07-83	56.	206	--	19.5	----	1
09-08-83	54.	209	--	21.0	----	1
09-09-83	50.	214	--	21.5	----	1
09-10-83	52.	168	--	21.0	----	1
09-11-83	53.	155	--	22.0	----	1
09-12-83	54.	146	--	18.5	----	1
09-13-83	51.	166	--	16.5	----	1
09-14-83	48.	156	--	17.5	----	1
09-15-83	54.	139	--	17.5	----	1
09-16-83	36.	181	73	16.0	----	2
09-16-83	51.	217	--	16.0	----	1
09-17-83	55.	70	--	21.5	----	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Temperature (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
09-18-83	56.	101	--	19.5	---	1
09-19-83	53.	106	--	18.0	---	1
09-20-83	57.	101	--	12.0	---	1
09-21-83	51.	69	--	9.5	---	1
09-22-83	51.	66	--	12.0	---	1
09-23-83	43.	46	--	12.0	---	1
09-24-83	40.	173	--	17.0	---	1
09-25-83	43.	29	--	20.5	---	1
09-26-83	42.	34	--	18.0	---	1
09-27-83	45.	26	--	17.5	---	1
09-28-83	43.	28	--	17.5	---	1
09-29-83	42.	30	--	16.5	---	1
09-30-83	43.	24	--	16.0	---	1
10-01-83	38.	17	--	18.5	---	1
10-02-83	42.	18	--	16.0	---	1
10-03-83	46.	26	--	14.5	---	1
10-04-83	42.	28	--	13.0	---	1
10-05-83	38.	22	--	15.0	---	1
10-06-83	37.	16	--	16.5	---	1
10-07-83	40.	28	74	14.0	---	1
10-08-83	40.	37	88	13.0	---	1
10-10-83	26.	---	--	14.0	---	1
10-11-83	16.	38	57	12.0	---	1
10-12-83	18.	44	--	10.0	---	1
10-13-83	18.	30	--	14.0	---	1
10-14-83	18.	15	--	13.5	---	1
10-15-83	20.	12	--	14.0	---	1
10-16-83	21.	21	--	13.5	---	1
10-17-83	21.	---	--	14.0	---	1
10-18-83	21.	27	--	14.5	---	1
10-19-83	21.	56	--	12.0	---	1
10-20-83	21.	27	--	9.5	---	1
10-21-83	22.	33	--	9.0	---	1
10-22-83	22.	36	--	10.0	---	1
10-23-83	23.	23	--	10.5	---	1

Table 18.-Data collected at site 4, Lower Platte and Beaver Canal--Continued

Date of sample M-D-Y	Discharge (cubic feet per second)	Sediment concentration (milligrams per liter)	Percent finer than .062 millimeters	Tempera-ture (degrees Celsius)	Specific conductance (micromhos)	Method of sample collection
10-24-83	23.	54	--	10.0	----	1
10-25-83	21.	27	--	9.0	----	1
10-26-83	23.	28	--	8.5	----	1
10-26-83	19.	10	--	10.5	1450	2
10-26-83	19.	11	52	10.5	1450	3
10-27-83	22.	17	--	13.0	----	1
10-29-83	21.	13	--	11.5	----	1
10-31-83	19.	27	--	13.0	----	1

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