ANALYSIS OF FLOOD-FLOW FREQUENCY, FLOW DURATION, AND CHANNEL-FORMING FLOW FOR THE JAMES RIVER IN SOUTH DAKOTA

By Rick D. Benson

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For those readers who may prefer to use metric (International System) units rather than inch-pound units, the conversion factors for the terms used in this report are given below.

Multiply inch-pound unit	By	To obtain SI unit
inch	25.40	millimeter
mile (mi)	1.609	kilometer
square mile (mi^2)	2.590	square kilometer
cubic foot per second (ft^3/s)	0.028317	cubic meter per second
acre-foot (acre-ft)	1,233	cubic meter

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ABSTRACT

The James River, which originates in North Dakota and joins the Missouri River near Yankton, South Dakota, is about 747 miles long, with about 474 river miles located in South Dakota. The James River basin includes 21,116 square miles, with 14,428 square miles located in South Dakota.

Bankfull capacity of the James River in South Dakota ranges from a minimum of about 200 cubic feet per second in the northern portion to a maximum of about 10,000 cubic feet per second near the mouth. Discharges that produce bankfull conditions on much of the river in South Dakota occur on an average of once in about 2 years. The 10-year flood flows, which range from 1,620 cubic feet per second (at the gage near Stratford) to 8,870 cubic feet per second (at the gage near Scotland), cause major flooding on most of the river in South Dakota.

The river also has potential for extended periods of low or zero flow, especially in the northern portion within South Dakota. Generally, low flows occur from late summer until spring snowmelt. The James River at Columbia had zero flow for 623 consecutive days from July 13, 1958, through March 26, 1960.

The channel pattern (channel alignment) has changed little since 1922. This channel stability indicates that channel formation is approaching a state of equilibrium. It does not appear that velocities in the river are sufficient to carry the sediment being delivered by the tributaries.

INTRODUCTION

Background

In 1984, a Federally appointed Garrison Diversion Unit Study Commission recommended major changes in the Garrison Diversion Unit (GDU) in North Dakota (Garrison Diversion Unit Commission, 1984). On May 12, 1986, the Garrison Diversion Unit Reformulation Act of 1986 was signed into law. There are eight specific study areas identified within the Reformulation Act (H.R. 1116), seven of which are directly associated with impacts to the James River. The Reformulation Act directs the Secretary of Interior to submit a comprehensive report to the Congress as soon as practicable but not later than the end of fiscal year 1988 (Amended Section 5(C)(1) Public Law 89-108).

The U.S. Bureau of Reclamation is the lead agency for evaluating the potential effects of GDU on the James River in South Dakota. As part of this evaluation, the Bureau requested that the U.S. Geological Survey conduct the flood-frequency, flow-duration, and channel-forming-flow studies that are summarized in this report.

Objectives

The objectives of this study were to analyze flood-flow frequency, flow duration, and channel-forming flow for the James River in South Dakota. Flood-flow frequency analyses also were made for certain tributaries within the James River basin. The study effort was limited to the analysis of existing discharge records.

The drainage area for the entire basin within South Dakota was determined. A separate drainage-area map report was prepared (Benson and others, 1987).

Physical Setting

The James River, which originates in North Dakota and joins the Missouri River near Yankton, S. Dak., is about 747 mi long, with about 474 river miles located in South Dakota (fig. 1). The total area of the James River basin is 21,116 mi^2, with 14,428 mi^2 located within South Dakota. Additional information concerning the river setting and hydrology can be found in a previous study by Benson (1983).

The gaging stations for which discharge records were analyzed as a part of this study are identified on figure 1. Data for continuous-record gaging stations operated by the U.S. Geological Survey within the James River basin in South Dakota are included in table 1 (main-stem stations) and in table 2 (tributary stations).

ANALYSIS OF FLOOD FREQUENCY

Statistical flood-flow frequency analyses were made for the main-stem gaging stations and for gaged tributaries that have 10 or more years of continuous record. The analyses were made by using the log-Pearson Type III frequency distribution based on procedures recommended by the U.S. Water Resources Council (1981).

The frequency analyses were made on two sets of flow data for the main-stem locations and for the tributary gages. The first frequency analyses were made for the instantaneous peak flow data stored in the Water Data Storage and Retrieval System (WATSTORE) Peak Flow File for each gaging station. The second frequency analyses were made for data sets containing the maximum daily mean discharge which occurred at each gaging station during the months of June, July, and August of each year (that is, a summer discharge). The analyses were made on the maximum daily mean discharge because instantaneous peak flow data are not generally available for the months of June, July, and August. Inspection of flow data on the James River indicates that the maximum daily mean discharge generally is within 5 percent of the instantaneous peak flow occurring on that same day.

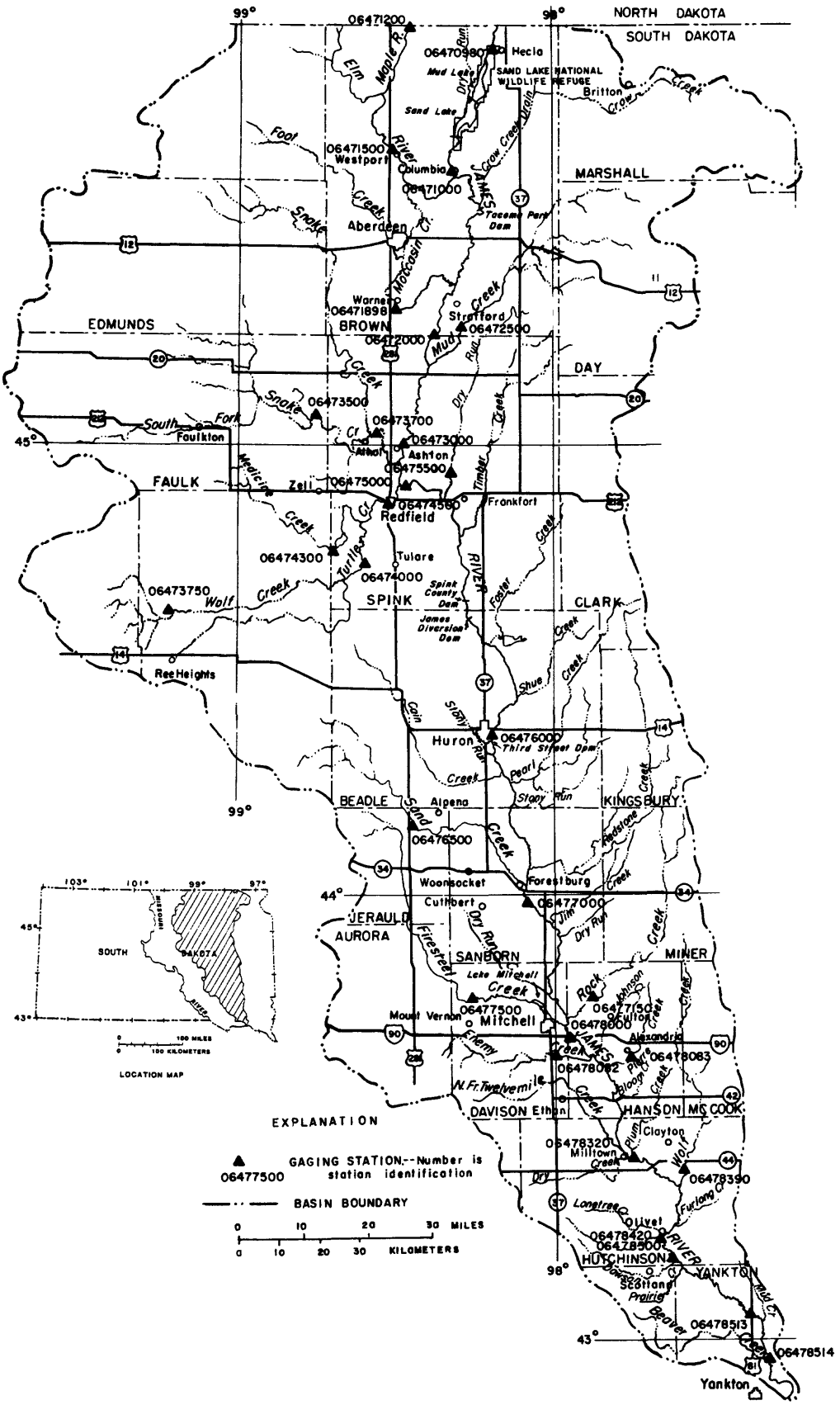

Figure 1.--James River basin in South Dakota.

Table 1.--Drainage area, period of record, and discharges of continuous-record streamflow-gaging stations on the James River main stem within South Dakota

Station number	Station name	Distance upstream from mouth (river miles)	Drainage area (square miles)		Discharge records			
			Total	Non-contributing	Period of record	Discharge (cubic feet per second)		
						Minimum daily	Average	Maximum instantaneous
06470980	James River at Hecla, S. Dak.	474	5,488	3,300	2/82-9/85	[1]	[1]	[1]
06471000	James River at Columbia, S. Dak.	437	5,857	3,376	10/45-9/85	[2]-1,860	111	5,420
06472000	James River near Stratford, S. Dak.	358	8,865	4,005	3/50-9/72, 10/76-9/77	0	124	5,580
06473000	James River at Ashton, S. Dak.	313	9,742	4,069	10/45-9/85	[2]-2,100	160	5,680
06475000	James River near Redfield, S. Dak.	294	13,911	4,118	3/50-9/85	0	190	7,310
06476000	James River at Huron, S. Dak.	232	15,869	4,148	8/28-9/32, 8/43-9/85	0	232	9,000
06477000	James River near Forestburg, S. Dak.	189	17,590	4,148	3/50-9/85	0	278	12,500
06478000	James River near Mitchell, S. Dak.	138	19,064	4,148	7/53-9/58, 8/65-9/72	1.0	313	13,800
06478500	James River near Scotland, S. Dak.	55	20,653	4,148	9/28-9/85	0	396	29,400
06478513	James River near Yankton, S. Dak.	17	20,942	4,148	10/81-9/85	.78	[3]	26,400

[1]Gaging station established for research project; discharge records have not been published.
[2]Reverse flow resulting from large inflow of downstream tributary.
[3]Gaging station established in 1981; average discharge for period of record has not been computed.

Table 2.--Drainage area, period of record, and discharges of continuous-record streamflow-gaging stations within the James River basin in South Dakota

Station number	Station name	Distance upstream from mouth (river miles)	Drainage area (square miles)		Discharge records			
			Total	Non-contributing	Period of record	Discharge (cubic feet per second)		
						Minimum daily	Average	Maximum instantaneous
06471200	Maple River at North Dakota-South Dakota State line	[1]15.7	716	332	6/56-9/85	0	19.8	5,930
06471500	Elm River at Westport, S. Dak.	30.4	1,493	444	10/45-9/85	0	45.7	12,600
06471898	Moccasin Creek near Warner, S. Dak.	21.5	304	0	10/76-9/80	0	[2]	387
06472500	Mud Creek near Stratford, S. Dak.	14.7	738	64.2	9/55-9/69, 10/76-9/77	0	9.34	1,180
06473500	South Fork Snake Creek near Athol, S. Dak.	[1]	1,743	48.4	3/50-9/72	0	11.2	6,810
06473700	Snake Creek near Ashton, S. Dak.	21.5	2,657	48.4	10/55-9/69, 10/76-9/79, 10/84-9/85	0	23.1	6,980
06473750	Wolf Creek near Ree Heights, S. Dak.	[1]	334	0	9/59-9/81, 10/84-9/85	0	3.73	990
06474000	Turtle Creek near Tulare, S. Dak.	33.7	1,124	0	8/53-9/56, 9/65-9/81, 10/84-9/85	0	13.2	6,000
06474300	Medicine Creek near Zell, S. Dak.	[1]	202	0	9/59-9/81, 10/84-9/85	0	5.67	2,210
06474500	Turtle Creek at Redfield, S. Dak.	6.8	1,481	0	10/45-9/72	0	24.8	7,660
06475500	Dry Run near Frankfort, S. Dak.	8.1	201	0	9/55-9/69	0	3.54	772
06476500	Sand Creek near Alpena, S. Dak.	40.7	261	0	3/50-9/85	0	8.33	2,240
06477150	Rock Creek near Fulton, S. Dak.	9.5	240	0	10/66-9/72	0	9.01	2,040
06477500	Firesteel Creek near Mount Vernon, S. Dak.	30.2	521	0	9/55-9/85	0	22.9	6,610
06478052	Enemy Creek near Mitchell, S. Dak.	7.3	163	0	10/75-9/85	0	12.6	4,280
06478083	Pierre Creek near Alexandria, S. Dak.	6.5	78.7	0	10/81-9/83	1.5	[2]	119
06478320	Plum Creek near Milltown, S. Dak.	.9	55.2	0	10/81-9/83	0	[2]	774
06478390	Wolf Creek near Clayton, S. Dak.	4.1	396	0	10/75-9/85	0	37.8	6,520
06478420	Lonetree Creek near Olivet, S. Dak.	.7	110	0	10/81-9/83	0	[2]	1,090
06478514	Beaver Creek near Yankton, S. Dak.	1.2	145	0	10/81-9/83	0	[2]	1,110

[1]Tributary does not discharge directly to the James River.
[2]Average discharge for period of record has not been computed.

Main-Stem Locations

The frequency analyses were made on the main-stem gages using records subsequent to the closure of Jamestown Dam in May 1953. Jamestown Reservoir, located near Jamestown, North Dakota, has a total capacity of 220,978 acre-ft, of which 185,435 acre-ft are for flood control (U.S. Bureau of Reclamation, 1985).

The results of the analysis of instantaneous peak flows are contained in table 3 and the results of the analysis of summer discharges are contained in table 4. Frequency curves for instantaneous peak flow are contained in the Supplemental Information section (figs. 9-16) at the back of the report. Frequency curves for the maximum daily mean flow during June, July, and August are contained in figures 17-24 in the Supplemental Information section. The frequency analyses for the gaging stations near Stratford and near Mitchell should be interpreted with caution because of the shorter periods of record.

Tributary Locations

Benson (1983) indicated that improved drainage area data for the James River basin would facilitate improved interpretation of the tributary frequency analyses. This is because most of the tributary gaging stations are located several miles upstream from the mouths. With complete drainage area data, frequency data for the gaged tributaries could be extended from the gage to the mouth by a drainage area ratio (Chow, 1964; Linsley and Franzini, 1964; Linsley and others, 1949). Frequency data for ungaged tributaries could be developed using the drainage area data in conjunction with methods developed by Becker (1974). A summary of the drainage area data which were used to develop the tributary frequency results are contained in table 5.

Gaged Tributaries

Results of the frequency analyses for the gaged tributaries are contained in table 6 (instantaneous peak flow) and table 7 (summer flow). Extension of the frequency data from each tributary gaging station to the confluence with the James River was accomplished by multiplying the gaging station data by the square root of the ratio of the drainage areas in accordance with the following relation:

$$Q_m = Q_g \, (A_m/A_g)^{0.5} \qquad (1)$$

where

Q_m = discharge at mouth of tributary,
Q_g = discharge at gaging station,
A_m = drainage area of tributary at mouth, and
A_g = drainage area of tributary at gage.

The results of extension of the tributary frequency data from the gage to the confluence with the James River are contained in table 8.

Table 3.--Magnitude and probability of instantaneous peak flow at streamflow-gaging stations on the James River in South Dakota subsequent to closure of Jamestown Reservoir in water year 1953

Station name	Period of record (water years)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent						
		Years:	1.25	2	5	10	25	50	100
		Percent:	80	50	20	10	4	2	1
James River at Columbia, S.Dak.	1953-85		121	389	1,080	1,750	2,800	3,720	4,730
James River near Stratford, S.Dak.	[1]1953-77		130	371	994	1,620	2,670	3,660	4,810
James River at Ashton, S.Dak.	1953-85		186	459	1,110	1,750	2,820	3,830	5,030
James River near Redfield, S.Dak.	1953-85		267	724	1,790	2,760	4,280	5,600	7,070
James River at Huron, S.Dak.	1953-85		487	1,180	2,780	4,330	6,880	9,260	12,100
James River near Forestburg, S.Dak.	1953-85		420	1,260	3,590	6,050	10,400	14,500	19,600
James River near Mitchell, S.Dak.	[2]1954-72		763	1,640	3,670	5,670	9,130	12,500	16,700
James River near Scotland, S.Dak.	1953-85		812	2,050	5,320	8,870	15,400	22,200	30,800

[1]Period of record not continuous (1953-72, 1977).
[2]Period of Record not continuous (1954-58, 1966-72).

Table 4.--Magnitude and probability of maximum daily mean flow during June, July, and August at streamflow-gaging stations on the James River in South Dakota subsequent to closure of Jamestown Reservoir in water year 1953

Station name	Period of record (water years)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent						
		Years:	1.25	2	5	10	25	50	100
		Percent:	80	50	20	10	4	2	1
James River at Columbia, S.Dak.	1953-85		46	185	612	1,060	1,810	2,490	3,250
James River near Stratford, S.Dak.	[1]1953-77		85	268	667	985	1,410	1,720	2,010
James River at Ashton, S.Dak.	1953-85		69	267	803	1,300	2,020	2,600	3,190
James River near Redfield, S.Dak.	1953-85		41	269	1,170	2,170	3,790	5,150	6,580
James River at Huron, S.Dak.	1953-85		155	468	1,280	2,090	3,420	4,640	6,030
James River near Forestburg, S.Dak.	1953-85		164	499	1,440	2,440	4,230	5,990	8,130
James River near Mitchell, S.Dak.	[2]1954-72		284	703	1,680	2,610	4,130	5,530	7,160
James River near Scotland, S.Dak.	1953-85		234	876	2,960	5,390	9,900	14,500	20,100

[1]Period of record not continuous (1953-72, 1977).
[2]Period of Record not continuous (1954-58, 1966-72).

Table 5.--Drainage area data for tributaries which discharge directly into the James River within South Dakota

Tributary name	Drainage area upstream from mouth (square miles)	Drainage area upstream from gage (square miles)	Non-contributing drainage area upstream from gage or mouth (square miles)	Square root of ratio of contributing drainage area[1]
Dry Run (Mud Lake)[2] [3]	122	--	53.2	--
Elm River	1,536	1,493	444	1.0203
Crow Creek[4]	836	--	185	--
Moccasin Creek	387	304	0	1.1283
Mud Creek (North)[2]	782	738	64.2	1.0321
Snake Creek	2,657	2,657	48.4	1.0000
Turtle Creek	1,499	1,481	0	1.0061
Dry Run (North)[2]	213	201	0	1.0294
Timber Creek	617	--	30.8	--
Foster Creek[5]	243	--	0	--
Shue Creek	171	--	0	--
Stony Run (West)[2]	61.7	--	0	--
Cain Creek	381	--	0	--
Pearl Creek	287	--	0	--
Stony Run (East)[2]	37.1	--	0	--
Redstone Creek	264	--	0	--
Sand Creek	397	261	0	1.2333
Jim Creek	102	--	0	--
Dry Run (East)[2]	11.4	--	0	--
Dry Run (South)[2]	222	--	0	--
Rock Creek	280	240	0	1.0801
Firesteel Creek[6]	699	521	0	1.1583
Enemy Creek	179	163	0	1.0479
Johnson Creek	53.5	--	0	--
Pierre Creek	93.4	78.7	0	1.0894
Bloom Creek	40.5	--	0	--
Twelvemile Creek	276	--	0	--
Dry Creek	131	--	0	--
Plum Creek	55.5	55.2	0	1.0027
Wolf Creek	398	396	0	1.0025
Furlong Creek	16.8	--	0	--
Lonetree Creek	110	110	0	1.0000
Dawson Creek	68.9	--	0	--
Prairie Creek	54.9	--	0	--
Mud Creek (South)[2]	27.4	--	0	--
Beaver Creek	145	145	0	1.0000

[1]The square root of the ratio of the contributing drainage area upstream from the mouth and the contributing drainage area upstream from the gage.
[2]Names in parenthesis added to differentiate between tributaries with identical names.
[3]Discharges into Mud Lake within Sand Lake National Wildlife Refuge.
[4]Crow Creek flows enter James River via Crow Creek Drain.
[5]Foster Creek flows through Lake Byron and is thereby regulated before entering James River.
[6]Firesteel Creek flows through Lake Mitchell and is thereby regulated before entering James River.

Table 6.--Magnitude and probability of instantaneous peak flow at continuous-record streamflow-gaging stations on tributaries within the James River basin in South Dakota

Station name	Period of record (water years)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent						
		Years:	1.25	2	5	10	25	50	100
		Percent:	80	50	20	10	4	2	1
Maple River at N.Dak.-S.Dak State line	1957-85		101	377	1,320	2,470	4,720	7,090	10,100
Elm River at Westport, S.Dak.	1947-85		150	678	2,680	5,230	10,300	15,500	22,300
Mud Creek near Stratford, S.Dak.	[1]1956-77		8.0	50	262	587	1,320	2,190	3,380
S. Fork Snake Creek near Athol, S.Dak.	1950-72		17	107	645	1,620	4,260	7,910	13,700
Snake Creek near Ashton, S.Dak.	[2]1956-85		30	185	992	2,250	5,170	8,660	13,600
Wolf Creek near Ree Heights, S.Dak.	[3]1960-85		--	12	160	530	1,710	3,450	6,250
Turtle Creek near Tulare, S.Dak.	[4]1954-85		4.9	69	772	2,490	8,120	16,800	31,600
Medicine Creek near Zell, S.Dak.	[3]1960-85		19	111	560	1,240	2,770	4,550	7,000
Turtle Creek at Redfield, S.Dak.	1946-72		39	219	1,180	2,800	6,940	12,400	20,700
Dry Run near Frankfort, S.Dak.	[5]1956-78		--	8.6	119	409	1,370	2,850	5,280
Sand Creek near Alpena, S.Dak.	1950-85		25	183	951	1,980	3,960	5,900	8,210
Firesteel Creek near Mount Vernon, S.Dak.	1956-85		23	243	1,890	4,950	12,800	22,500	36,600
Enemy Creek near Mitchell, S.Dak.	1976-85		--	171	999	2,380	5,780	10,000	16,200
Wolf Creek near Clayton, S.Dak.	1976-85		102	538	2,460	5,140	10,900	17,200	25,700

[1]Period of record not continuous (1956-69, 1977).
[2]Period of record not continuous (1956-69, 1977-79, 1985).
[3]Period of record not continuous (1960-81, 1985).
[4]Period of record not continuous (1954-56, 1966-81, 1985).
[5]Period of continuous record from 1956 to 1969.

Table 7.--Magnitude and probability of maximum daily mean flow during June, July, and August at continuous-record streamflow-gaging stations on tributaries within the James River basin in South Dakota

Station name	Period of record (water years)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent						
		Years: 1.25	2	5	10	25	50	100
		Percent: 80	50	20	10	4	2	1
Maple River at N.Dak.-S.Dak State line	1956-85	5.5	35	199	470	1,140	1,980	3,220
Elm River at Westport, S.Dak.	1946-85	19	77	353	821	2,100	3,950	7,070
Mud Creek near Stratford, S.Dak.	[1]1956-77	1.1	8.6	58	147	386	705	1,190
S. Fork Snake Creek near Athol, S.Dak.	1950-72	--	4.8	54	176	588	1,240	2,380
Snake Creek near Ashton, S.Dak.	[2]1956-85	1.0	13	113	303	788	1,380	2,210
Wolf Creek near Ree Heights, S.Dak.	[3]1960-85	*	*	*	*	*	*	*
Turtle Creek near Tulare, S.Dak.	[5]1954-85	.1	1.1	14	52	195	454	958
Medicine Creek near Zell, S.Dak.	[3]1960-85	.3	4.2	47	161	574	1,280	2,620
Turtle Creek at Redfield, S.Dak.	1946-72	13	36	99	165	281	395	535
Dry Run near Frankfort, S.Dak.	1956-69	--	1.6	23	83	303	669	1,330
Sand Creek near Alpena, S.Dak.	1950-85	.7	6.9	64	206	719	1,610	3,340
Firesteel Creek near Mount Vernon, S.Dak.	1956-85	1.6	20	220	740	2,560	5,600	11,100
Enemy Creek near Mitchell, S.Dak.	1976-85	*	*	*	*	*	*	*
Wolf Creek near Clayton, S.Dak.	1976-85	12	78	526	1,450	4,290	8,730	16,600

[1]Period of record not continuous (1956-69, 1977).
[2]Period of record not continuous (1956-69, 1977-79, 1985).
[3]Period of record not continuous (1960-81, 1985).
[4]Data did not produce valid frequency analysis.
[5]Period of record not continuous (1954-56, 1966-81, 1985).

Table 8.--Estimated magnitude and probability of instantaneous peak flow at the confluence of gaged tributaries and the James River within South Dakota

Tributary[1] name	Contributing drainage area at mouth (square miles)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent						
		Years: 1.25	2	5	10	25	50	100
		Percent: 80	50	20	10	4	2	1
Elm River	1,092	153	692	2,740	5,340	10,500	15,900	22,700
Mud Creek (North)[2]	718	8.3	51	270	606	1,370	2,260	3,490
Snake Creek	2,609	30	185	992	2,250	5,170	8,660	13,600
Turtle Creek	1,499	39	220	1,190	2,820	6,980	12,400	20,800
Dry Run (North)[2]	213	--	8.9	123	421	1,420	2,930	5,440
Sand Creek	397	31	226	1,170	2,440	4,880	7,280	10,100
Firesteel Creek[3]	699	27	281	2,190	5,730	14,800	26,100	42,400
Enemy Creek	179	--	179	1,050	2,500	6,050	10,500	17,000
Wolf Creek	398	103	540	2,460	5,160	10,900	17,200	25,700

[1]Tributaries for which continuous-record gaging stations have been operated for 10 or more years.
[2]Names in parenthesis added to differentiate between tributaries with identical names.
[3]Flows at mouth regulated by Lake Mitchell.

Ungaged Tributaries

Estimates of peak discharges for the 2-, 5-, 10-, 25-, 50-, and 100-year recurrence interval floods were computed using the following relations developed by Becker (1974). Equations are:

$$Q_2 = 0.030\ A^{0.47}\ P^{2.92} \quad (2)$$

$$Q_5 = 0.458\ A^{0.49}\ P^{2.26} \quad (3)$$

$$Q_{10} = 1.78\ A^{0.50}\ P^{1.92} \quad (4)$$

$$Q_{25} = 7.52\ A^{0.51}\ P^{1.54} \quad (5)$$

$$Q_{50} = 30.3\ A^{0.52}\ P^{1.09} \quad (6)$$

$$Q_{100} = 78.4\ A^{0.52}\ P^{0.84} \quad (7)$$

where

Q = discharge in cubic feet per second,
A = contributing drainage area in square miles (limited to areas less than 4,000 mi^2), and
P = mean annual precipitation, in inches, minus 11 inches.

Estimated flood flows (instantaneous peak discharge) of selected ungaged tributaries at their confluence with the James River are contained in table 9. Becker's method is for peak flows and is not applicable to estimation of summer discharges.

ANALYSIS OF FLOW DURATION

Duration hydrograph plots (Wilson, 1981) were prepared for each of the main-stem gaging stations using daily mean discharge data stored in the U.S. Geological Survey's WATSTORE daily-values file. Each plot shows the daily discharge values for the 20-, 50-, and 80-percent exceedance values, as well as the minimum and maximum recorded daily values for each day of the year. A 20-percent exceedance value represents a daily mean discharge that can be expected to be equaled or exceeded on the indicated day an average of once in 5 years (sometimes referred to as a 5-year flow). Likewise, the 80-percent value represents a daily mean discharge which can be expected to be equaled or exceeded on the indicated day an average of 4 years out of 5 (a 1.25-year flow). The 50-percent value (or median) can be expected to be equaled or exceeded on the indicated day an average of once in 2 years (a 2-year flow).

The computer program used to generate the duration hydrographs requires that the analysis be conducted for a period of 9, 19, 29, 39, or 49 years. Therefore, it was not possible to use the entire period of record for the analysis of each gaging station. The period of record used for each duration hydrograph is specified in the discussion of the duration hydrographs for each of the James River main-stem gages in South Dakota.

Table 9.--Estimated magnitude and probability of instantaneous peak flow at the confluence of ungaged tributaries and the James River in South Dakota

Tributary name	Contributing drainage area (square miles)	Mean annual precipitation[1] (inches)	Discharge, in cubic feet per second, for recurrence interval, in years, and annual exceedance probability, in percent					
			Years:	2	5	10	25	50	100
				50	20	10	4	2	1
Moccasin Creek	387	19.5		261	1,070	2,130	4,240	6,920	10,500
Timber Creek	586	19.5		317	1,310	2,620	5,240	8,590	13,000
Foster Creek[2]	243	19		176	743	1,500	3,050	5,090	7,830
Shue Creek	171	19		149	625	1,260	2,550	4,240	6,520
Stony Run (West)[3]	61.7	18.5		76.3	328	669	1,370	2,320	3,630
Cain Creek	381	18		147	685	1,460	3,120	5,550	8,840
Pearl Creek	287	19.5		227	924	1,840	3,640	5,930	8,980
Stony Run (East)[3]	37.1	19.5		86.8	339	660	1,280	2,050	3,100
Redstone Creek	264	20		258	1,010	1,970	3,810	6,040	9,010
Jim Creek	102	20.5		193	715	1,360	2,550	3,900	5,760
Dry Run (East)[3]	11.4	21		80.2	275	500	902	1,320	1,920
Dry Run (South)[3]	222	20.5		278	1,050	2,000	3,790	5,850	8,630
Rock Creek	280	22		477	1,640	2,970	5,350	7,750	11,000
Johnson Creek	53.5	22		219	727	1,300	2,300	3,280	4,650
Pierre Creek	93.4	22		285	955	1,720	3,050	4,380	6,210
Bloom Creek	40.5	22		192	634	1,130	1,990	2,830	4,020
Twelvemile Creek	276	22		474	1,620	2,950	5,310	7,690	10,900
Dry Creek	131	22		334	1,130	2,040	3,630	5,220	7,410
Plum Creek	55.5	22.5		254	818	1,440	2,510	3,510	4,920
Furlong Creek	16.8	23		164	501	851	1,460	1,970	2,740
Lonetree Creek	110	22.5		350	1,140	2,030	3,550	5,000	7,030
Dawson Creek	68.9	23		318	1,000	1,740	2,990	4,110	5,710
Prairie Creek	54.9	23		286	896	1,560	2,660	3,650	5,070
Mud Creek (South)[3]	27.4	23.5		233	698	1,190	1,990	2,660	3,660
Beaver Creek	145	23.5		509	1,580	2,740	4,650	6,320	8,700

[1]From Becker (1974, fig. 2).
[2]Computed flows do not reflect regulation by Lake Byron.
[3]Names in parenthesis added to differentiate among tributaries with identical names.

James River at Columbia

The duration hydrograph for the James River at Columbia (station no. 06471000) is shown in figure 2. The hydrograph is based on the 39 years of discharge record from water year 1947 through water year 1985.

The bankfull capacity of the James River between Columbia and Stratford has been estimated to be as little as 200 to 300 ft^3/s at certain locations (U.S. Bureau of Reclamation, 1977; Missouri River Basin Commission, 1980a; and Benson, 1983). The duration hydrograph indicates that a discharge of 200 ft^3/s can be expected to be equaled or exceeded on any individual day at least 20 percent of the time from April 7 through July 31 and at least 50 percent of the time from April 16 through April 19 and from April 24 through May 17 (table 10 in the Supplemental Information section). A discharge of 200 ft^3/s has never been exceeded at Columbia during the period from December 19 through March 20.

The 50-percent exceedance discharge (median) at Columbia ranges from zero on many days to 325 ft^3/s on May 10 and is less than 10 ft^3/s from August 3 through August 11, August 14 through March 25, and March 31 through April 2. Zero flow has occurred on each day of the year sometime during the 39 years which were analyzed. In fact, zero flow was recorded for 623 consecutive days from July 13, 1958, through March 26, 1960. Zero flow can be expected 50 percent of the time on September 14 and on any individual day between September 17 and October 28 and between December 22 and March 12.

Figure 2 and table 10 further indicate that a daily mean discharge of 1,010 ft^3/s can be expected to be equaled or exceeded an average of once in 5 years (20-percent flow) on April 25, 325 ft^3/s can be expected to be equaled or exceeded an average of once in 2 years (50-percent flow) on May 10, and 49 ft^3/s can be expected to be equaled or exceeded an average of once in 1.25 years (80-percent flow) on May 1. These are the maximums of the 20-, 50-, and 80-percent discharges in figure 2 and table 10.

James River near Stratford

Continuous discharge records for the James River near Stratford (station no. 06472000) were collected from March 1950 through September 1972 and again during water year 1977. The duration hydrograph analysis was conducted for the 19 water years from 1954 through 1972 and the hydrograph plot is shown in figure 3.

The hydrograph is quite similar to the one for Columbia discussed previously. The duration hydrograph indicates that flows exceeding 200 ft^3/s can be expected to be equaled or exceeded on any individual day at least 20 percent of the time from March 24 through August 17 and at least 50 percent of the time from April 29 through May 15, May 17-18, and May 21-24 (table 11 in the Supplemental Information section). Zero flow was recorded at Stratford for 601 consecutive days from August 4, 1958, through March 26, 1960.

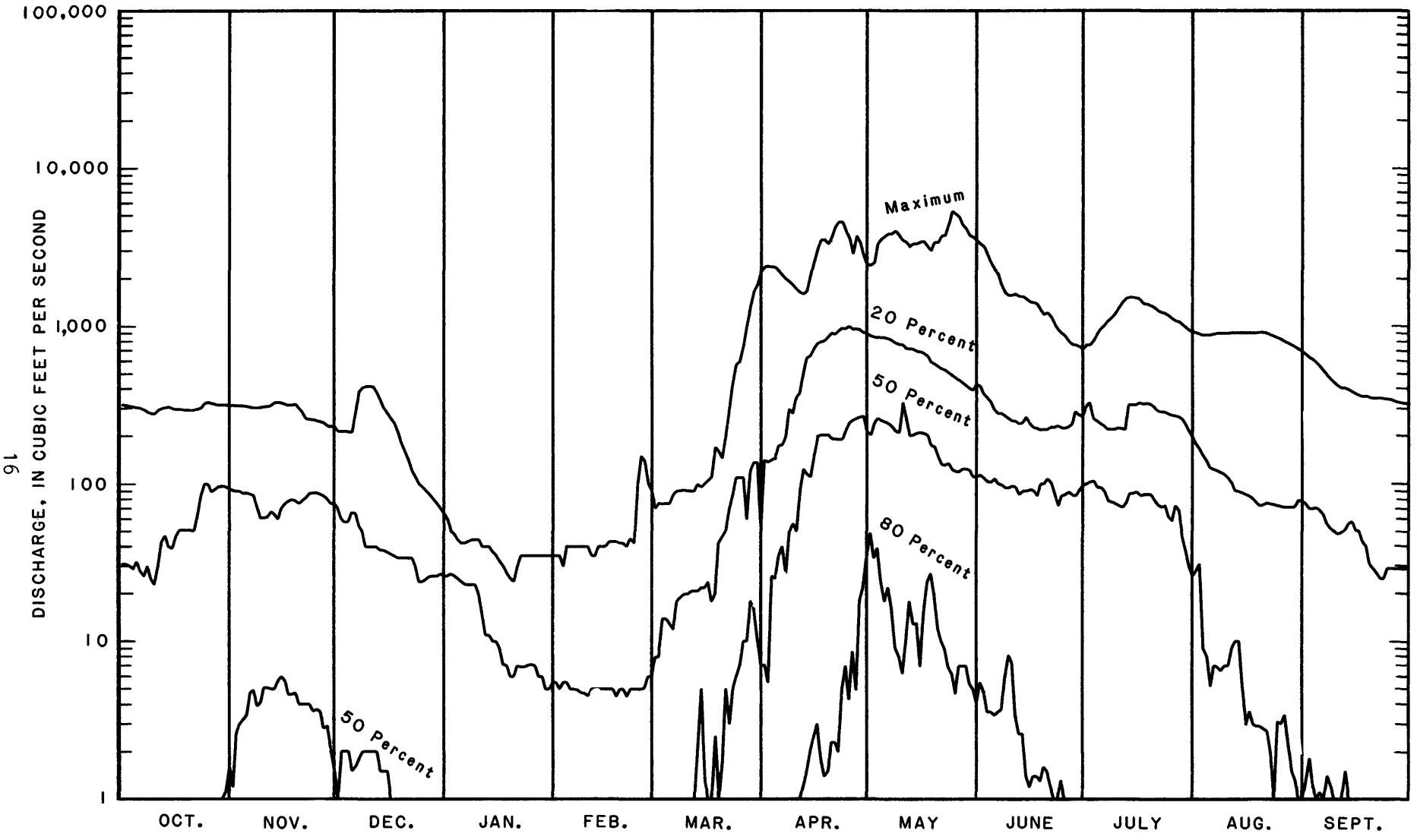

Figure 2.--Duration hydrograph for daily discharges of the James River at Columbia, water years 1947-85.

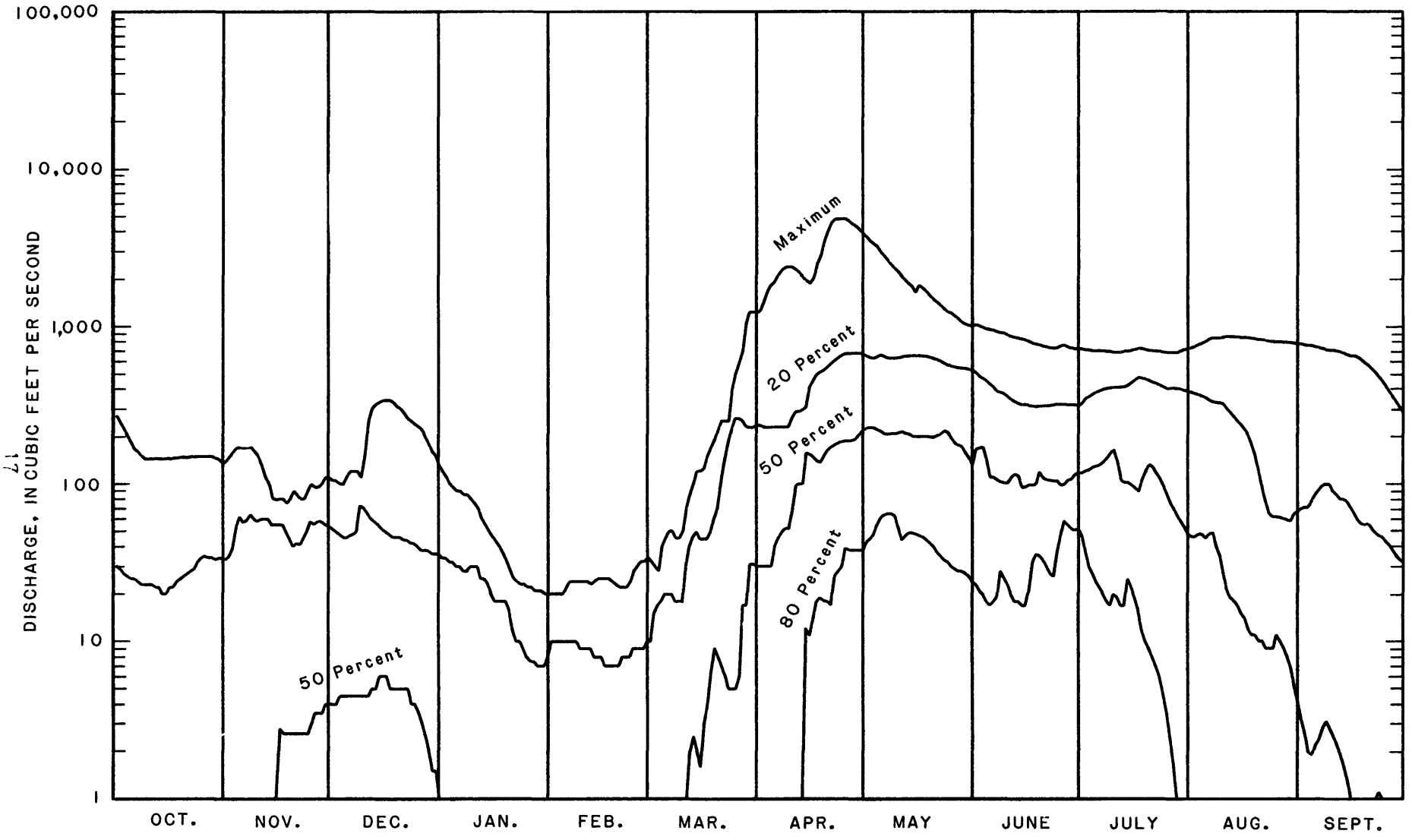

Figure 3.--Duration hydrograph for daily discharges of the James River near Stratford, water years 1954-72.

James River at Ashton

The duration hydrograph for the James River at Ashton (station no. 06473000) is presented in figure 4. The hydrograph is based on 39 years of discharge record (water years 1947 through 1985).

The bankfull capacity between Stratford and Ashton has been estimated to range from 500 to 1,000 ft^3/s (Benson, 1983). The duration hydrograph indicates that discharges exceeding 500 ft^3/s have occurred at Ashton during March 21 through September 28 (table 12 in the Supplemental Information section). The 20-percent exceedance daily mean discharge is greater than 1,000 ft^3/s from May 13 through May 16 and greater than 500 ft^3/s from April 14 through July 7, July 18-29, and August 2-6. The 10-percent exceedance daily mean discharge (table 12) is greater than 1,000 ft^3/s on any individual day from April 16 through May 29.

The median discharge at Ashton ranges from 0.1 ft^3/s on January 31 to 399 ft^3/s on May 13 and is less than 10 ft^3/s from August 31 through March 19. As with the previous stations, zero flow has occurred on each day of the year sometime during the period of record. Zero flow was recorded at Ashton for 590 consecutive days from August 14, 1958, through March 25, 1960.

James River near Redfield

The duration hydrograph for the James River near Redfield (station no. 06475000) is presented in figure 5. The hydrograph is based on 29 years of discharge record (water years 1957 through 1985).

The bankfull capacity between Ashton and Redfield has been estimated to be as little as 800 ft^3/s (Benson, 1983). The 20-percent exceedance daily mean discharge exceeds 800 ft^3/s for 61 days from April 3 through June 2 (table 13 in the Supplemental Information section). Thus, flow exceeding bankfull capacity between Ashton and Redfield can be expected to occur on any given day between April 3 and June 2 an average of at least once every 5 years. The 10-percent exceedance daily mean discharge exceeds 800 ft^3/s from March 20 through June 7, June 14, June 17-19, June 21 through July 7, and July 13-17.

The median discharge at the gage near Redfield ranges from 1.5 ft^3/s on February 1 to 434 ft^3/s on May 17 and the discharge is less than 10 ft^3/s from January 6 through March 11 and from September 19 through November 23. Zero flow at the gage near Redfield has never occurred during the periods April 5 through May 13, May 17-19, and May 23-24 although the discharge has been less than 3 ft^3/s during these periods. Zero flow was recorded at Redfield from August 15, 1958, through March 1, 1959 (199 consecutive days), and from June 11, 1959, through March 26, 1960 (290 consecutive days).

James River at Huron

The duration hydrograph for the James River at Huron (station no. 06476000) is presented in figure 6. The hydrograph is based on 39 years of discharge record (water years 1947 through 1985).

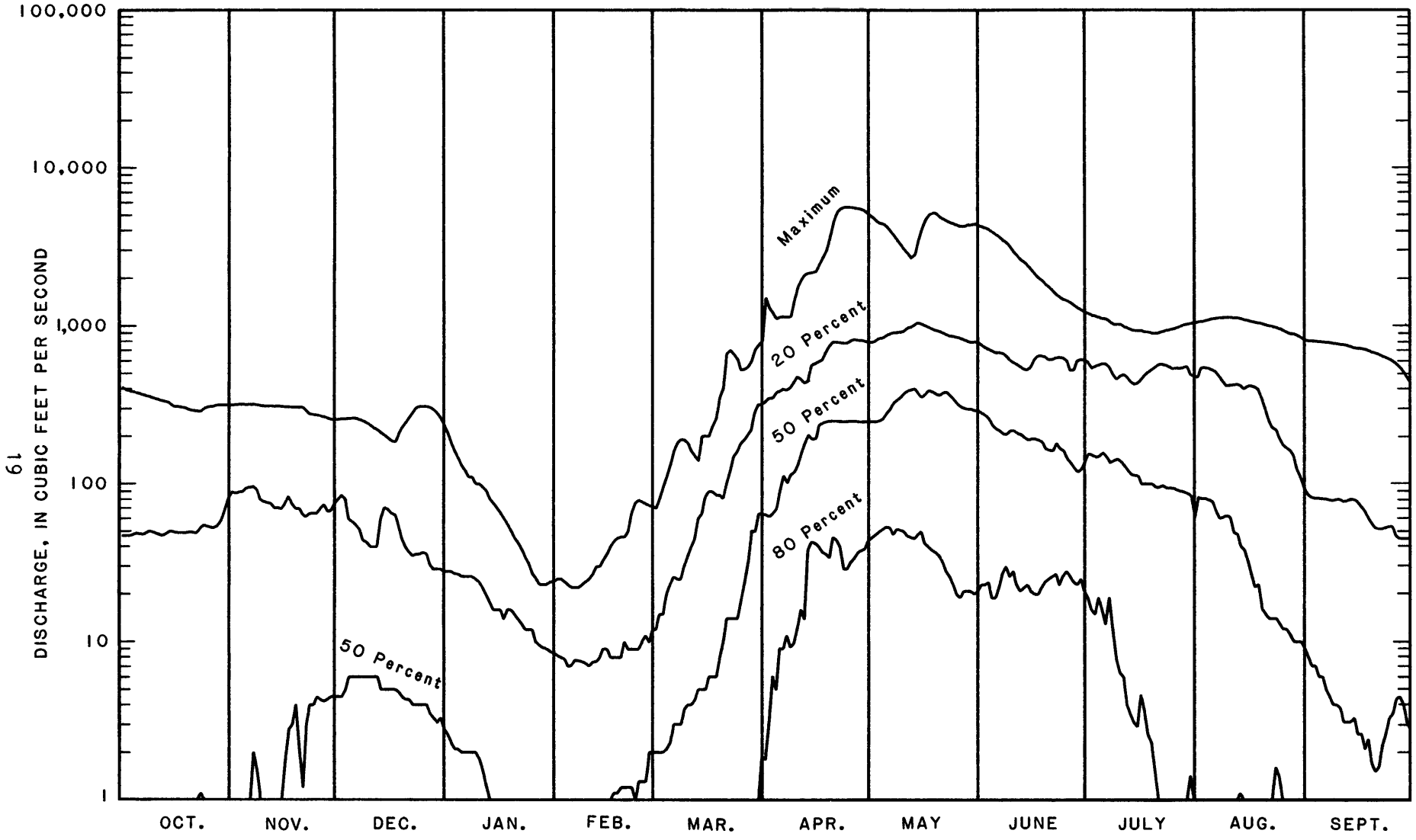

Figure 4.--Duration hydrograph for daily discharges of the James River at Ashton, water years 1947-85.

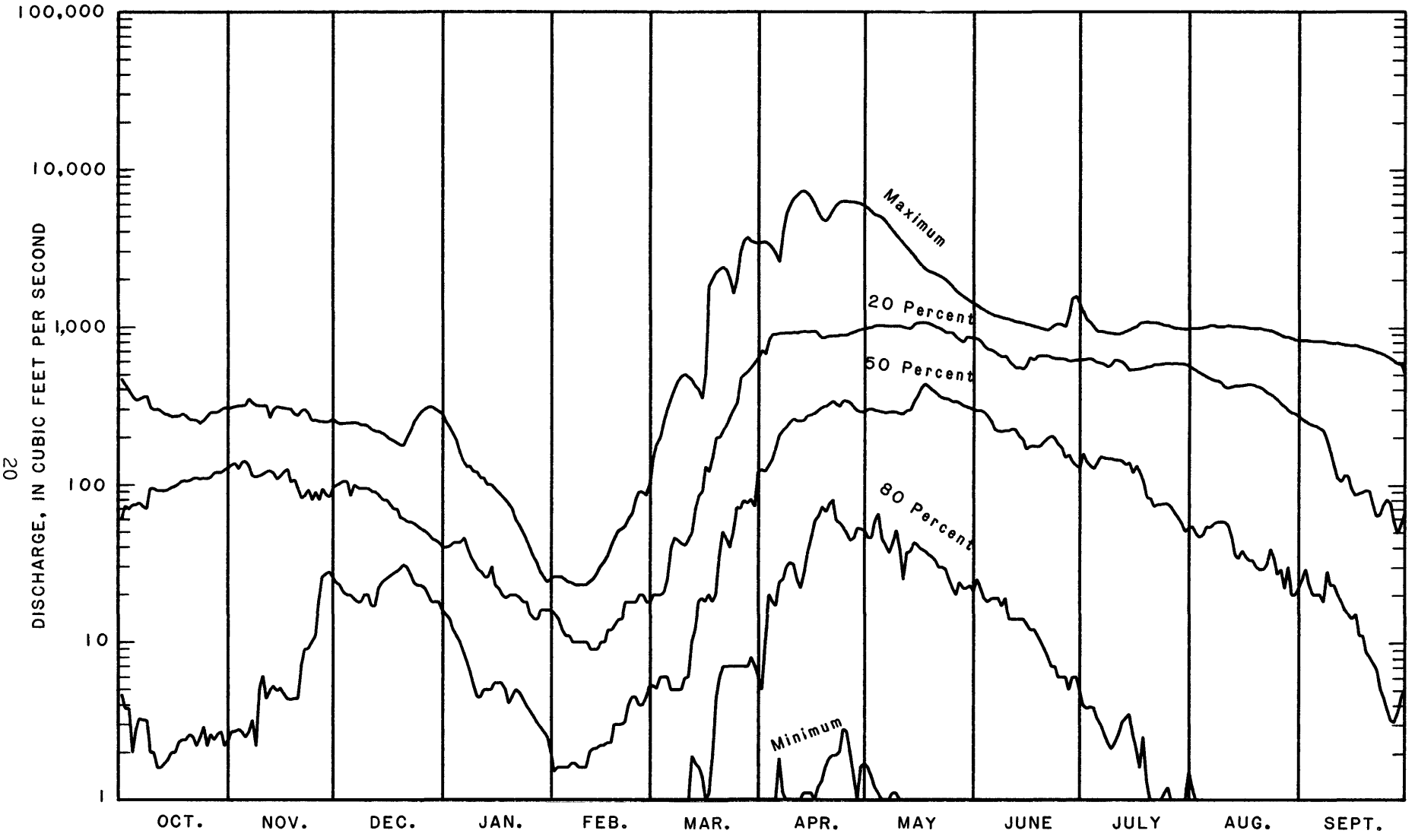

Figure 5.--Duration hydrograph for daily discharges of the James River near Redfield, water years 1957-85.

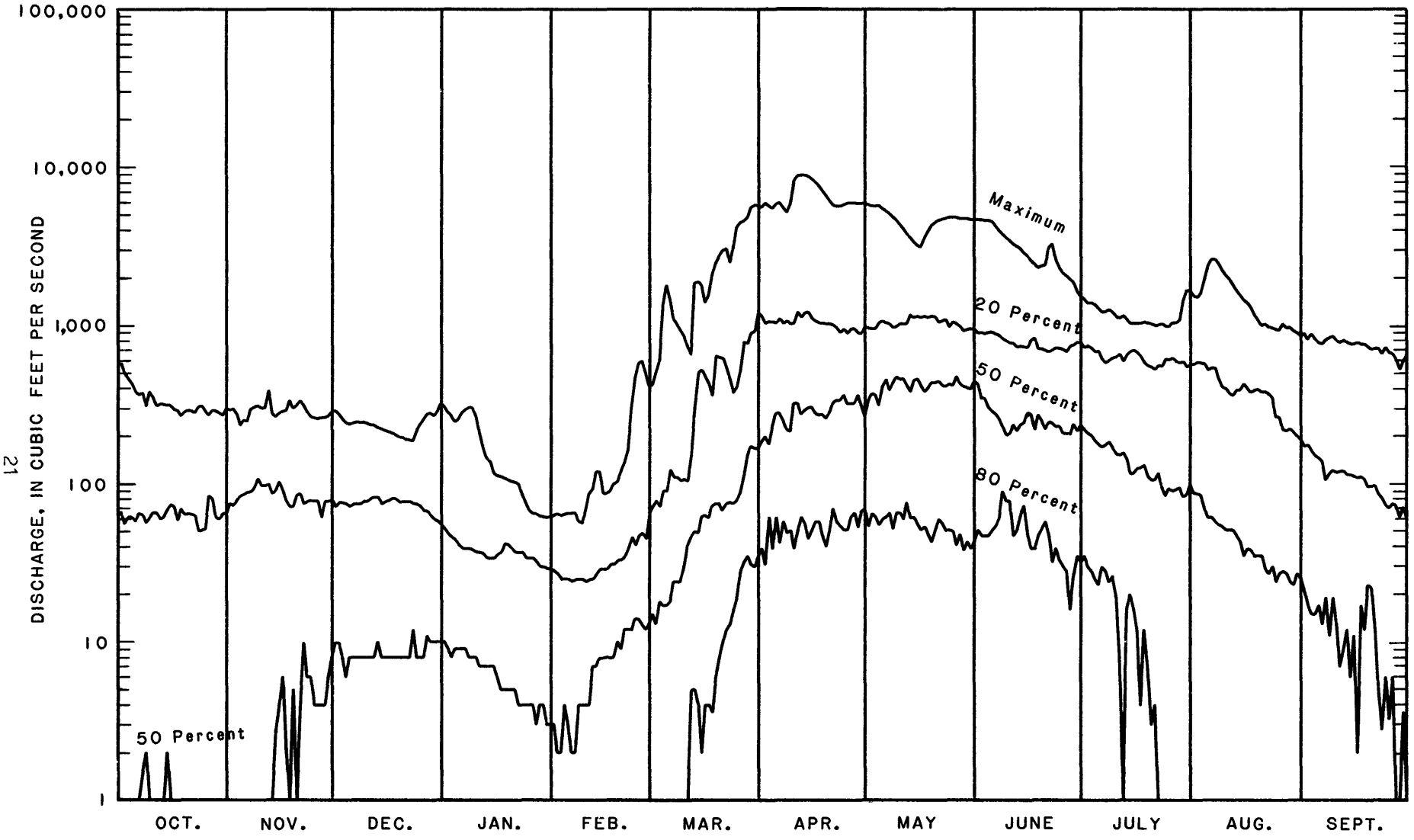

Figure 6.--Duration hydrograph for daily discharges of the James River at Huron, water years 1947-85.

Much of the reach between Redfield and Huron is in backwater from the James Diversion Dam or from the Third Street Dam. The bankfull capacity between the James Diversion Dam and the gage at Huron is about 3,800 ft^3/s (Missouri River Basin Commission, 1980a). The duration hydrograph indicates that maximum daily mean discharges exceeding bankfull capacity have occurred during the period March 25 through May 12 and during May 18 through June 8. The 20-percent exceedance daily mean discharge does not exceed 3,800 ft^3/s and the 10-percent exceedance daily mean discharge only exceeds 3,800 ft^3/s on April 7 (table 14 in the Supplemental Information section).

The median discharge at Huron ranges from zero on many days in October and November to 478 ft^3/s on May 9 and May 26 and is less than 20 ft^3/s from September 2-18 and from September 21 through March 6. Zero flow was recorded on each day of the year sometime during the analysis period.

James River near Forestburg

The duration hydrograph for the James River near Forestburg (station no. 06477000) is presented in figure 7. The hydrograph is based on the 29 years of discharge record from water year 1957 through water year 1985.

The bankfull capacity between Huron and Forestburg is estimated to be as little as 1,200 ft^3/s (Benson, 1983). The 20-percent exceedance daily mean discharge equals or exceeds 1,200 ft^3/s during March 29 through April 1, April 13-20, May 9-10, and May 17-18 (table 15 in the Supplemental Information section). The 10-percent exceedance daily mean discharge equals or exceeds 1,200 ft^3/s during March 14 through June 11 and June 19-29.

The median discharge at the gage near Forestburg ranges from 8 ft^3/s on October 2 to 438 ft^3/s on May 27 and exceeds 50 ft^3/s from March 12 through August 2 and August 9-10. Zero flow has been recorded on July 1-2, July 6 through August 2, and August 4 through March 10.

James River near Scotland

The duration hydrograph for the James River near Scotland (station no. 06478500) is presented in figure 8. The hydrograph is based on the 49 years of discharge record from water year 1937 through 1985.

The bankfull capacity of the James River between Forestburg and Scotland ranges from 2,000 to 3,400 ft^3/s (Missouri River Basin Commission, 1980a). Discharges exceeding 3,400 ft^3/s have been recorded on March 15-17 and March 20 through July 22 (table 16 in the Supplemental Information section). The 10-percent exceedance daily mean discharge exceeds 3,400 ft^3/s during March 28 through April 23 and June 12-13. Daily mean discharges equal to or greater than 2,000 ft^3/s have been recorded during March 3 through July 29, August 10-14, and August 20. The 20-percent exceedance discharge equals or exceeds 2,000 ft^3/s during March 27 through April 22 and the 10-percent exceedance discharge equals or exceeds 2,000 ft^3/s during March 19 through June 8 and June 10 through July 3.

The median discharge at the gage near Scotland ranges between 24 ft^3/s (October 22) and 864 ft^3/s (March 30) and exceeds 100 ft^3/s from March 9 through August 9. Zero flow has been recorded during January 30 through February 4, August 4 through September 1, and September 5 through December 4.

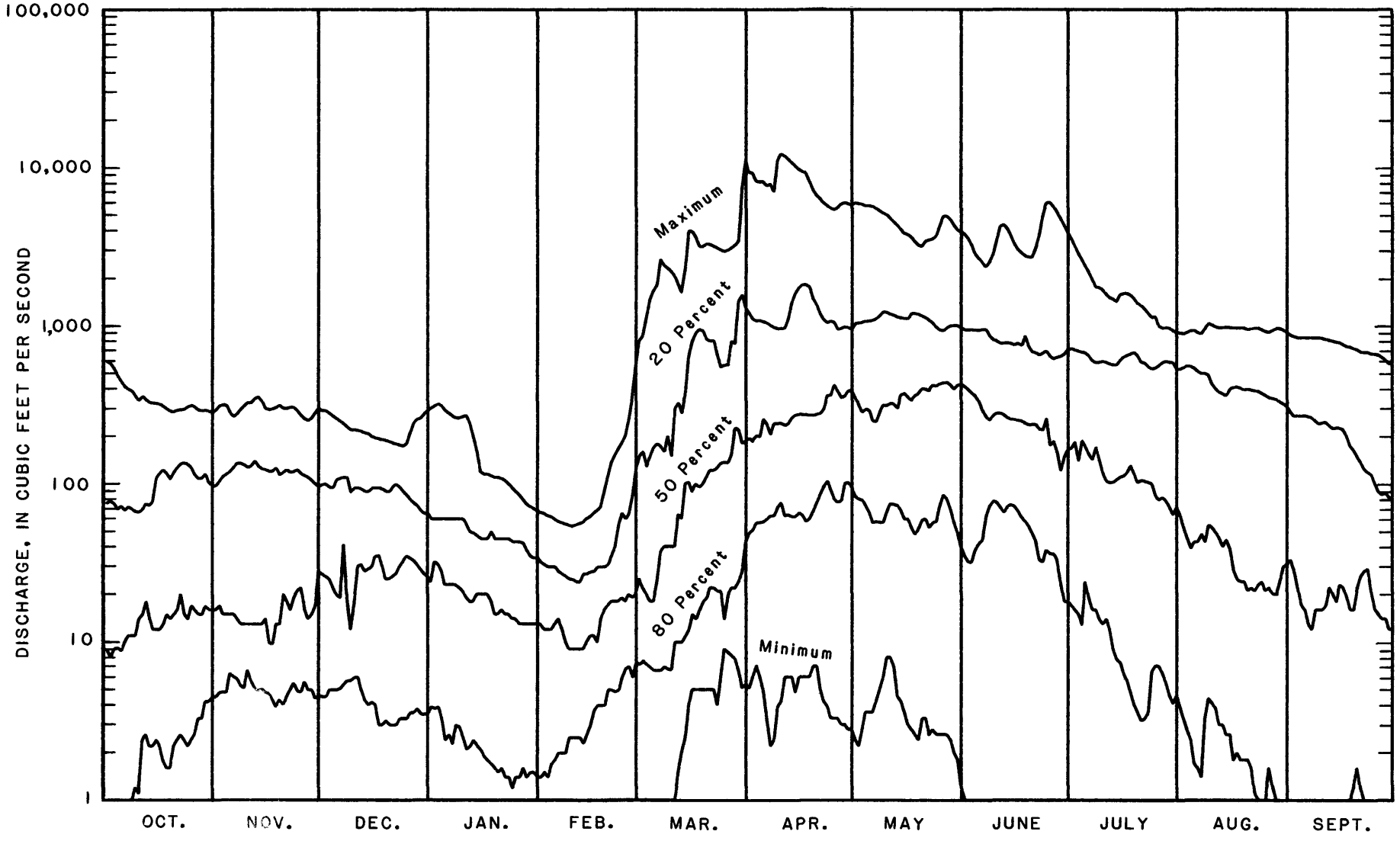

Figure 7.--Duration hydrograph for daily discharges of the James River near Forestburg, water years 1957-85.

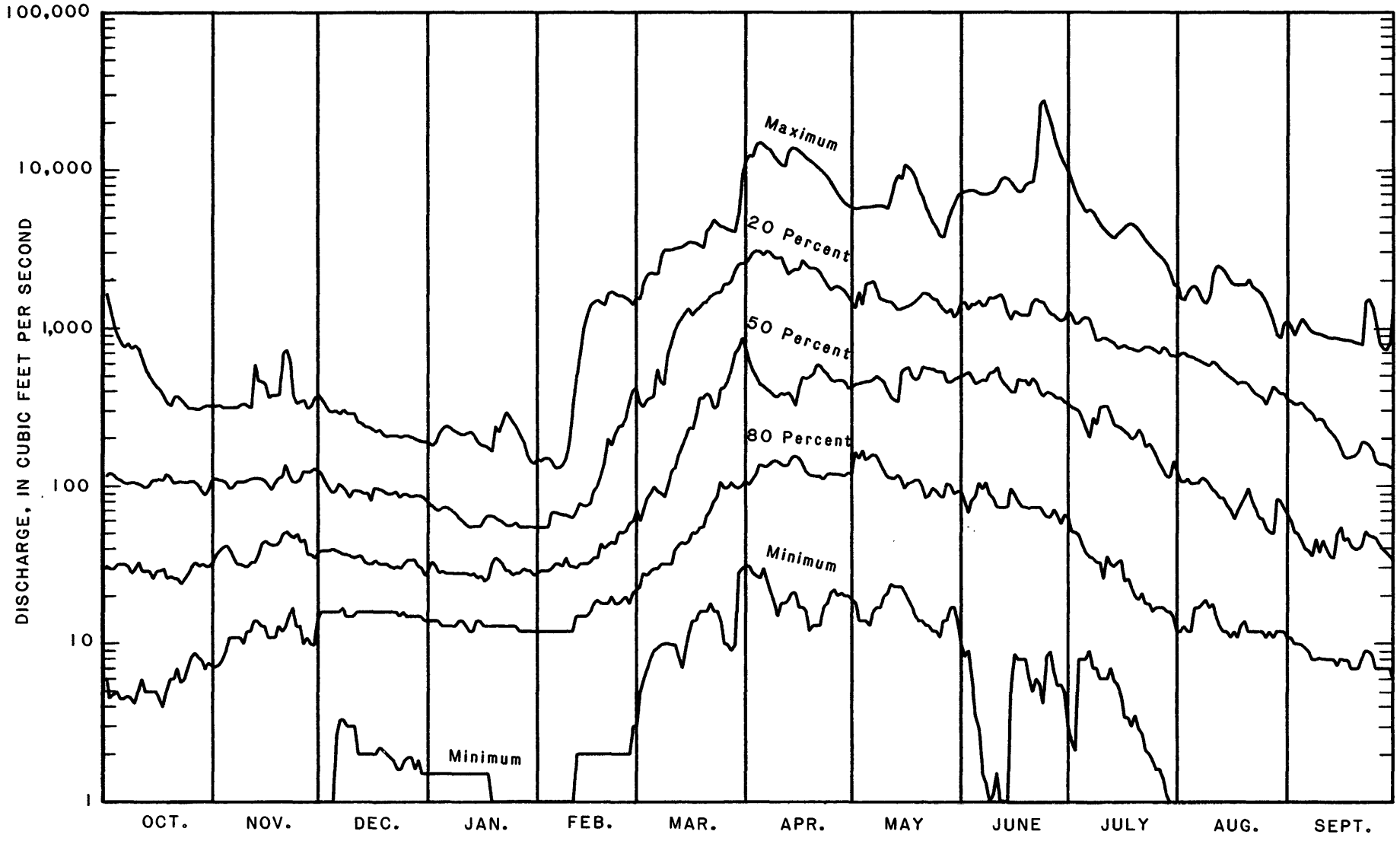

Figure 8.--Duration hydrograph for daily discharges of the James River near Scotland, water years 1937-85.

Summary of Analysis of Flow Duration

The duration hydrographs for the James River main-stem gaging stations indicate that the river has potential for relatively high flows during spring from snowmelt and during early summer from thunderstorms. The hydrographs also indicate that the river has extended periods of no flow from late summer until spring snowmelt. Upstream from Redfield, zero-flow conditions have occurred on the James River within South Dakota in excess of an entire year.

The use of the duration hydrograph analysis in conjunction with bankfull capacity data provides a tool to evaluate the potential flooding effects of additional flows in the James River. For instance, the importation of additional flow into the river reduces the river's capability to convey natural flows by a volume equal to the imported flow. Therefore, the duration of flooding subsequent to flow importation can be analyzed by subtracting the imported flow from the bankfull capacity and then comparing this to the applicable duration hydrograph (Benson, 1983). For example, importation of 100 ft^3/s of flow would impair the river's capability to convey natural flows by that same 100 ft^3/s. In an area where the bankfull capacity is as little as 200 ft^3/s (such as between Columbia and Stratford), the importation of 100 ft^3/s would reduce the river's capacity to convey natural flows from 200 to 100 ft^3/s. From figure 3 and table 11, the time during which the 5-year daily mean discharge (20-percent exceedance probability) exceeds bankfull discharge would be increased from 147 days (March 24 through August 17) to 153 days (March 21 through August 20). The impact on the median discharge (50-percent exceedance probability) would be much greater in that the number of days with discharge equal to or greater than 200 ft^3/s would be increased from 23 to 94 days. Where the bankfull capacity is as little as 500 ft^3/s (such as between Stratford and Ashton), importation of 100 ft^3/s of flow into the river would reduce the river's capacity to convey natural flows from 500 to 400 ft^3/s. From figure 4 and table 12, the time during which the 5-year daily mean discharge exceeds bankfull discharge would be increased from 102 days (April 14 through July 7, July 18-29, and August 2-6) to 132 days (April 6, April 8 through August 13, and August 15-17). Similar comparisons can be made for other imported flow amounts and at other locations.

ANALYSIS OF CHANNEL-FORMING FLOW

Factors Affecting Channel Formation

The shape of the cross section of a river channel at any location is a function of the flow, the quantity and character of the sediment moving through the section, and the character and composition of the materials making up the bed and banks of the channel. The shape of a channel as viewed from above, referred to as channel pattern, is closely related to the amount and character of the available sediment and to the quantity and variability of the discharge. River channels having a ratio of channel length to valley length (sinuousity) of greater than 1.5 are considered to be meandering (Leopold and others, 1964). The sinuousity of the James River in South Dakota is about 2.25. Chow (1964) states that at least four variables (valley slope, sediment load, discharge, and the characteristics of the bed and bank material) are known to control the shape of the channel and the process of meandering.

There is evidence to indicate that the channel pattern of the James River changes very slowly. With the exception of some isolated reaches where human modifications have been made to the channel alignment and where a few natural oxbow cutoffs have occurred, the current channel pattern is very similar to the pattern that existed more than 60 years ago. Examination of data presented by Reeves (1922) also indicates that the general character of cross sections of the James River channel through South Dakota in 1922 was similar to current conditions. Reeves states: "Through parts of Spink and Brown Counties the channel is so small and badly choked with trees, deadfall, and other obstructions that extensive clearing operations are necessary." Reeves further indicated that sandbars, deadfall, and other channel obstructions were present in the river channel in the southern portion of the State.

Although not specifically documented, local residents maintain that the bankfull capacity in many areas has decreased in recent years due to bank sloughing or to the accumulation of sediment. Areas of obvious siltation are usually found near the mouth of a tributary or upstream from obstructions such as rock dams and log jams.

It was beyond the scope of this study to determine the causes of bank sloughing or the sources of sediment reaching the James River, or the specific factors influencing deposition in the main channel. Rather, the objective was to attempt to identify discharges most responsible for the present channel configuration of the James River in South Dakota. Ideally, this would involve the determination of a "dominant" or an "effective" discharge. Dominant discharge is defined as "a discharge that molds a riverbed" (Johnson, 1970) and effective discharge is defined as "a discharge that maintains the present channel cross section" (Karlinger and others, 1983). Detailed sediment data are required to determine either of these discharges. However, sediment data have not been collected at the main-stem gaging stations on a regular basis, except for water years 1982 and 1983 when daily suspended sediment data were collected at the gages near Forestburg, Scotland, and Yankton (Little, 1983 and 1985).

Bankfull discharge at a river cross section is the flow that just fills the channel to the tops of the banks. Bankfull discharge is thought to also have an important influence on the cross-sectional shape and size of the channel (Williams, 1978). Determination of the bankfull capacity of the James River in South Dakota has been made by the U.S. Bureau of Reclamation (1977), the U.S. Army Corps of Engineers (Missouri River Basin Commission, 1980a), and the U.S. Geological Survey (Benson, 1983).

Because insufficient sediment data are available to determine a "dominant" or an "effective" discharge on the James River in South Dakota and because bankfull discharge is thought to also have an important influence on the channel cross section, frequency data (peak flow and maximum daily mean discharge during June, July, and August) and duration data for daily mean discharges were related to bankfull capacity to assess channel-forming flow.

Relation Between Bankfull-Capacity, Flood-Frequency, and Flow-Duration Data

Between Sand Lake and the confluence with the Elm River, the average bankfull capacity of the James River was estimated to be 200 ft^3/s (Missouri River Basin Commission, 1980a). The recurrence interval of a peak flow of

200 ft^3/s at the gage at Columbia is about 1.4 years (fig. 9). The recurrence interval of a maximum daily mean discharge of this magnitude during June, July, or August (that is, a summer discharge) is only slightly more than 2 years (fig. 17). The duration hydrograph (fig. 2) indicates that a daily mean discharge of 200 ft^3/s has at least a 20-percent chance of being equaled or exceeded on any one day during the 116-day period from April 7 through July 31 and has at least a 50-percent chance of being equaled or exceeded on any one day during the 28 days from April 16-19 and April 24 through May 17. The duration hydrograph for Columbia further indicates that a daily mean discharge of 325 ft^3/s can be expected to be equaled or exceeded an average of 1 year in 2 (50-percent flow) on May 10; on other dates the probability of exceedance is less than 1 in 2 years.

Between the Elm River and the gage near Stratford, the bankfull capacity was estimated to range between 200-300 and 700 ft^3/s (Benson, 1983). The recurrence interval of an instantaneous peak flow of 200 ft^3/s at the gage near Stratford is about 1.4 years and the recurrence interval of an instantaneous peak flow of 700 ft^3/s is about 3.4 years (fig. 10). The recurrence interval of a summer discharge (that is, maximum daily mean discharge during June, July, or August) of 200 ft^3/s at the gage near Stratford is about 1.7 years (fig. 18). The duration hydrograph for Stratford (fig. 3) indicates that a daily mean discharge of 200 ft^3/s has at least a 20-percent chance of being equaled or exceeded on any given day during the 147-day period from March 24 through August 17 and at least a 50-percent chance of being equaled or exceeded on any individual day from April 29 through May 15, May 17-18, and May 21-24 (23 days).

Between Stratford and the gage at Ashton, the bankfull capacity was estimated to range between 500 and 1,000 ft^3/s (Missouri River Basin Commission, 1980a). The recurrence interval of an instantaneous peak flow of 500 ft^3/s at the gage at Ashton is about 2.2 years and the recurrence interval of a 1,000 ft^3/s peak flow is about 4.2 years (fig. 11). A daily mean discharge of 500 ft^3/s has a 20-percent chance of being equaled or exceeded at Ashton on any one day from April 14 through July 7, July 18-29, and August 2-6 (102 days). The 50-percent discharge (median) does not equal or exceed 500 ft^3/s at Ashton. The duration hydrograph table for Ashton (table 12) shows that a daily mean discharge of 500 ft^3/s has a 10-percent chance of being equaled or exceeded on any one day from March 30 through August 17 (141 days).

Between Ashton and the gage near Redfield, the bankfull capacity was estimated to be as little as 800 ft^3/s (Benson, 1983). The recurrence interval of an instantaneous peak flow of 800 ft^3/s at the gage near Redfield is about 2.3 years (fig. 12). A daily mean discharge of 800 ft^3/s has at least a 20-percent chance of being equaled or exceeded on any one day from April 3 through June 2 (61 days). The 50-percent discharge (median) does not equal or exceed 800 ft^3/s at the gage near Redfield. The 10-percent discharge exceeds 800 ft^3/s for 106 days from March 20 through June 7, June 14, June 17-19, June 21 through July 7, and July 13-17 (table 13).

Most of the reach between Redfield and Huron is in backwater from the James Diversion Dam or the Third Street Dam. The 1979 bankfull capacity between the James Diversion Dam and the gage at Huron was estimated to be about 3,800 ft^3/s. The recurrence interval of an instantaneous peak flow of

3,800 ft^3/s at the Huron gage is about 8 years (fig. 13). The duration hydrograph analysis indicates that daily mean flows exceeding 3,800 ft^3/s have only been recorded at Huron during March 25 through May 12 and during May 18 through June 8. Table 14 shows that there is at least a 10-percent chance of a discharge of 3,800 ft^3/s being equaled or exceeded on only one day of the year (April 7). The 20-percent and 50-percent discharges do not exceed 3,800 ft^3/s at Huron.

The bankfull capacity between Huron and the gage near Forestburg was estimated to be as little as 1,200 ft^3/s (Benson, 1983). The recurrence interval of an instantaneous peak flow of 1,200 ft^3/s at the gage near Forestburg is about 2 years (fig. 14). Figure 7 shows that a daily mean discharge of 1,200 ft^3/s has at least a 20-percent chance of being equaled or exceeded on any given day during the 16 days from March 29 through April 1, April 13-20, May 9-10, and May 17-18. Table 15 shows that there is a 10-percent chance that the daily mean discharge will equal or exceed 1,200 ft^3/s at the gage near Forestburg on any given day from March 14 through June 11 and June 19-29 (101 days).

The bankfull capacity between Forestburg and the gage near Mitchell was estimated to range between 1,000 and 3,400 ft^3/s (Missouri River Basin Commission, 1980a). The recurrence interval for an instantaneous peak flow of 1,000 ft^3/s at the gage near Mitchell is about 1.4 years and for a peak flow of 3,400 ft^3/s is about 4.5 years (fig. 15). The duration hydrograph analysis was not made for the gage near Mitchell due to insufficient data.

The bankfull capacity of the James River between Mitchell and the gage near Scotland was estimated to range from 2,000 to 3,400 ft^3/s (Missouri River Basin Commission, 1980a). The recurrence interval for an instantaneous peak flow of 2,000 ft^3/s at the gage near Scotland is slightly less than 2 years and the recurrence interval for a peak flow of 3,400 ft^3/s at the gage near Scotland is slightly less than 3 years (fig. 16). There is at least a 20-percent chance that a daily mean discharge of 2,000 ft^3/s will be equaled or exceeded at the gage near Scotland on any given day during March 27 through April 22 (27 days) and at least a 10-percent chance that 2,000 ft^3/s will be equaled or exceeded on any individual day for 106 days from March 19 through July 3, excluding June 9 (table 16). The 50-percent discharge (median) does not exceed 2,000 ft^3/s.

Summary of Analysis of Channel-Forming Flow

Table 17 summarizes the recurrence intervals of peak discharges which produce bankfull conditions in the reach upstream of various gaging stations, as well as the number of days the daily mean discharge exceeds bankfull capacity for various exceedance probabilities.

As an explanation of the data in table 17, for the reach upstream from Columbia, the recurrence interval of an instantaneous peak discharge at Columbia which exceeds bankfull capacity (200 ft^3/s) is 1.4 years. There is at least a 10-percent chance that the daily mean discharge at Columbia will equal or exceed 200 ft^3/s for 154 days during the year, at least a 20-percent chance of equaling or exceeding 200 ft^3/s for 116 days, and at least a 50-percent chance that bankfull capacity will be exceeded for 28 days per year. Similar evaluations of the data for the other gaging stations can be made.

Table 17.--Recurrence interval of instantaneous peak flow equal to minimum bankfull capacity and days for which minimum bankfull capacity is equaled or exceeded for streamflow-gaging stations on the James River in South Dakota

James River gaging station	Minimum bankfull capacity, in cubic feet per second, in reach upstream from gage	Recurrence interval, in years, of peak flow equal to minimum bankfull capacity[1]	Days for which minimum bankfull capacity is equaled or exceeded for exceedance probability, in percent		
			10	20	50
at Columbia	200	1.4	154	116	28
nr Stratford	200	1.4	168	147	23
at Ashton	500	2.2	141	102	0
nr Redfield	800	2.3	106	61	0
at Huron	[2]3,800	[2]8.0	[2]1	[2]0	[2]0
nr Forestburg	1,200	2.0	101	16	0
nr Mitchell	1,000	1.4	[3]	[3]	[3]
nr Scotland	2,000	2.0	106	27	0

[1]Based on Water Resources Council Bulletin 17B flood-frequency analysis.
[2]Most of reach is in backwater from James Diversion Dam and Third Street Dam.
[3]Duration hydrograph analysis not performed due to lack of data.

In summary, flows which produce bankfull conditions occur quite frequently on the James River in South Dakota. The frequency of occurrence of bankfull flows on the James River suggests one of two things: (1) Channel formation is occurring almost continuously, or (2) channel formation is approaching an equilibrium condition. The slowness with which changes in channel configuration occur, as evidenced by the similarity between channel conditions which Reeves observed in 1922 and channel conditions which currently exist, would suggest an equilibrium condition.

The accumulation of sediment probably can be attributed to the flat slope of the James River. The slope of the river is so flat that velocities are not sufficient to carry the sediment being delivered to the river. Collection of detailed sediment data on the James River and on tributaries is necessary in order to ascertain the sources of sediment which are accumulating in the main channel. These sediment data would also facilitate a more detailed evaluation of "dominant flow" or "effective discharge" on the James River.

CONCLUSIONS

The flood-flow frequency data, when evaluated in conjunction with bankfull-capacity data, indicate that discharges that produce bankfull conditions occur an average of once in about 2 years. Furthermore, the frequency data indicate that the 10-year flood flows, which range from 1,620 cubic feet per second at the gage near Stratford to 8,870 cubic feet per second at the gage near Scotland, cause major flooding on most of the river in South Dakota.

The frequency analyses of maximum daily mean discharges during June, July, and August were conducted to facilitate Bureau of Reclamation evaluation of "summer" discharges. For the main-stem gaging stations, the 10-year maximum daily mean discharges during June, July, and August are of a similar magnitude to the 5-year instantaneous peak flow discharges.

The flood-flow frequency analyses of the gaged tributaries indicate that the tributaries have potential to contribute substantial flows to the main stem. For instance, the 2-year flow for the Elm River at Westport is 678 cubic feet per second, which equals or exceeds the bankfull capacity of the James River a few miles downstream from its confluence with the main stem. Evaluation of the flood-flow frequency data, in conjunction with bankfull capacity data, reveals other instances where the 2-year tributary flood flows are greater than the channel capacity of the main stem near their confluence.

Determination of the drainage area for the entire James River basin in South Dakota allowed for the extension of flood-flow frequency data from the gaging station location to the mouth for gaged tributaries and allowed for the determination of flood-flow frequency data for ungaged tributaries. The locations of some tributary gaging stations are such that adjustments as much as 13 to 23 percent are required to extend the tributary data from the gage to the mouth. The drainage area data allowed for the determination of frequency data for over 4,100 square miles of tributary drainage within South Dakota.

The duration hydrographs for the James River main-stem gaging stations indicate that the river has potential for relatively high flows during spring from snowmelt and during early summer from thunderstorms. In the vicinity of Columbia, there is a 50-percent chance that the bankfull capacity will be equaled or exceeded for 28 days per year, a 20-percent chance that bankfull capacity will be exceeded for 116 days per year, and a 10-percent chance that bankfull capacity will be exceeded for 154 days per year. Downstream, at the gage near Scotland, there is a 20-percent chance that bankfull capacity will be equaled or exceeded for 27 days per year and a 10-percent chance that bankfull capacity will be equaled or exceeded for 106 days per year. The hydrographs also indicate that the river has extended periods of no flow from late summer until spring snowmelt. Upstream from Redfield, zero-flow conditions have occurred on the river in excess of an entire year (623 consecutive days at Columbia, 601 consecutive days at the gage near Stratford, and 590 days at Ashton).

Evaluation of dominant discharge was limited by the lack of sediment data on the James River. An evaluation of channel-forming flow was conducted on the basis of an appraisal of discharge data in conjunction with channel capacity and channel geometry. An appraisal of channel cross sections and of the river pattern indicates that the frequent occurrence of bankfull conditions (an average of about every other year) is not causing substantial changes in the river cross section or pattern. This channel stability indicates that channel formation is approaching a state of equilibrium.

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SUPPLEMENTAL INFORMATION

Frequency curves for instantaneous peak flow in the James River at eight locations

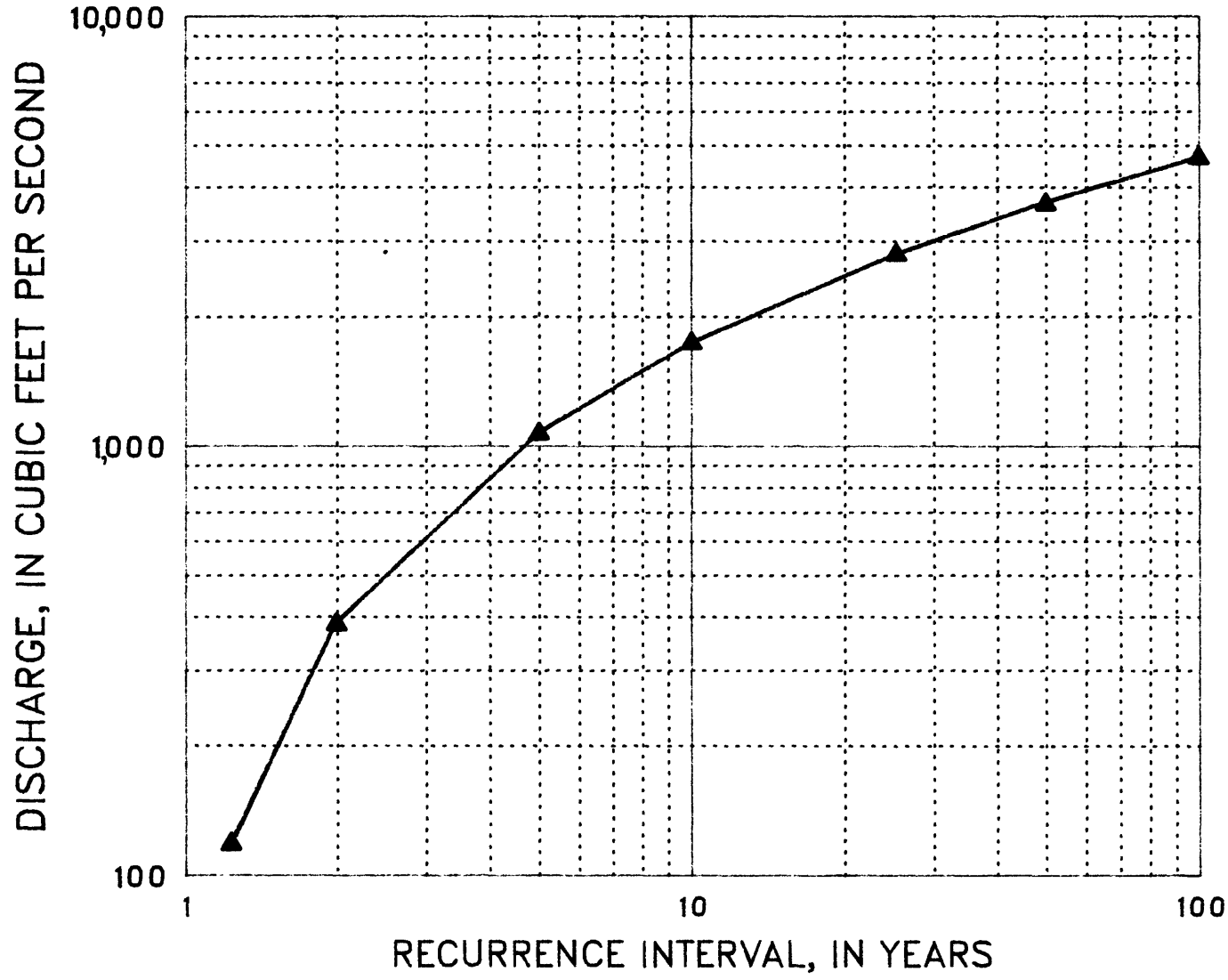

Figure 9.--Frequency curve for instantaneous peak flow for the James River at Columbia (station 06471000).

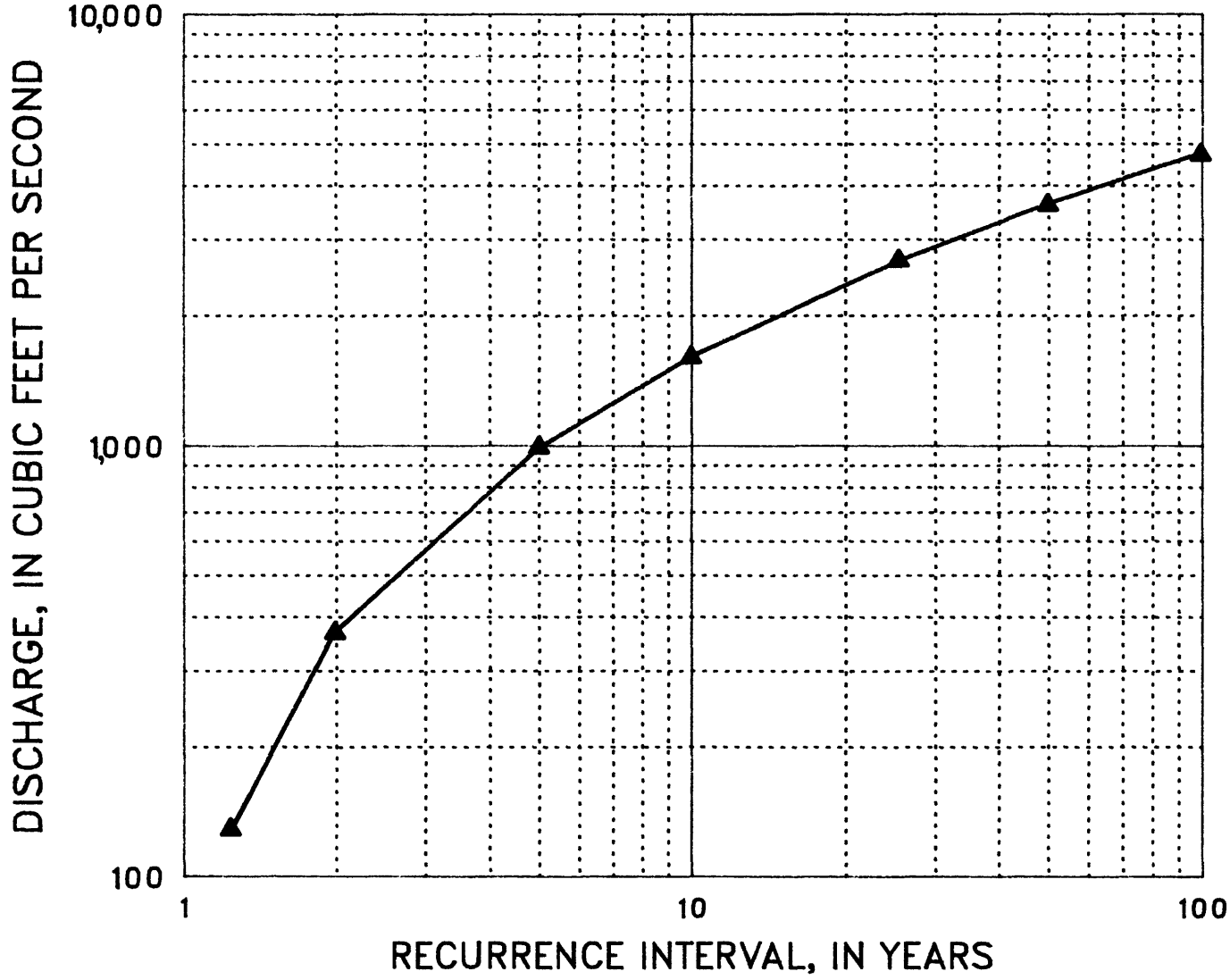

Figure 10.--Frequency curve for instantaneous peak flow for the James River near Stratford (station 06472000).

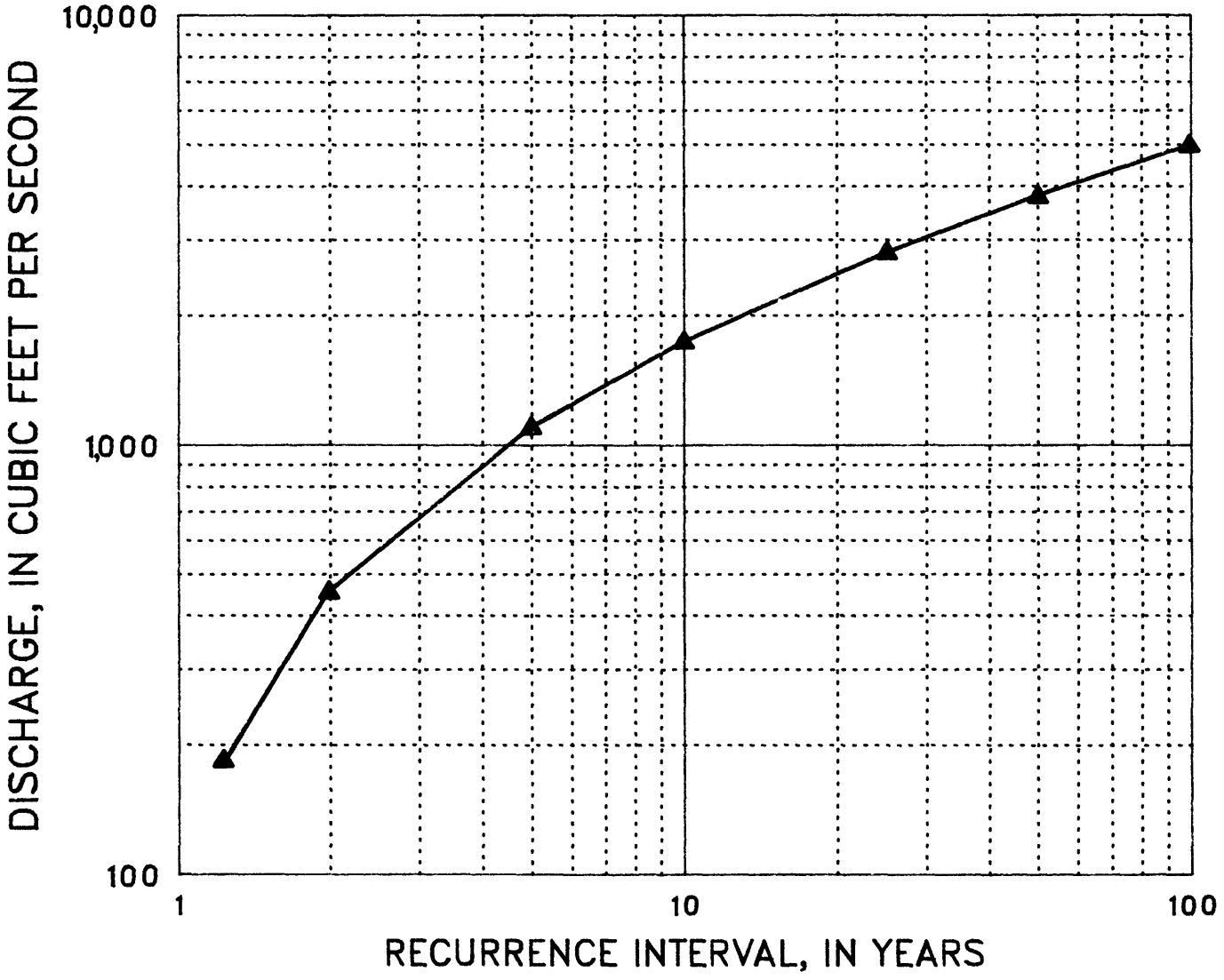

Figure 11.--Frequency curve for instantaneous peak flow for the James River at Ashton (station 06473000).

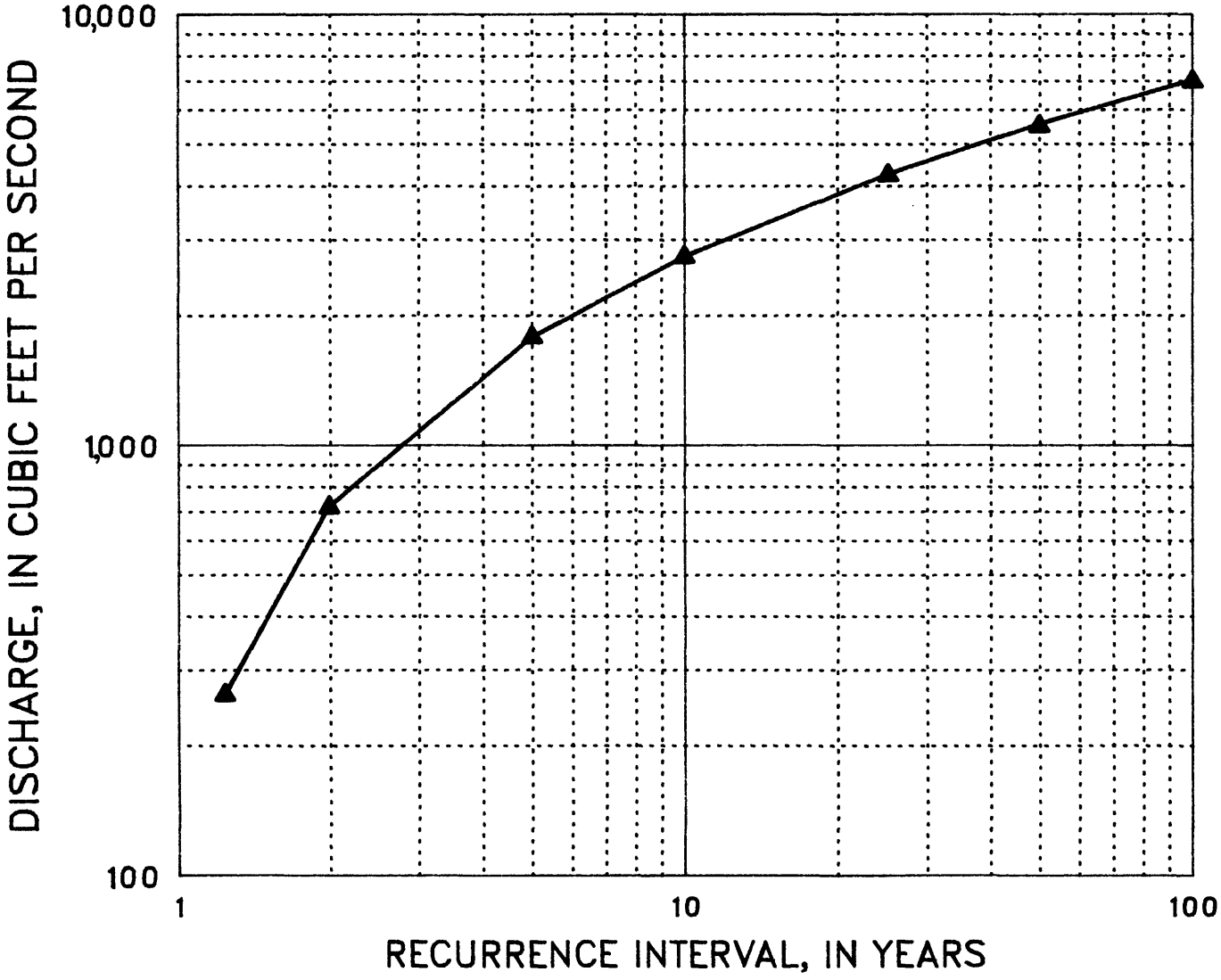

Figure 12.--Frequency curve for instantaneous peak flow for the James River near Redfield (station 06475000).

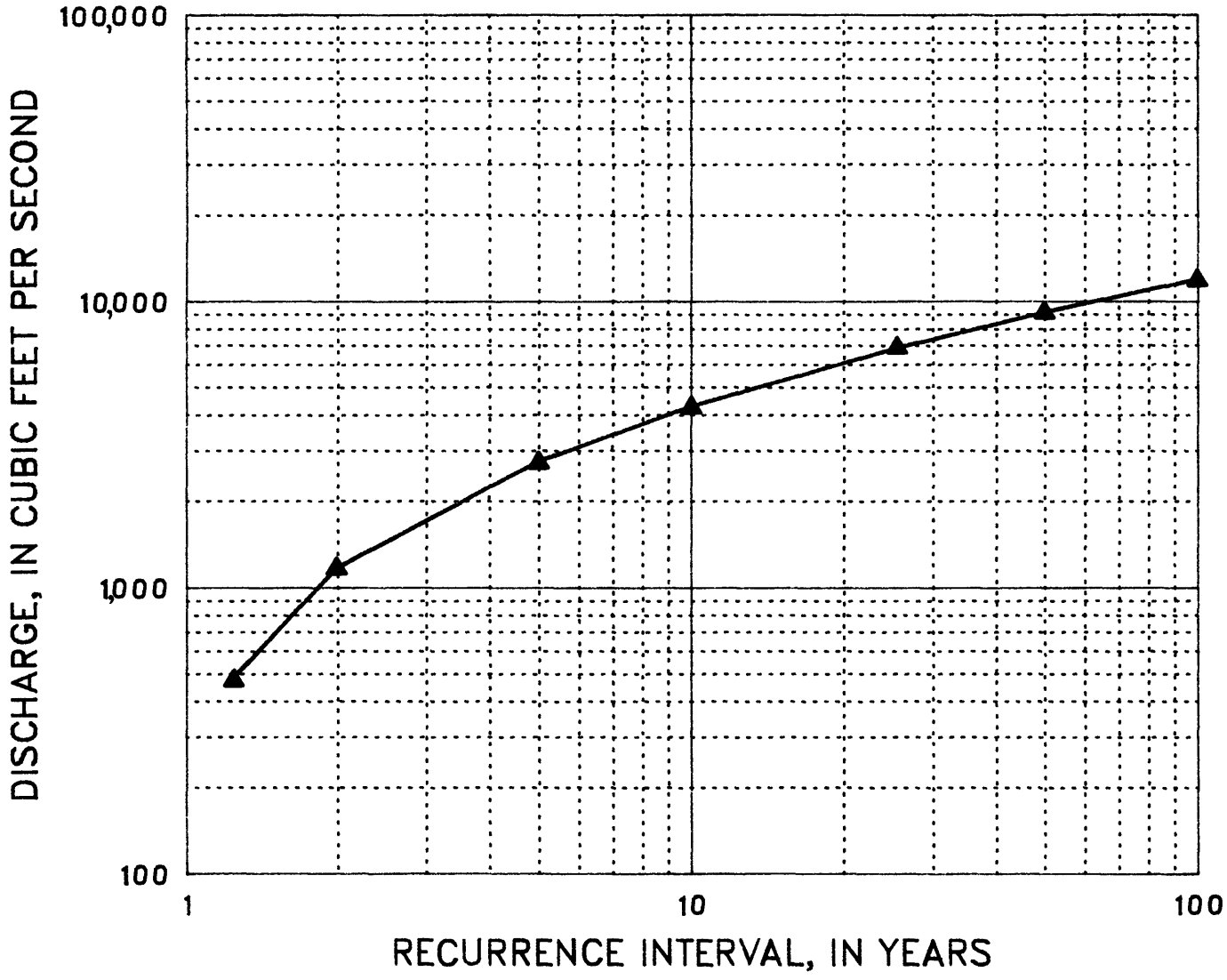

Figure 13.--Frequency curve for instantaneous peak flow for the James River at Huron (station 06476000).

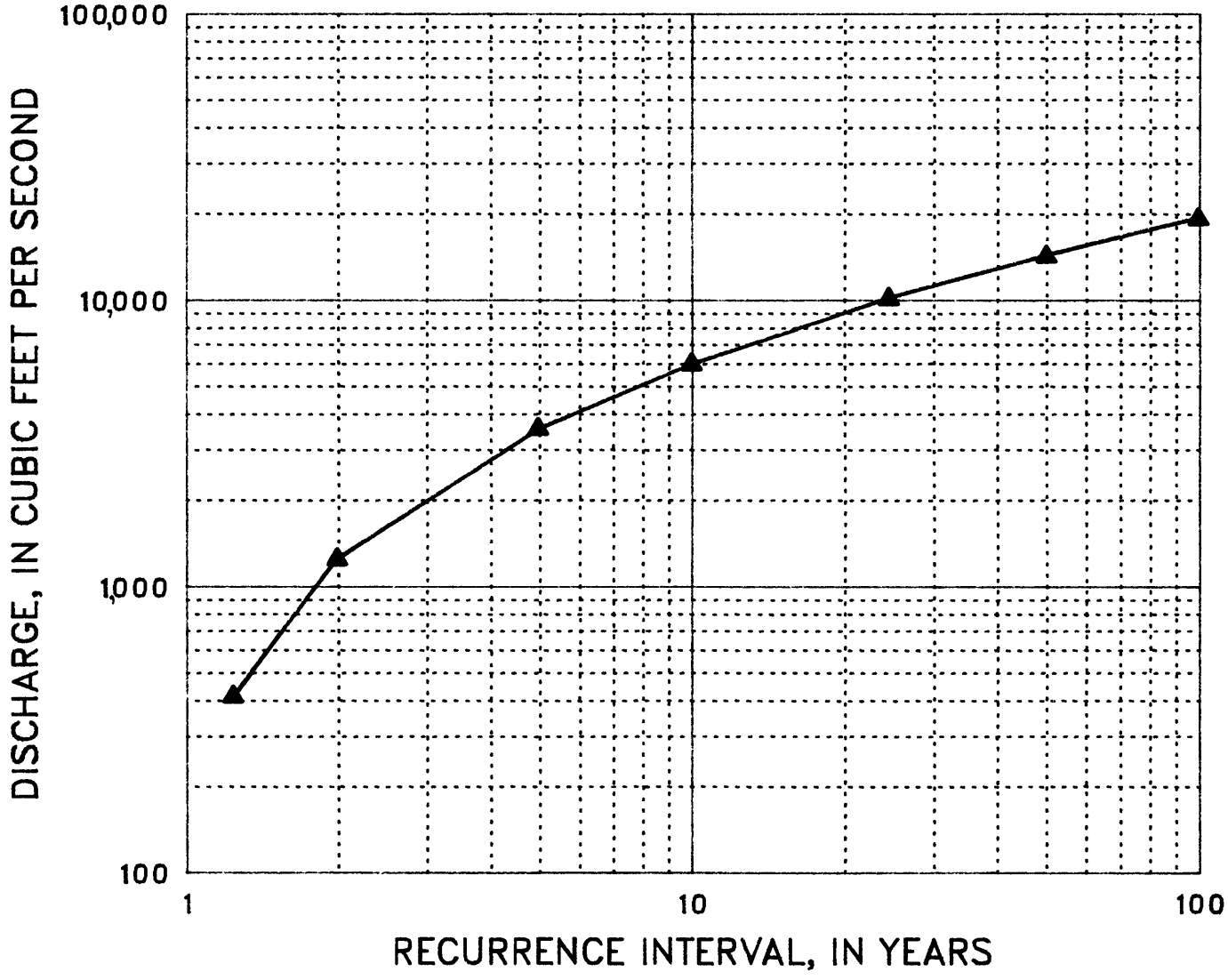

Figure 14.--Frequency curve for instantaneous peak flow for the James River near Forestburg (station 06477000).

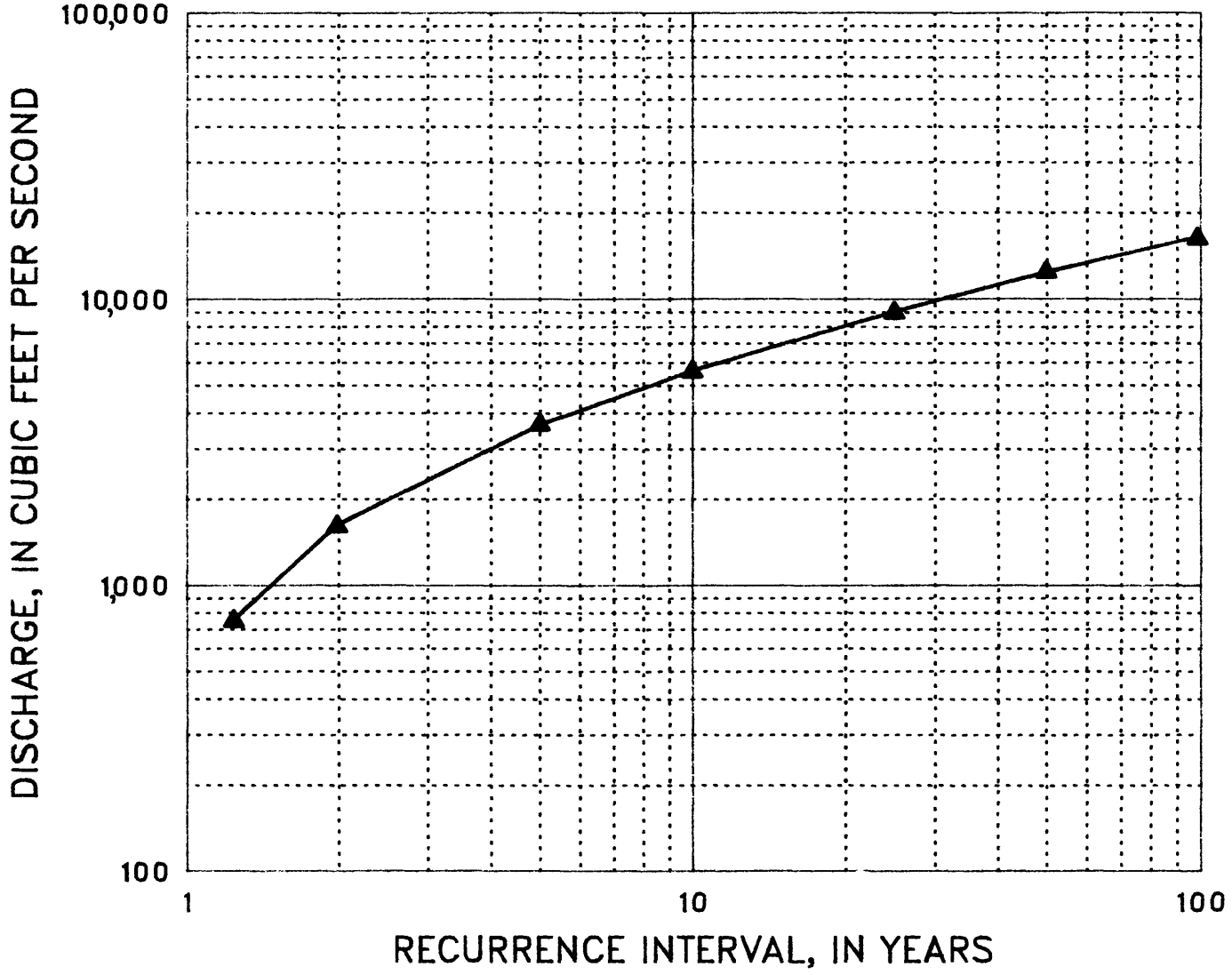

Figure 15.--Frequency curve for instantaneous peak flow for the James River near Mitchell (station 06478000).

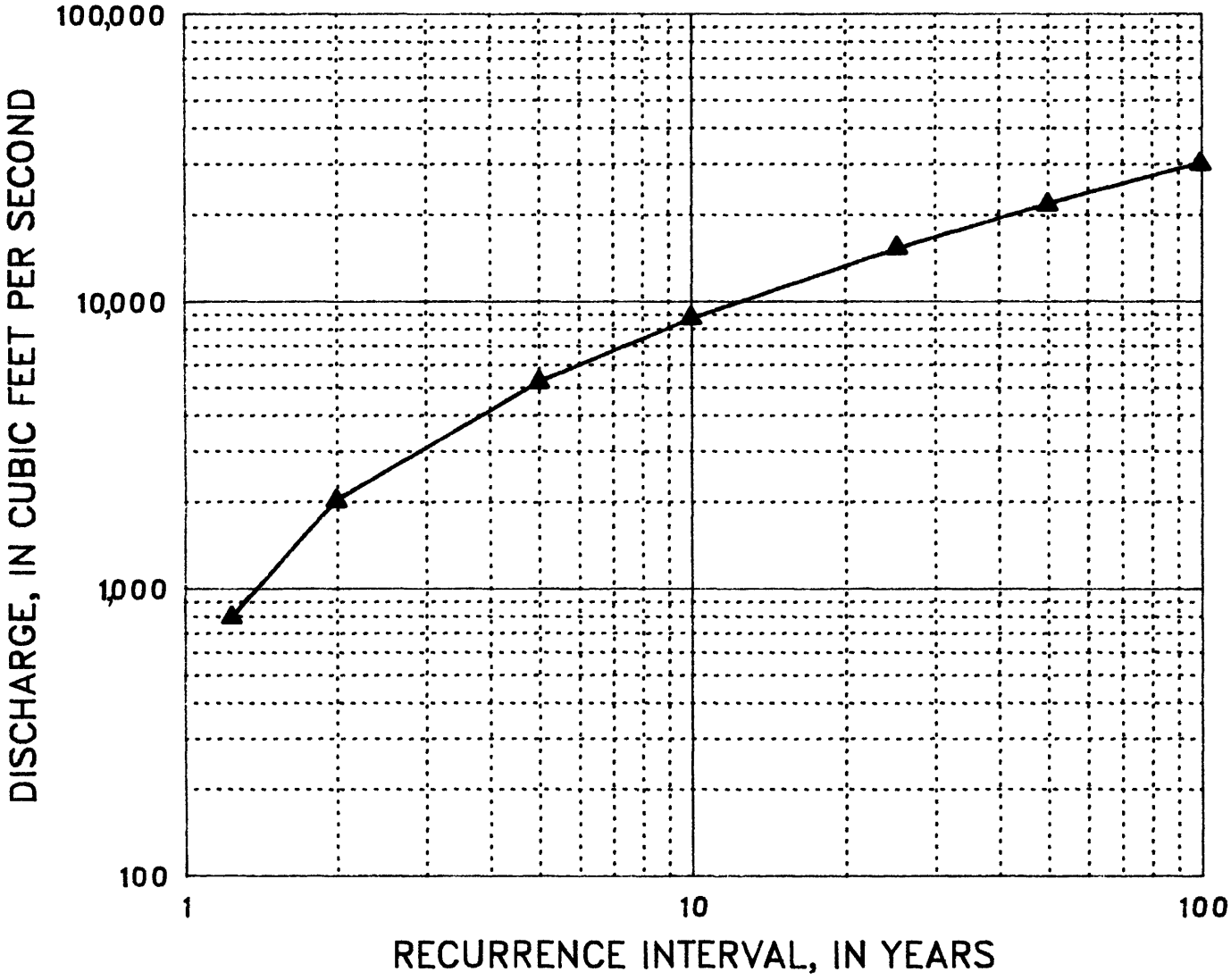

Figure 16.--Frequency curve for instantaneous peak flow for the James River near Scotland (station 06478500).

Frequency curves for maximum daily mean flow during June, July, and August in the James River at eight locations

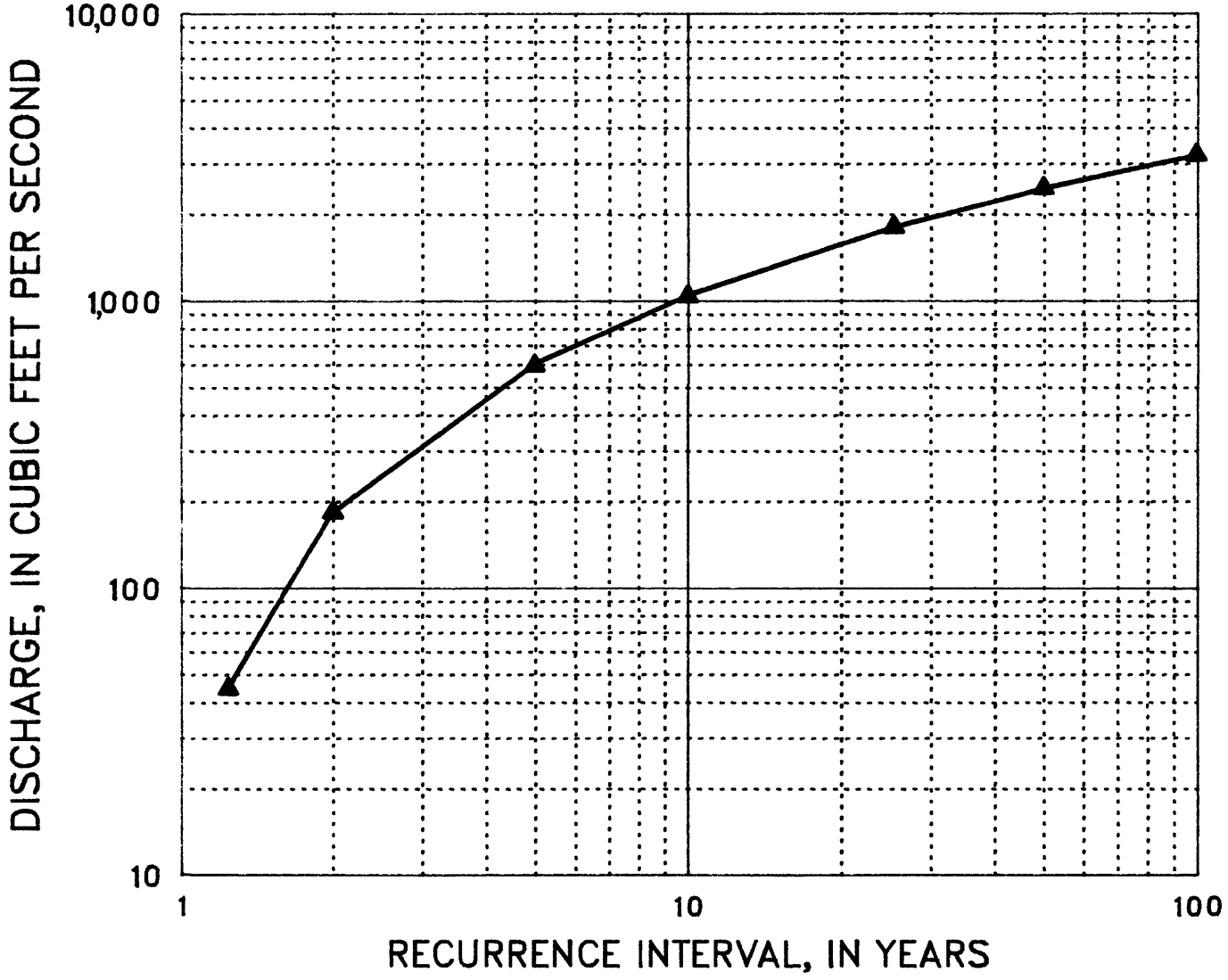

Figure 17.--Frequency curve for maximum daily mean flow during June, July, and August for the James River at Columbia (station 06471000).

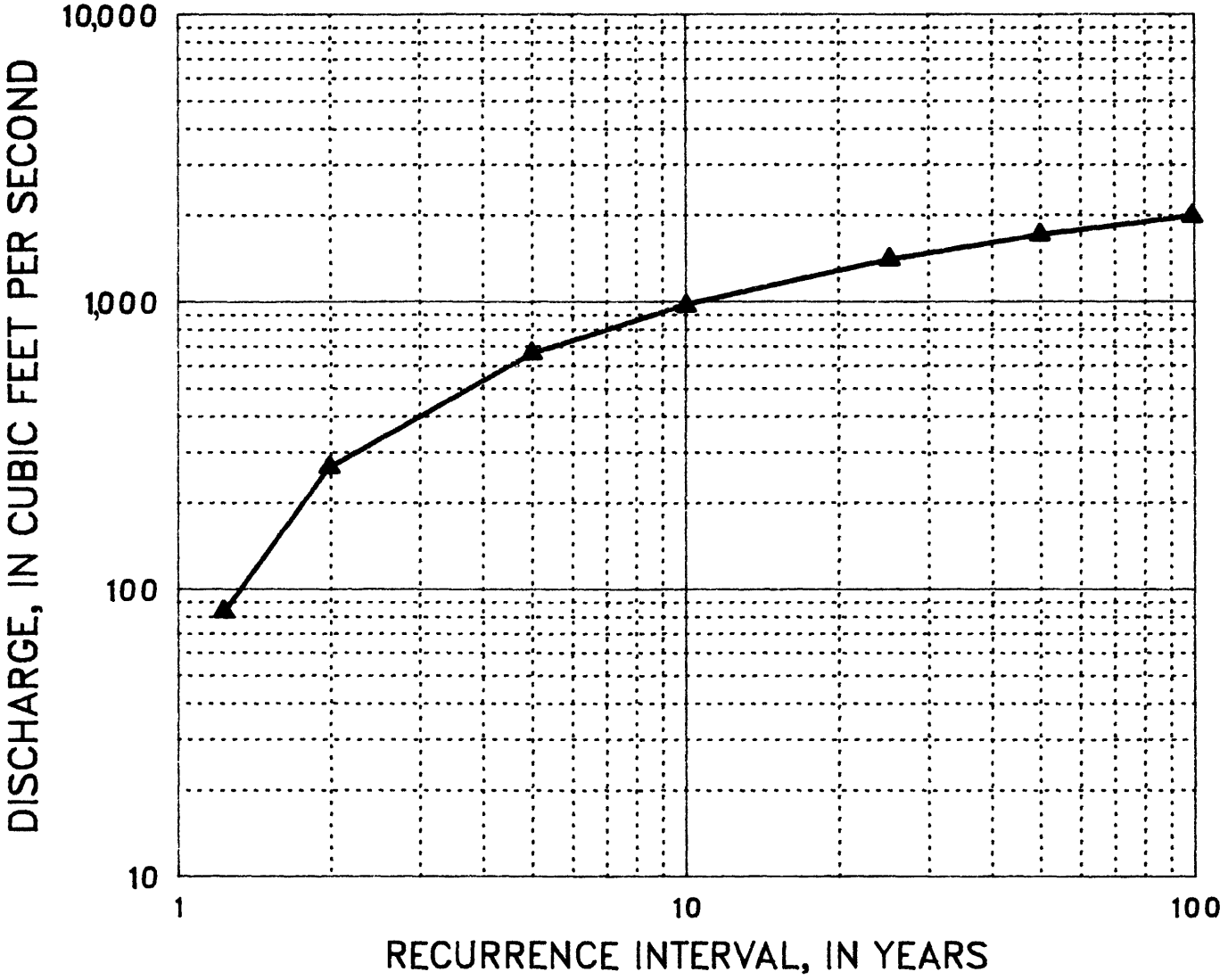

Figure 18.--Frequency curve for maximum daily mean flow during June, July, and August for the James River near Stratford (station 06472000).

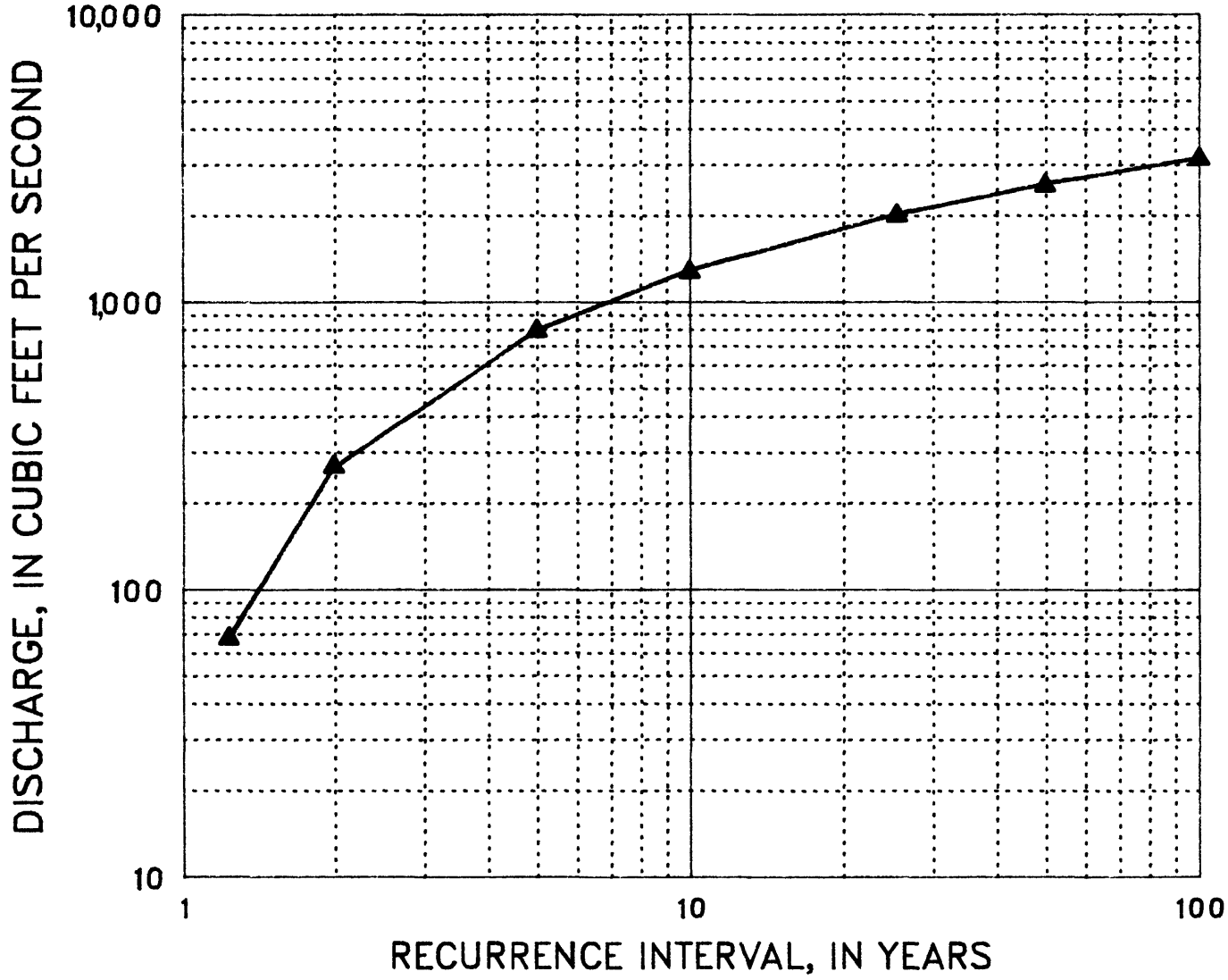

Figure 19.--Frequency curve for maximum daily mean flow during June, July, and August for the James River at Ashton (station 06473000).

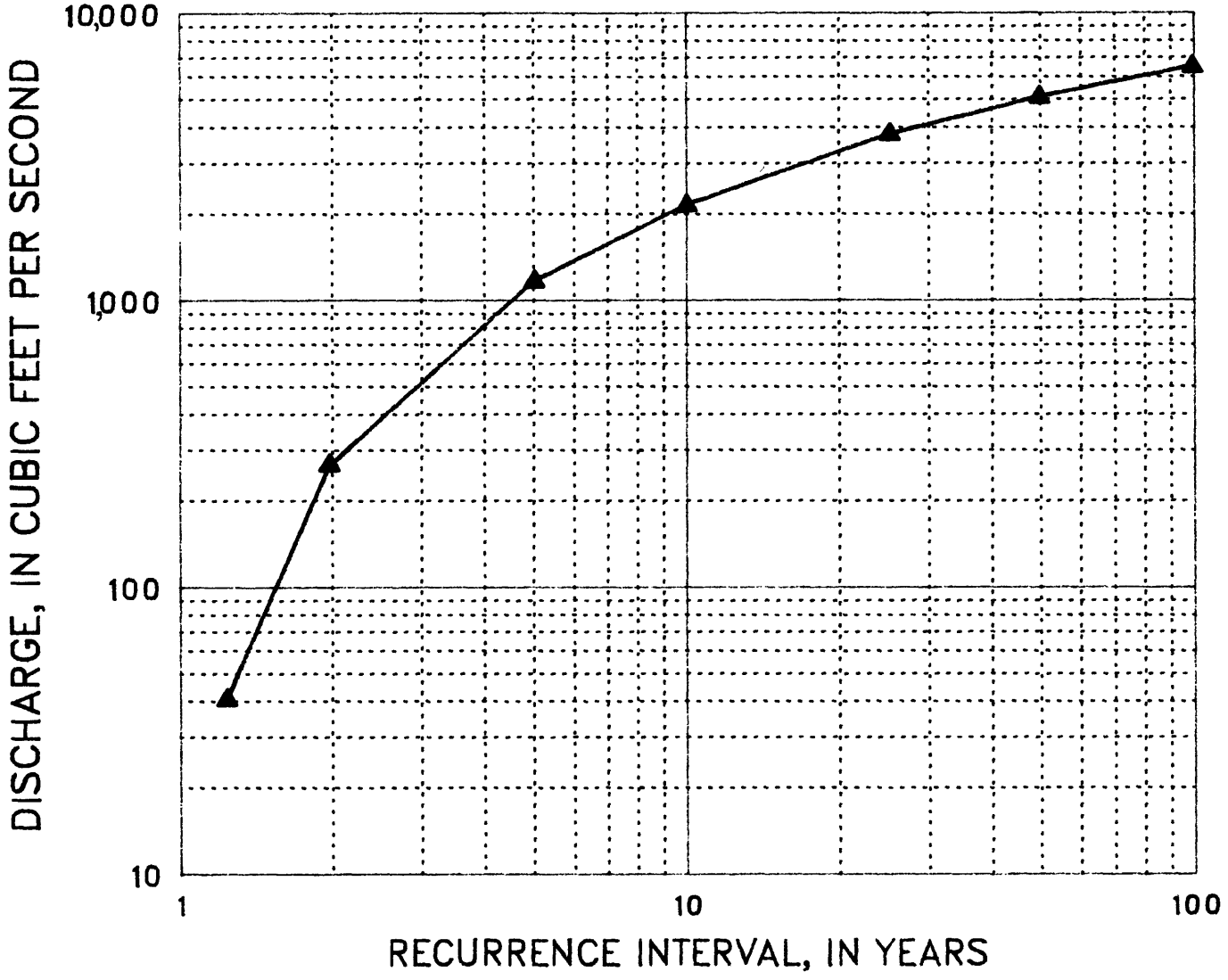

Figure 20.--Frequency curve for maximum daily mean flow during June, July, and August for the James River near Redfield (station 06475000).

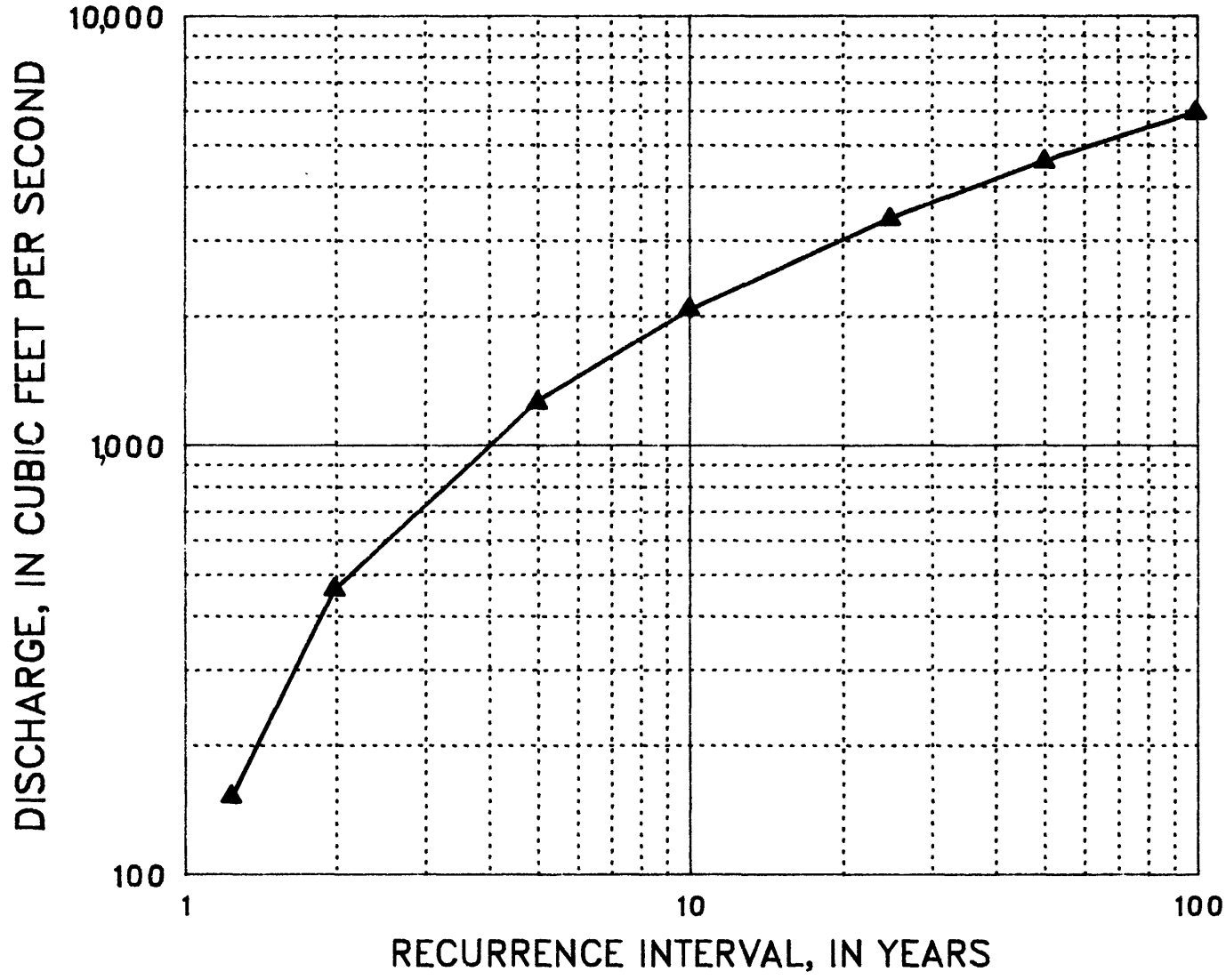

Figure 21.--Frequency curve for maximum daily mean flow during June, July, and August for the James River at Huron (station 06476000).

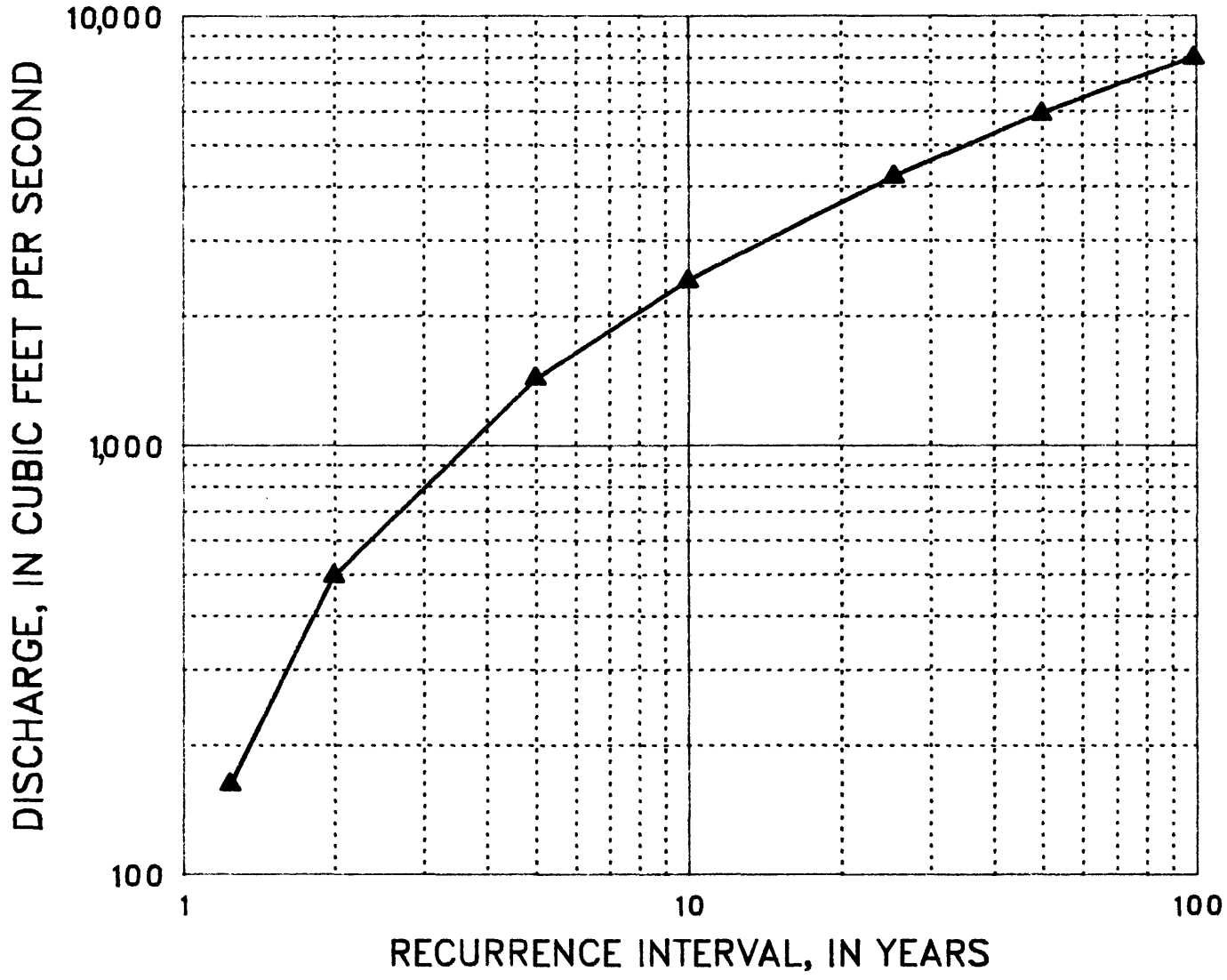

Figure 22.--Frequency curve for maximum daily mean flow during June, July, and August for the James River near Forestburg (station 06477000).

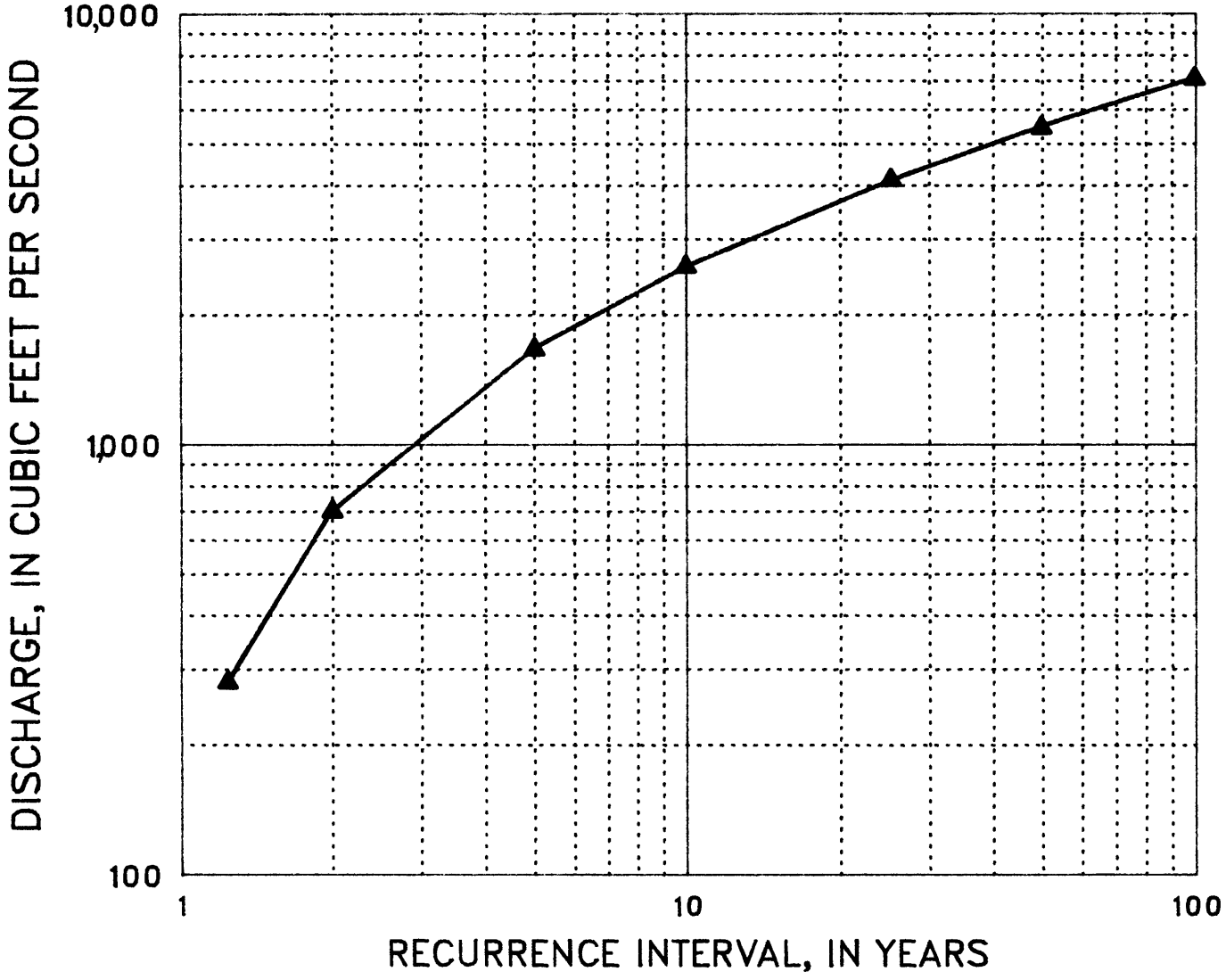

Figure 23.--Frequency curve for maximum daily mean flow during June, July, and August for the James River near Mitchell (station 06478000).

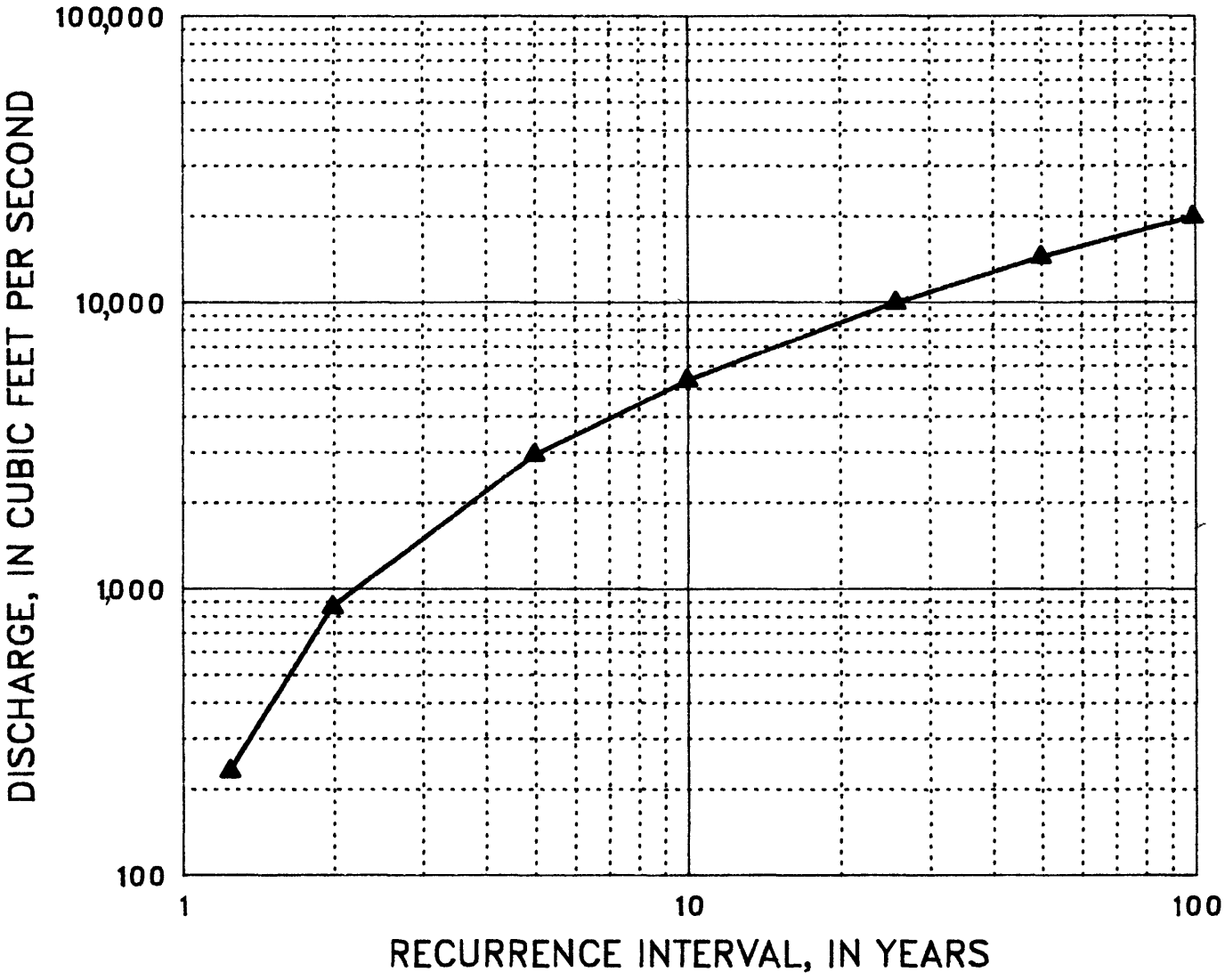

Figure 24.--Frequency curve for maximum daily mean flow during June, July, and August for the James River near Scotland (station 06478500).

Duration hydrograph tables for the James River at seven locations

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
10- 1	318.00	135.00	31.00	2.80	0.00	0.00	0.00	0.00	0.00
10- 2	315.00	140.00	31.00	2.40	0.00	0.00	0.00	0.00	0.00
10- 3	312.00	140.00	30.00	1.70	0.00	0.00	0.00	0.00	0.00
10- 4	309.00	138.00	29.00	1.70	0.00	0.00	0.00	0.00	0.00
10- 5	306.00	137.00	32.00	1.90	0.00	0.00	0.00	0.00	0.00
10- 6	302.00	135.00	28.00	3.90	0.00	0.00	0.00	0.00	0.00
10- 7	295.00	135.00	26.00	2.80	0.00	0.00	0.00	0.00	0.00
10- 8	285.00	131.00	30.00	2.30	0.00	0.00	0.00	0.00	0.00
10- 9	279.00	121.00	25.00	1.70	0.00	0.00	0.00	0.00	0.00
10-10	277.00	107.00	23.00	1.80	0.00	0.00	0.00	0.00	0.00
10-11	292.00	112.00	30.00	1.60	0.00	0.00	0.00	0.00	0.00
10-12	300.00	130.00	43.00	2.60	0.00	0.00	0.00	0.00	0.00
10-13	304.00	138.00	47.00	3.40	0.00	0.00	0.00	0.00	0.00
10-14	309.00	141.00	40.00	5.50	0.00	0.00	0.00	0.00	0.00
10-15	301.00	143.00	39.00	23.00	0.00	0.00	0.00	0.00	0.00
10-16	297.00	142.00	46.00	26.00	0.00	0.00	0.00	0.00	0.00
10-17	297.00	139.00	51.00	27.00	0.00	0.00	0.00	0.00	0.00
10-18	295.00	139.00	51.00	31.00	0.00	0.00	0.00	0.00	0.00
10-19	294.00	139.00	51.00	33.00	0.00	0.00	0.00	0.00	0.00
10-20	292.00	138.00	51.00	28.00	0.00	0.00	0.00	0.00	0.00
10-21	293.00	138.00	50.00	26.00	0.00	0.00	0.00	0.00	0.00
10-22	297.00	159.00	62.00	26.00	0.00	0.00	0.00	0.00	0.00
10-23	303.00	156.00	84.00	31.00	0.00	0.00	0.00	0.00	0.00
10-24	324.00	145.00	100.00	29.00	0.00	0.00	0.00	0.00	0.00
10-25	331.00	133.00	100.00	29.00	0.00	0.00	0.00	0.00	0.00
10-26	325.00	130.00	89.00	29.00	0.00	0.00	0.00	0.00	0.00
10-27	321.00	135.00	93.00	27.00	0.00	0.00	0.00	0.00	0.00
10-28	317.00	145.00	96.00	34.00	0.00	0.00	0.00	0.00	0.00
10-29	318.00	150.00	98.00	40.00	0.50	0.00	0.00	0.00	0.00
10-30	317.00	155.00	96.00	42.00	1.10	0.00	0.00	0.00	0.00
10-31	315.00	165.00	93.00	40.00	1.60	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
11- 1	315.00	170.00	91.00	37.00	1.20	0.00	0.00	0.00	0.00
11- 2	314.00	175.00	90.00	37.00	2.60	0.00	0.00	0.00	0.00
11- 3	314.00	183.00	90.00	44.00	3.00	0.00	0.00	0.00	0.00
11- 4	313.00	185.00	87.00	48.00	3.20	0.00	0.00	0.00	0.00
11- 5	312.00	183.00	88.00	49.00	3.40	0.00	0.00	0.00	0.00
11- 6	307.00	181.00	86.00	49.00	4.70	0.00	0.00	0.00	0.00
11- 7	304.00	178.00	85.00	49.00	4.90	0.00	0.00	0.00	0.00
11- 8	303.00	174.00	72.00	50.00	3.90	0.00	0.00	0.00	0.00
11- 9	305.00	171.00	61.00	41.00	4.10	0.00	0.00	0.00	0.00
11-10	306.00	169.00	61.00	44.00	5.10	0.00	0.00	0.00	0.00
11-11	310.00	166.00	62.00	46.00	5.10	0.00	0.00	0.00	0.00
11-12	313.00	140.00	67.00	41.00	5.00	0.00	0.00	0.00	0.00
11-13	329.00	140.00	64.00	39.00	5.00	0.00	0.00	0.00	0.00
11-14	329.00	138.00	60.00	48.00	5.60	0.00	0.00	0.00	0.00
11-15	327.00	133.00	70.00	53.00	6.00	0.00	0.00	0.00	0.00
11-16	321.00	130.00	75.00	53.00	5.60	0.00	0.00	0.00	0.00
11-17	316.00	132.00	78.00	53.00	4.60	0.00	0.00	0.00	0.00
11-18	315.00	138.00	80.00	56.00	4.60	0.00	0.00	0.00	0.00
11-19	321.00	140.00	78.00	57.00	4.70	0.00	0.00	0.00	0.00
11-20	300.00	135.00	75.00	57.00	4.00	0.00	0.00	0.00	0.00
11-21	280.00	135.00	79.00	57.00	4.00	0.00	0.00	0.00	0.00
11-22	258.00	139.00	82.00	44.00	4.00	0.00	0.00	0.00	0.00
11-23	257.00	137.00	87.00	48.00	4.00	0.00	0.00	0.00	0.00
11-24	255.00	134.00	88.00	54.00	3.60	0.00	0.00	0.00	0.00
11-25	251.00	132.00	88.00	56.00	3.70	0.00	0.00	0.00	0.00
11-26	247.00	130.00	86.00	57.00	3.60	0.00	0.00	0.00	0.00
11-27	244.00	134.00	84.00	55.00	2.80	0.00	0.00	0.00	0.00
11-28	232.00	137.00	80.00	50.00	2.90	0.00	0.00	0.00	0.00
11-29	230.00	136.00	75.00	35.00	2.00	0.00	0.00	0.00	0.00
11-30	230.00	141.00	75.00	38.00	1.50	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
12- 1	215.00	135.00	70.00	37.00	1.00	0.00	0.00	0.00	0.00
12- 2	213.00	130.00	60.00	35.00	2.00	0.00	0.00	0.00	0.00
12- 3	215.00	135.00	57.00	35.00	2.00	0.00	0.00	0.00	0.00
12- 4	213.00	135.00	58.00	35.00	2.00	0.00	0.00	0.00	0.00
12- 5	212.00	135.00	66.00	34.00	1.50	0.00	0.00	0.00	0.00
12- 6	290.00	135.00	65.00	33.00	1.60	0.00	0.00	0.00	0.00
12- 7	384.00	130.00	54.00	33.00	1.80	0.00	0.00	0.00	0.00
12- 8	407.00	127.00	50.00	30.00	2.00	0.00	0.00	0.00	0.00
12- 9	415.00	117.00	40.00	30.00	2.00	0.00	0.00	0.00	0.00
12-10	417.00	110.00	40.00	28.00	2.00	0.00	0.00	0.00	0.00
12-11	412.00	100.00	40.00	25.00	2.00	0.00	0.00	0.00	0.00
12-12	380.00	90.00	40.00	22.00	2.00	0.00	0.00	0.00	0.00
12-13	340.00	90.00	38.00	20.00	1.50	0.00	0.00	0.00	0.00
12-14	300.00	85.00	38.00	21.00	1.50	0.00	0.00	0.00	0.00
12-15	280.00	85.00	37.00	22.00	1.50	0.00	0.00	0.00	0.00
12-16	260.00	85.00	36.00	20.00	1.00	0.00	0.00	0.00	0.00
12-17	240.00	80.00	35.00	20.00	0.80	0.00	0.00	0.00	0.00
12-18	210.00	80.00	34.00	21.00	0.80	0.00	0.00	0.00	0.00
12-19	180.00	80.00	34.00	21.00	0.60	0.00	0.00	0.00	0.00
12-20	160.00	80.00	34.00	19.00	0.40	0.00	0.00	0.00	0.00
12-21	140.00	80.00	34.00	16.00	0.20	0.00	0.00	0.00	0.00
12-22	120.00	60.00	34.00	16.00	0.00	0.00	0.00	0.00	0.00
12-23	110.00	53.00	30.00	15.00	0.00	0.00	0.00	0.00	0.00
12-24	100.00	55.00	24.00	12.00	0.00	0.00	0.00	0.00	0.00
12-25	95.00	55.00	24.00	12.00	0.00	0.00	0.00	0.00	0.00
12-26	90.00	50.00	25.00	10.00	0.00	0.00	0.00	0.00	0.00
12-27	85.00	50.00	26.00	9.50	0.00	0.00	0.00	0.00	0.00
12-28	80.00	47.00	26.00	8.50	0.00	0.00	0.00	0.00	0.00
12-29	75.00	46.00	26.00	6.80	0.00	0.00	0.00	0.00	0.00
12-30	70.00	45.00	27.00	5.50	0.00	0.00	0.00	0.00	0.00
12-31	65.00	44.00	26.00	5.50	0.00	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
1- 1	60.00	42.00	26.00	5.00	0.00	0.00	0.00	0.00	0.00
1- 2	50.00	40.00	27.00	5.00	0.00	0.00	0.00	0.00	0.00
1- 3	48.00	40.00	26.00	4.50	0.00	0.00	0.00	0.00	0.00
1- 4	44.00	37.00	25.00	4.50	0.00	0.00	0.00	0.00	0.00
1- 5	42.00	28.00	24.00	4.50	0.00	0.00	0.00	0.00	0.00
1- 6	42.00	28.00	23.00	4.50	0.00	0.00	0.00	0.00	0.00
1- 7	43.00	28.00	23.00	5.00	0.00	0.00	0.00	0.00	0.00
1- 8	44.00	26.00	23.00	5.00	0.00	0.00	0.00	0.00	0.00
1- 9	44.00	26.00	23.00	5.00	0.00	0.00	0.00	0.00	0.00
1-10	44.00	23.00	20.00	3.50	0.00	0.00	0.00	0.00	0.00
1-11	40.00	23.00	15.00	3.50	0.00	0.00	0.00	0.00	0.00
1-12	40.00	24.00	11.00	4.00	0.00	0.00	0.00	0.00	0.00
1-13	40.00	24.00	11.00	6.00	0.00	0.00	0.00	0.00	0.00
1-14	37.00	24.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
1-15	35.00	25.00	10.00	5.00	0.00	0.00	0.00	0.00	0.00
1-16	32.00	17.00	9.00	4.30	0.00	0.00	0.00	0.00	0.00
1-17	30.00	17.00	7.20	3.20	0.00	0.00	0.00	0.00	0.00
1-18	27.00	10.00	7.00	3.20	0.00	0.00	0.00	0.00	0.00
1-19	25.00	9.50	6.00	3.00	0.00	0.00	0.00	0.00	0.00
1-20	24.00	9.00	6.00	3.20	0.00	0.00	0.00	0.00	0.00
1-21	30.00	14.00	7.00	3.50	0.00	0.00	0.00	0.00	0.00
1-22	35.00	13.00	6.90	3.50	0.00	0.00	0.00	0.00	0.00
1-23	35.00	12.00	6.90	3.00	0.00	0.00	0.00	0.00	0.00
1-24	35.00	11.00	7.10	2.00	0.00	0.00	0.00	0.00	0.00
1-25	35.00	10.00	7.20	1.00	0.00	0.00	0.00	0.00	0.00
1-26	35.00	10.00	7.00	0.50	0.00	0.00	0.00	0.00	0.00
1-27	35.00	11.00	6.00	0.09	0.00	0.00	0.00	0.00	0.00
1-28	35.00	11.00	6.00	0.09	0.00	0.00	0.00	0.00	0.00
1-29	35.00	11.00	5.00	0.06	0.00	0.00	0.00	0.00	0.00
1-30	35.00	12.00	5.00	0.05	0.00	0.00	0.00	0.00	0.00
1-31	35.00	12.00	5.50	0.04	0.00	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
2- 1	35.00	11.00	5.50	0.04	0.00	0.00	0.00	0.00	0.00
2- 2	35.00	10.00	5.00	0.10	0.00	0.00	0.00	0.00	0.00
2- 3	30.00	9.80	5.50	0.10	0.00	0.00	0.00	0.00	0.00
2- 4	40.00	9.20	5.50	0.10	0.00	0.00	0.00	0.00	0.00
2- 5	40.00	8.50	5.00	0.10	0.00	0.00	0.00	0.00	0.00
2- 6	40.00	8.20	5.00	0.11	0.00	0.00	0.00	0.00	0.00
2- 7	40.00	10.00	4.90	0.15	0.00	0.00	0.00	0.00	0.00
2- 8	40.00	15.00	4.70	0.20	0.00	0.00	0.00	0.00	0.00
2- 9	40.00	17.00	4.70	1.00	0.00	0.00	0.00	0.00	0.00
2-10	40.00	20.00	4.50	2.00	0.00	0.00	0.00	0.00	0.00
2-11	35.00	24.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00
2-12	35.00	23.00	5.00	0.50	0.00	0.00	0.00	0.00	0.00
2-13	40.00	22.00	5.00	0.97	0.00	0.00	0.00	0.00	0.00
2-14	40.00	22.00	5.00	1.00	0.00	0.00	0.00	0.00	0.00
2-15	40.00	21.00	5.00	1.10	0.00	0.00	0.00	0.00	0.00
2-16	43.00	21.00	5.00	1.20	0.00	0.00	0.00	0.00	0.00
2-17	43.00	21.00	5.00	3.00	0.00	0.00	0.00	0.00	0.00
2-18	43.00	20.00	4.50	3.00	0.00	0.00	0.00	0.00	0.00
2-19	42.00	20.00	5.00	2.00	0.00	0.00	0.00	0.00	0.00
2-20	42.00	20.00	5.00	2.00	0.00	0.00	0.00	0.00	0.00
2-21	40.00	20.00	4.50	3.00	0.00	0.00	0.00	0.00	0.00
2-22	45.00	23.00	5.00	4.00	0.00	0.00	0.00	0.00	0.00
2-23	42.00	27.00	5.00	4.00	0.00	0.00	0.00	0.00	0.00
2-24	100.00	30.00	5.00	4.00	0.00	0.00	0.00	0.00	0.00
2-25	150.00	34.00	5.00	4.00	0.00	0.00	0.00	0.00	0.00
2-26	140.00	37.00	5.10	4.00	0.00	0.00	0.00	0.00	0.00
2-27	100.00	36.00	6.00	3.00	0.00	0.00	0.00	0.00	0.00
2-28	90.00	36.00	6.00	3.00	0.00	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
3- 1	70.00	50.00	8.00	3.00	0.00	0.00	0.00	0.00	0.00
3- 2	75.00	50.00	8.00	3.00	0.00	0.00	0.00	0.00	0.00
3- 3	74.00	40.00	14.00	4.00	0.00	0.00	0.00	0.00	0.00
3- 4	75.00	40.00	14.00	4.00	0.00	0.00	0.00	0.00	0.00
3- 5	75.00	35.00	13.00	4.00	0.00	0.00	0.00	0.00	0.00
3- 6	85.00	40.00	12.00	5.00	0.00	0.00	0.00	0.00	0.00
3- 7	90.00	40.00	18.00	6.00	0.00	0.00	0.00	0.00	0.00
3- 8	90.00	40.00	19.00	6.00	0.00	0.00	0.00	0.00	0.00
3- 9	92.00	40.00	20.00	6.00	0.00	0.00	0.00	0.00	0.00
3-10	90.00	50.00	20.00	6.00	0.00	0.00	0.00	0.00	-19.99
3-11	90.00	60.00	21.00	8.00	0.00	0.00	0.00	0.00	-99.99
3-12	90.00	65.00	21.00	10.00	0.00	0.00	0.00	0.00	-299.99
3-13	100.00	70.00	21.00	10.00	2.10	0.00	0.00	0.00	-499.99
3-14	95.00	50.00	22.00	11.00	5.00	0.00	0.00	0.00	-599.99
3-15	100.00	50.00	22.00	9.00	1.30	0.00	0.00	0.00	-499.99
3-16	105.00	40.00	24.00	10.00	1.00	0.00	0.00	0.00	-299.99
3-17	110.00	85.00	18.00	12.00	0.04	0.00	0.00	0.00	-899.99
3-18	170.00	90.00	20.00	12.00	2.50	0.00	0.00	0.00	-1539.99
3-19	160.00	95.00	42.00	12.00	1.00	0.00	0.00	0.00	-819.99
3-20	145.00	100.00	46.00	13.00	1.70	0.00	0.00	0.00	-449.99
3-21	200.00	126.00	50.00	15.00	5.00	0.00	0.00	0.00	-1179.99
3-22	300.00	135.00	70.00	20.00	3.00	0.00	0.00	0.00	-549.99
3-23	440.00	147.00	85.00	22.00	5.00	0.00	0.00	0.00	0.00
3-24	570.00	250.00	110.00	30.00	6.00	0.52	0.00	0.00	-99.99
3-25	595.00	300.00	110.00	42.00	7.00	0.52	0.00	0.00	-199.99
3-26	750.00	320.00	110.00	43.00	10.00	0.31	0.00	0.00	-759.99
3-27	1010.00	320.00	60.00	47.00	10.00	0.02	0.00	0.00	-979.99
3-28	1320.00	312.00	120.00	40.00	18.00	0.50	0.00	0.00	-969.99
3-29	1640.00	272.00	137.00	35.00	16.00	0.04	0.00	0.00	-849.99
3-30	1840.00	233.00	137.00	33.00	10.00	0.00	0.00	-59.99	-909.99
3-31	2190.00	200.00	53.00	37.00	7.00	0.00	0.00	-14.99	-799.99

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
4- 1	2380.00	285.00	142.00	55.00	7.10	0.00	0.00	-49.99	-459.99
4- 2	2400.00	390.00	137.00	64.00	5.50	0.00	0.00	-49.99	-449.99
4- 3	2380.00	455.00	143.00	84.00	26.00	0.50	0.00	-29.99	-669.99
4- 4	2360.00	520.00	146.00	100.00	25.00	0.10	0.00	-9.99	-719.99
4- 5	2250.00	595.00	175.00	100.00	35.00	1.00	0.00	-19.99	-799.99
4- 6	2120.00	665.00	177.00	110.00	40.00	1.40	0.00	-9.99	-599.99
4- 7	2000.00	705.00	200.00	120.00	27.00	5.00	0.00	0.00	-1199.99
4- 8	1920.00	790.00	300.00	174.00	50.00	10.00	0.03	0.00	-1859.99
4- 9	1830.00	823.00	280.00	171.00	56.00	2.40	0.00	-19.99	-1299.99
4-10	1730.00	814.00	350.00	156.00	50.00	1.50	0.00	-9.99	-1099.99
4-11	1650.00	797.00	380.00	200.00	93.00	1.40	0.00	0.00	-1749.99
4-12	1600.00	885.00	500.00	224.00	124.00	11.00	1.20	0.00	-1699.99
4-13	1670.00	1010.00	630.00	287.00	115.00	11.00	1.50	0.00	-1599.99
4-14	2100.00	1130.00	649.00	375.00	111.00	10.00	2.00	0.00	-1149.99
4-15	2600.00	1090.00	720.00	401.00	153.00	26.00	2.50	0.00	0.00
4-16	3100.00	1320.00	778.00	528.00	200.00	31.00	3.00	0.00	-59.99
4-17	3530.00	1270.00	800.00	633.00	204.00	25.00	1.80	0.00	-154.99
4-18	3530.00	1320.00	811.00	703.00	203.00	18.00	1.40	0.00	-234.99
4-19	3320.00	1450.00	857.00	612.00	205.00	14.00	1.50	0.02	-289.99
4-20	3700.00	1320.00	910.00	678.00	193.00	49.00	2.30	0.09	-294.99
4-21	4270.00	1190.00	890.00	700.00	193.00	34.00	2.30	0.04	-259.99
4-22	4570.00	1160.00	940.00	761.00	191.00	39.00	2.00	0.04	-139.99
4-23	4560.00	1140.00	979.00	782.00	192.00	38.00	5.00	0.20	0.00
4-24	3990.00	1220.00	965.00	725.00	220.00	30.00	7.00	0.30	0.00
4-25	3580.00	1270.00	1010.00	830.00	243.00	41.00	4.30	0.04	-9.99
4-26	2880.00	1270.00	956.00	857.00	253.00	40.00	8.60	0.02	-14.99
4-27	3720.00	1380.00	965.00	840.00	259.00	52.00	5.00	0.00	-7.99
4-28	3380.00	1520.00	953.00	805.00	264.00	57.00	18.00	1.20	0.00
4-29	2800.00	1610.00	911.00	795.00	268.00	53.00	22.00	1.00	0.00
4-30	2460.00	1550.00	906.00	784.00	213.00	59.00	34.00	0.90	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
5- 1	2430.00	1520.00	868.00	766.00	204.00	62.00	49.00	0.77	0.00
5- 2	2530.00	1490.00	857.00	742.00	240.00	61.00	34.00	0.60	0.00
5- 3	3320.00	1460.00	842.00	705.00	260.00	59.00	39.00	0.50	0.00
5- 4	3560.00	1480.00	857.00	703.00	252.00	60.00	24.00	0.50	0.00
5- 5	3700.00	1600.00	845.00	761.00	247.00	60.00	18.00	0.00	-199.99
5- 6	3830.00	1730.00	834.00	756.00	241.00	56.00	22.00	0.00	-649.99
5- 7	3830.00	1740.00	814.00	743.00	231.00	52.00	16.00	0.00	-559.99
5- 8	4020.00	1660.00	789.00	730.00	216.00	53.00	9.10	0.00	-619.99
5- 9	3760.00	1580.00	767.00	654.00	212.00	62.00	8.00	0.04	0.00
5-10	3500.00	1570.00	767.00	667.00	325.00	61.00	6.30	0.04	0.00
5-11	3420.00	1480.00	725.00	669.00	257.00	58.00	10.00	0.09	0.00
5-12	3200.00	1370.00	725.00	556.00	201.00	54.00	18.00	0.25	0.00
5-13	3340.00	1280.00	717.00	501.00	204.00	54.00	13.00	0.00	0.00
5-14	3320.00	1130.00	695.00	485.00	210.00	55.00	13.00	0.52	0.00
5-15	3400.00	1040.00	691.00	470.00	212.00	55.00	7.00	0.38	0.00
5-16	3450.00	1120.00	673.00	463.00	209.00	55.00	15.00	0.09	0.00
5-17	3200.00	1130.00	651.00	458.00	203.00	48.00	24.00	0.00	0.00
5-18	3020.00	1090.00	598.00	446.00	175.00	33.00	27.00	0.00	0.00
5-19	3400.00	1080.00	580.00	432.00	172.00	34.00	20.00	0.00	0.00
5-20	3400.00	1050.00	558.00	423.00	147.00	40.00	12.00	0.00	0.00
5-21	3730.00	1040.00	542.00	409.00	133.00	45.00	10.00	0.00	0.00
5-22	3760.00	1020.00	530.00	369.00	131.00	55.00	8.90	0.00	0.00
5-23	4420.00	989.00	512.00	332.00	135.00	45.00	6.90	0.19	0.00
5-24	5370.00	976.00	492.00	288.00	123.00	44.00	6.20	1.40	0.00
5-25	5140.00	962.00	472.00	262.00	120.00	43.00	4.70	3.00	0.00
5-26	4920.00	945.00	458.00	246.00	119.00	24.00	7.00	2.50	0.00
5-27	4380.00	915.00	442.00	243.00	125.00	20.00	7.00	2.80	0.00
5-28	4130.00	830.00	421.00	265.00	124.00	23.00	7.00	3.00	0.00
5-29	3760.00	805.00	404.00	274.00	122.00	17.00	5.40	2.80	0.00
5-30	3670.00	703.00	394.00	264.00	111.00	18.00	5.00	1.10	0.00
5-31	3530.00	681.00	430.00	260.00	111.00	14.00	4.10	0.00	-14.99

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	3320.00	670.00	417.00	248.00	114.00	15.00	5.50	0.80	0.00
6- 2	3200.00	657.00	374.00	220.00	109.00	18.00	4.80	0.60	0.00
6- 3	2870.00	646.00	354.00	201.00	104.00	22.00	3.60	0.40	0.00
6- 4	2530.00	640.00	334.00	175.00	102.00	20.00	3.60	0.40	0.00
6- 5	2310.00	636.00	297.00	179.00	108.00	15.00	3.40	0.20	0.00
6- 6	2150.00	627.00	280.00	175.00	100.00	22.00	3.60	0.00	0.00
6- 7	1820.00	619.00	280.00	170.00	99.00	22.00	3.70	0.00	0.00
6- 8	1650.00	610.00	270.00	189.00	94.00	30.00	5.80	0.00	0.00
6- 9	1560.00	615.00	260.00	179.00	94.00	18.00	8.20	0.00	0.00
6-10	1570.00	615.00	250.00	172.00	97.00	19.00	7.30	0.00	0.00
6-11	1610.00	612.00	250.00	182.00	95.00	22.00	3.40	0.00	0.00
6-12	1550.00	609.00	240.00	206.00	85.00	27.00	2.60	0.00	0.00
6-13	1540.00	601.00	245.00	182.00	90.00	15.00	2.60	0.00	0.00
6-14	1490.00	600.00	266.00	195.00	90.00	17.00	1.40	0.00	-24.99
6-15	1430.00	609.00	243.00	182.00	92.00	16.00	1.20	0.00	-149.99
6-16	1410.00	594.00	229.00	182.00	91.00	5.40	1.40	0.00	-199.99
6-17	1380.00	584.00	225.00	174.00	84.00	4.50	1.40	0.00	0.00
6-18	1270.00	562.00	220.00	192.00	100.00	3.40	1.30	0.00	-4.99
6-19	1180.00	582.00	222.00	200.00	100.00	5.00	1.60	0.00	-44.99
6-20	1220.00	596.00	222.00	205.00	108.00	12.00	1.50	0.00	-99.99
6-21	1140.00	550.00	230.00	198.00	101.00	12.00	1.20	0.00	-299.99
6-22	1030.00	434.00	228.00	185.00	86.00	4.60	0.10	0.00	-679.99
6-23	953.00	432.00	235.00	181.00	73.00	10.00	0.00	0.00	-749.99
6-24	903.00	428.00	226.00	190.00	84.00	10.00	1.30	0.00	-599.99
6-25	865.00	446.00	226.00	174.00	85.00	18.00	0.80	0.00	-529.99
6-26	800.00	443.00	230.00	174.00	89.00	17.00	0.50	0.00	-389.99
6-27	769.00	500.00	240.00	170.00	85.00	18.00	0.31	0.00	-179.99
6-28	757.00	536.00	287.00	168.00	84.00	23.00	0.80	0.00	0.00
6-29	747.00	518.00	272.00	174.00	92.00	25.00	0.60	0.00	0.00
6-30	716.00	510.00	270.00	203.00	98.00	22.00	0.50	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
7- 1	758.00	483.00	310.00	190.00	100.00	20.00	0.40	0.00	0.00
7- 2	761.00	467.00	330.00	180.00	103.00	19.00	0.70	0.00	0.00
7- 3	816.00	445.00	260.00	169.00	104.00	18.00	0.70	0.00	0.00
7- 4	895.00	450.00	251.00	166.00	95.00	7.30	0.10	0.00	-19.99
7- 5	962.00	500.00	241.00	166.00	95.00	8.20	0.00	0.00	-299.99
7- 6	1010.00	550.00	234.00	165.00	89.00	7.80	0.10	0.00	-79.99
7- 7	1080.00	550.00	222.00	157.00	78.00	12.00	0.20	0.00	0.00
7- 8	1130.00	540.00	223.00	162.00	77.00	3.90	0.00	0.00	-99.99
7- 9	1200.00	540.00	222.00	168.00	75.00	3.00	0.00	0.00	-509.99
7-10	1300.00	528.00	227.00	173.00	73.00	3.00	0.00	0.00	-439.99
7-11	1410.00	530.00	224.00	168.00	71.00	2.50	0.00	0.00	-669.99
7-12	1490.00	530.00	222.00	171.00	76.00	6.50	0.00	0.00	-599.99
7-13	1530.00	530.00	318.00	165.00	87.00	7.30	0.00	0.00	-99.99
7-14	1530.00	520.00	320.00	163.00	87.00	7.60	0.00	0.00	0.00
7-15	1500.00	518.00	318.00	207.00	89.00	7.10	0.00	0.00	0.00
7-16	1480.00	497.00	331.00	206.00	84.00	9.60	0.40	0.00	0.00
7-17	1390.00	472.00	322.00	202.00	86.00	8.00	0.40	0.00	0.00
7-18	1390.00	447.00	326.00	199.00	86.00	5.40	0.80	0.00	0.00
7-19	1350.00	423.00	323.00	195.00	86.00	6.70	0.90	0.00	0.00
7-20	1320.00	401.00	310.00	191.00	79.00	6.50	0.80	0.00	0.00
7-21	1260.00	391.00	293.00	190.00	74.00	6.00	0.80	0.00	0.00
7-22	1230.00	382.00	288.00	198.00	71.00	4.50	0.70	0.00	0.00
7-23	1210.00	402.00	286.00	206.00	73.00	4.50	0.60	0.00	0.00
7-24	1170.00	423.00	279.00	198.00	62.00	3.40	0.38	0.00	0.00
7-25	1130.00	437.00	274.00	180.00	59.00	2.70	0.00	0.00	0.00
7-26	1090.00	440.00	271.00	169.00	73.00	4.00	0.00	0.00	0.00
7-27	1070.00	439.00	268.00	166.00	68.00	5.20	0.00	0.00	0.00
7-28	1030.00	444.00	259.00	158.00	46.00	5.00	0.00	0.00	0.00
7-29	989.00	448.00	241.00	158.00	38.00	4.30	0.00	0.00	0.00
7-30	949.00	448.00	219.00	147.00	30.00	1.30	0.00	0.00	0.00
7-31	924.00	444.00	200.00	137.00	26.00	0.40	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
8- 1	913.00	439.00	181.00	128.00	28.00	0.40	0.00	0.00	0.00
8- 2	893.00	434.00	168.00	123.00	31.00	0.40	0.00	0.00	0.00
8- 3	874.00	429.00	153.00	114.00	9.00	0.10	0.00	0.00	0.00
8- 4	880.00	421.00	141.00	116.00	8.00	0.10	0.00	0.00	0.00
8- 5	880.00	414.00	127.00	99.00	5.20	0.00	0.00	0.00	-149.99
8- 6	890.00	404.00	124.00	99.00	7.00	0.00	0.00	0.00	-9.99
8- 7	900.00	388.00	121.00	98.00	6.90	0.10	0.00	0.00	0.00
8- 8	900.00	373.00	118.00	90.00	6.50	0.10	0.00	0.00	0.00
8- 9	900.00	349.00	115.00	79.00	7.00	0.10	0.00	0.00	0.00
8-10	900.00	333.00	110.00	73.00	7.00	0.20	0.00	0.00	0.00
8-11	910.00	317.00	103.00	64.00	9.00	0.00	0.00	0.00	0.00
8-12	910.00	293.00	91.00	58.00	10.00	0.20	0.00	0.00	0.00
8-13	910.00	279.00	90.00	54.00	10.00	0.20	0.00	0.00	0.00
8-14	910.00	263.00	88.00	38.00	5.20	0.20	0.00	0.00	0.00
8-15	910.00	246.00	86.00	32.00	3.00	0.20	0.00	0.00	0.00
8-16	910.00	222.00	84.00	30.00	3.60	0.20	0.00	0.00	0.00
8-17	910.00	207.00	81.00	41.00	3.00	0.00	0.00	0.00	0.00
8-18	910.00	180.00	77.00	52.00	2.90	0.00	0.00	0.00	0.00
8-19	914.00	157.00	73.00	46.00	2.90	0.00	0.00	0.00	0.00
8-20	914.00	150.00	74.00	50.00	2.80	0.00	0.00	0.00	0.00
8-21	909.00	160.00	76.00	50.00	2.70	0.00	0.00	0.00	0.00
8-22	885.00	158.00	75.00	43.00	2.00	0.00	0.00	0.00	0.00
8-23	869.00	149.00	74.00	22.00	0.80	0.00	0.00	0.00	0.00
8-24	849.00	171.00	73.00	21.00	3.10	0.00	0.00	0.00	0.00
8-25	828.00	202.00	72.00	25.00	3.00	0.00	0.00	0.00	0.00
8-26	804.00	201.00	71.00	30.00	3.40	0.00	0.00	0.00	0.00
8-27	781.00	200.00	71.00	47.00	2.20	0.00	0.00	0.00	0.00
8-28	761.00	204.00	71.00	41.00	1.50	0.00	0.00	0.00	0.00
8-29	739.00	204.00	72.00	34.00	1.30	0.00	0.00	0.00	0.00
8-30	716.00	204.00	79.00	31.00	0.70	0.00	0.00	0.00	0.00
8-31	691.00	203.00	78.00	39.00	1.00	0.00	0.00	0.00	0.00

Table 10.--Discharge data for duration hydrograph for James River at Columbia, S. Dak. (station no. 06471000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
9- 1	662.00	194.00	75.00	50.00	1.30	0.00	0.00	0.00	0.00
9- 2	633.00	169.00	70.00	50.00	1.80	0.00	0.00	0.00	0.00
9- 3	615.00	146.00	70.00	50.00	1.20	0.00	0.00	0.00	0.00
9- 4	587.00	131.00	71.00	49.00	0.80	0.00	0.00	0.00	0.00
9- 5	555.00	126.00	68.00	49.00	1.10	0.00	0.00	0.00	0.00
9- 6	521.00	123.00	64.00	35.00	0.60	0.00	0.00	0.00	0.00
9- 7	488.00	124.00	56.00	31.00	1.40	0.00	0.00	0.00	0.00
9- 8	460.00	122.00	52.00	36.00	1.20	0.00	0.00	0.00	0.00
9- 9	438.00	120.00	50.00	39.00	0.50	0.00	0.00	0.00	0.00
9-10	420.00	117.00	48.00	38.00	0.40	0.00	0.00	0.00	0.00
9-11	406.00	117.00	49.00	37.00	0.40	0.00	0.00	0.00	0.00
9-12	405.00	117.00	51.00	35.00	1.50	0.00	0.00	0.00	0.00
9-13	396.00	118.00	56.00	32.00	0.14	0.00	0.00	0.00	0.00
9-14	384.00	119.00	58.00	24.00	0.00	0.00	0.00	0.00	0.00
9-15	373.00	109.00	51.00	20.00	0.20	0.00	0.00	0.00	0.00
9-16	364.00	107.00	50.00	4.00	0.10	0.00	0.00	0.00	0.00
9-17	357.00	105.00	43.00	4.50	0.00	0.00	0.00	0.00	0.00
9-18	361.00	102.00	40.00	15.00	0.00	0.00	0.00	0.00	0.00
9-19	354.00	102.00	31.00	11.00	0.00	0.00	0.00	0.00	0.00
9-20	347.00	98.00	29.00	5.20	0.00	0.00	0.00	0.00	0.00
9-21	351.00	96.00	27.00	4.80	0.00	0.00	0.00	0.00	0.00
9-22	351.00	96.00	25.00	3.60	0.00	0.00	0.00	0.00	0.00
9-23	348.00	110.00	25.00	3.20	0.00	0.00	0.00	0.00	0.00
9-24	346.00	124.00	29.00	2.80	0.00	0.00	0.00	0.00	0.00
9-25	343.00	124.00	29.00	2.60	0.00	0.00	0.00	0.00	0.00
9-26	336.00	125.00	29.00	2.60	0.00	0.00	0.00	0.00	0.00
9-27	331.00	126.00	29.00	2.40	0.00	0.00	0.00	0.00	0.00
9-28	328.00	125.00	29.00	2.40	0.00	0.00	0.00	0.00	0.00
9-29	326.00	123.00	29.00	2.10	0.00	0.00	0.00	0.00	0.00
9-30	323.00	129.00	30.00	2.10	0.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
10- 1	268.00	104.00	30.00	8.00	0.20	0.00	0.00	0.00	0.00
10- 2	245.00	110.00	29.00	7.00	0.14	0.00	0.00	0.00	0.00
10- 3	223.00	115.00	27.00	6.00	0.09	0.00	0.00	0.00	0.00
10- 4	203.00	120.00	26.00	6.00	0.07	0.00	0.00	0.00	0.00
10- 5	185.00	125.00	25.00	6.00	0.03	0.00	0.00	0.00	0.00
10- 6	167.00	129.00	25.00	5.00	0.00	0.00	0.00	0.00	0.00
10- 7	160.00	132.00	24.00	5.50	0.00	0.00	0.00	0.00	0.00
10- 8	151.00	137.00	23.00	10.00	0.00	0.00	0.00	0.00	0.00
10- 9	144.00	141.00	23.00	9.20	0.00	0.00	0.00	0.00	0.00
10-10	144.00	140.00	23.00	7.90	0.00	0.00	0.00	0.00	0.00
10-11	144.00	134.00	23.00	6.60	0.00	0.00	0.00	0.00	0.00
10-12	145.00	128.00	22.00	6.00	0.00	0.00	0.00	0.00	0.00
10-13	144.00	123.00	22.00	5.50	0.00	0.00	0.00	0.00	0.00
10-14	144.00	120.00	20.00	8.20	0.00	0.00	0.00	0.00	0.00
10-15	145.00	120.00	20.00	6.60	0.00	0.00	0.00	0.00	0.00
10-16	144.00	122.00	22.00	6.00	0.00	0.00	0.00	0.00	0.00
10-17	145.00	126.00	22.00	8.00	0.00	0.00	0.00	0.00	0.00
10-18	146.00	133.00	24.00	10.00	0.00	0.00	0.00	0.00	0.00
10-19	148.00	138.00	25.00	10.00	0.00	0.00	0.00	0.00	0.00
10-20	147.00	143.00	26.00	8.00	0.00	0.00	0.00	0.00	0.00
10-21	147.00	146.00	27.00	6.00	0.00	0.00	0.00	0.00	0.00
10-22	148.00	148.00	28.00	4.90	0.00	0.00	0.00	0.00	0.00
10-23	148.00	147.00	29.00	4.60	0.00	0.00	0.00	0.00	0.00
10-24	149.00	148.00	32.00	4.60	0.00	0.00	0.00	0.00	0.00
10-25	149.00	148.00	34.00	4.80	0.00	0.00	0.00	0.00	0.00
10-26	149.00	147.00	35.00	5.00	0.00	0.00	0.00	0.00	0.00
10-27	150.00	147.00	34.00	5.30	0.00	0.00	0.00	0.00	0.00
10-28	149.00	146.00	34.00	6.00	0.00	0.00	0.00	0.00	0.00
10-29	146.00	144.00	33.00	6.20	0.00	0.00	0.00	0.00	0.00
10-30	143.00	141.00	34.00	6.80	0.00	0.00	0.00	0.00	0.00
10-31	135.00	133.00	34.00	8.20	0.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
11- 1	140.00	129.00	33.00	8.20	0.00	0.00	0.00	0.00	0.00
11- 2	150.00	122.00	35.00	8.70	0.00	0.00	0.00	0.00	0.00
11- 3	160.00	115.00	39.00	20.00	0.00	0.00	0.00	0.00	0.00
11- 4	170.00	107.00	53.00	20.00	0.00	0.00	0.00	0.00	0.00
11- 5	170.00	101.00	62.00	19.00	0.00	0.00	0.00	0.00	0.00
11- 6	170.00	96.00	57.00	17.00	0.00	0.00	0.00	0.00	0.00
11- 7	170.00	92.00	59.00	14.00	0.00	0.00	0.00	0.00	0.00
11- 8	170.00	90.00	64.00	12.00	0.00	0.00	0.00	0.00	0.00
11- 9	160.00	87.00	60.00	11.00	0.00	0.00	0.00	0.00	0.00
11-10	150.00	86.00	58.00	9.00	0.00	0.00	0.00	0.00	0.00
11-11	130.00	85.00	60.00	8.90	0.00	0.00	0.00	0.00	0.00
11-12	110.00	83.00	60.00	9.00	0.00	0.00	0.00	0.00	0.00
11-13	100.00	83.00	60.00	12.00	0.00	0.00	0.00	0.00	0.00
11-14	81.00	80.00	55.00	15.00	0.00	0.00	0.00	0.00	0.00
11-15	79.00	75.00	55.00	20.00	0.00	0.00	0.00	0.00	0.00
11-16	80.00	80.00	55.00	25.00	2.80	0.00	0.00	0.00	0.00
11-17	80.00	75.00	55.00	30.00	2.60	0.00	0.00	0.00	0.00
11-18	75.00	75.00	50.00	34.00	2.60	0.00	0.00	0.00	0.00
11-19	80.00	75.00	45.00	38.00	2.60	0.00	0.00	0.00	0.00
11-20	90.00	74.00	40.00	40.00	2.60	0.00	0.00	0.00	0.00
11-21	85.00	73.00	42.00	39.00	2.60	0.00	0.00	0.00	0.00
11-22	80.00	71.00	41.00	38.00	2.60	0.00	0.00	0.00	0.00
11-23	80.00	75.00	45.00	37.00	2.60	0.00	0.00	0.00	0.00
11-24	90.00	75.00	50.00	40.00	2.60	0.00	0.00	0.00	0.00
11-25	100.00	80.00	58.00	44.00	3.00	0.00	0.00	0.00	0.00
11-26	95.00	85.00	55.00	44.00	3.50	0.00	0.00	0.00	0.00
11-27	95.00	90.00	58.00	43.00	3.50	0.00	0.00	0.00	0.00
11-28	100.00	90.00	58.00	40.00	3.50	0.00	0.00	0.00	0.00
11-29	110.00	85.00	55.00	37.00	4.00	0.00	0.00	0.00	0.00
11-30	110.00	90.00	54.00	35.00	4.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
12- 1	105.00	95.00	52.00	34.00	4.00	0.00	0.00	0.00	0.00
12- 2	105.00	95.00	50.00	34.00	4.00	0.00	0.00	0.00	0.00
12- 3	100.00	100.00	48.00	42.00	4.50	0.00	0.00	0.00	0.00
12- 4	100.00	100.00	46.00	45.00	4.50	0.00	0.00	0.00	0.00
12- 5	110.00	100.00	45.00	40.00	4.50	0.00	0.00	0.00	0.00
12- 6	120.00	95.00	47.00	35.00	4.50	0.00	0.00	0.00	0.00
12- 7	120.00	80.00	48.00	31.00	4.50	0.00	0.00	0.00	0.00
12- 8	120.00	80.00	50.00	31.00	4.50	0.00	0.00	0.00	0.00
12- 9	110.00	90.00	73.00	32.00	4.50	0.00	0.00	0.00	0.00
12-10	150.00	110.00	70.00	35.00	4.50	0.00	0.00	0.00	0.00
12-11	250.00	110.00	65.00	36.00	4.50	0.00	0.00	0.00	0.00
12-12	300.00	100.00	60.00	36.00	5.00	0.00	0.00	0.00	0.00
12-13	320.00	100.00	58.00	36.00	5.00	0.00	0.00	0.00	0.00
12-14	330.00	100.00	55.00	35.00	6.00	0.00	0.00	0.00	0.00
12-15	340.00	95.00	52.00	35.00	6.00	0.00	0.00	0.00	0.00
12-16	340.00	95.00	50.00	35.00	6.00	0.00	0.00	0.00	0.00
12-17	340.00	95.00	48.00	35.00	5.00	0.00	0.00	0.00	0.00
12-18	330.00	90.00	46.00	35.00	5.00	0.00	0.00	0.00	0.00
12-19	310.00	90.00	46.00	33.00	5.00	0.00	0.00	0.00	0.00
12-20	300.00	90.00	46.00	33.00	5.00	0.00	0.00	0.00	0.00
12-21	280.00	90.00	44.00	32.00	5.00	0.00	0.00	0.00	0.00
12-22	260.00	90.00	44.00	32.00	5.00	0.00	0.00	0.00	0.00
12-23	250.00	90.00	42.00	31.00	4.00	0.00	0.00	0.00	0.00
12-24	240.00	90.00	42.00	30.00	4.00	0.00	0.00	0.00	0.00
12-25	230.00	85.00	40.00	30.00	3.50	0.00	0.00	0.00	0.00
12-26	220.00	80.00	38.00	29.00	3.00	0.00	0.00	0.00	0.00
12-27	200.00	75.00	38.00	29.00	2.50	0.00	0.00	0.00	0.00
12-28	180.00	75.00	38.00	28.00	2.00	0.00	0.00	0.00	0.00
12-29	160.00	75.00	36.00	28.00	1.50	0.00	0.00	0.00	0.00
12-30	150.00	70.00	36.00	27.00	1.50	0.00	0.00	0.00	0.00
12-31	130.00	65.00	36.00	25.00	1.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
1- 1	120.00	60.00	34.00	22.00	1.00	0.00	0.00	0.00	0.00
1- 2	110.00	60.00	34.00	21.00	1.00	0.00	0.00	0.00	0.00
1- 3	100.00	55.00	32.00	21.00	1.00	0.00	0.00	0.00	0.00
1- 4	95.00	50.00	32.00	20.00	1.00	0.00	0.00	0.00	0.00
1- 5	90.00	45.00	30.00	20.00	0.00	0.00	0.00	0.00	0.00
1- 6	90.00	45.00	30.00	19.00	0.00	0.00	0.00	0.00	0.00
1- 7	85.00	42.00	28.00	19.00	0.00	0.00	0.00	0.00	0.00
1- 8	85.00	42.00	28.00	18.00	0.00	0.00	0.00	0.00	0.00
1- 9	80.00	42.00	30.00	17.00	0.00	0.00	0.00	0.00	0.00
1-10	75.00	40.00	30.00	17.00	0.00	0.00	0.00	0.00	0.00
1-11	70.00	32.00	30.00	17.00	0.00	0.00	0.00	0.00	0.00
1-12	60.00	32.00	25.00	17.00	0.00	0.00	0.00	0.00	0.00
1-13	55.00	32.00	25.00	15.00	0.00	0.00	0.00	0.00	0.00
1-14	50.00	32.00	23.00	15.00	0.00	0.00	0.00	0.00	0.00
1-15	46.00	32.00	20.00	14.00	0.00	0.00	0.00	0.00	0.00
1-16	43.00	32.00	18.00	13.00	0.00	0.00	0.00	0.00	0.00
1-17	40.00	31.00	18.00	13.00	0.00	0.00	0.00	0.00	0.00
1-18	36.00	30.00	18.00	13.00	0.00	0.00	0.00	0.00	0.00
1-19	32.00	28.00	18.00	11.00	0.00	0.00	0.00	0.00	0.00
1-20	28.00	26.00	16.00	10.00	0.00	0.00	0.00	0.00	0.00
1-21	25.00	24.00	12.00	8.50	0.00	0.00	0.00	0.00	0.00
1-22	24.00	20.00	10.00	8.00	0.00	0.00	0.00	0.00	0.00
1-23	23.00	18.00	10.00	8.00	0.00	0.00	0.00	0.00	0.00
1-24	23.00	16.00	9.00	7.00	0.00	0.00	0.00	0.00	0.00
1-25	22.00	14.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00
1-26	22.00	13.00	7.50	5.50	0.00	0.00	0.00	0.00	0.00
1-27	21.00	12.00	7.50	5.50	0.00	0.00	0.00	0.00	0.00
1-28	21.00	12.00	7.00	6.00	0.00	0.00	0.00	0.00	0.00
1-29	21.00	12.00	7.00	6.00	0.00	0.00	0.00	0.00	0.00
1-30	20.00	11.00	7.00	6.00	0.00	0.00	0.00	0.00	0.00
1-31	20.00	11.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
2- 1	20.00	11.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 2	20.00	14.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 3	20.00	18.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 4	20.00	20.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 5	22.00	20.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 6	24.00	20.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 7	24.00	22.00	10.00	6.00	0.00	0.00	0.00	0.00	0.00
2- 8	24.00	23.00	10.00	7.00	0.00	0.00	0.00	0.00	0.00
2- 9	24.00	24.00	9.00	7.00	0.00	0.00	0.00	0.00	0.00
2-10	24.00	22.00	9.00	7.00	0.00	0.00	0.00	0.00	0.00
2-11	24.00	22.00	9.00	7.00	0.00	0.00	0.00	0.00	0.00
2-12	23.00	23.00	9.00	7.00	0.00	0.00	0.00	0.00	0.00
2-13	24.00	23.00	8.00	6.50	0.00	0.00	0.00	0.00	0.00
2-14	25.00	23.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00
2-15	25.00	22.00	8.00	5.00	0.00	0.00	0.00	0.00	0.00
2-16	25.00	22.00	7.00	4.50	0.00	0.00	0.00	0.00	0.00
2-17	25.00	21.00	7.00	4.50	0.00	0.00	0.00	0.00	0.00
2-18	24.00	21.00	7.00	4.50	0.00	0.00	0.00	0.00	0.00
2-19	23.00	20.00	7.00	4.00	0.00	0.00	0.00	0.00	0.00
2-20	22.00	20.00	7.00	4.00	0.00	0.00	0.00	0.00	0.00
2-21	22.00	19.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00
2-22	22.00	19.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00
2-23	24.00	18.00	8.00	6.00	0.00	0.00	0.00	0.00	0.00
2-24	28.00	18.00	9.00	6.00	0.00	0.00	0.00	0.00	0.00
2-25	30.00	18.00	9.00	6.00	0.00	0.00	0.00	0.00	0.00
2-26	32.00	19.00	9.00	6.00	0.00	0.00	0.00	0.00	0.00
2-27	32.00	19.00	9.00	6.00	0.00	0.00	0.00	0.00	0.00
2-28	34.00	19.00	10.00	8.00	0.00	0.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
3- 1	32.00	21.00	10.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 2	30.00	22.00	15.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 3	28.00	25.00	17.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 4	40.00	26.00	18.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 5	45.00	26.00	20.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 6	50.00	26.00	20.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 7	50.00	28.00	20.00	8.00	0.00	0.00	0.00	0.00	0.00
3- 8	45.00	30.00	18.00	8.00	0.60	0.00	0.00	0.00	0.00
3- 9	45.00	35.00	18.00	8.00	1.00	0.00	0.00	0.00	0.00
3-10	50.00	40.00	18.00	10.00	0.80	0.00	0.00	0.00	0.00
3-11	70.00	50.00	30.00	16.00	1.00	0.00	0.00	0.00	0.00
3-12	85.00	70.00	40.00	16.00	2.00	0.00	0.00	0.00	0.00
3-13	100.00	85.00	46.00	15.00	2.50	0.00	0.00	0.00	0.00
3-14	120.00	80.00	50.00	14.00	2.00	0.00	0.00	0.00	0.00
3-15	120.00	80.00	45.00	16.00	1.60	0.00	0.00	0.00	0.00
3-16	125.00	85.00	45.00	16.00	3.00	0.00	0.00	0.00	0.00
3-17	150.00	95.00	45.00	18.00	4.00	0.00	0.00	0.00	0.00
3-18	170.00	130.00	50.00	18.00	6.50	0.00	0.00	0.00	0.00
3-19	190.00	155.00	60.00	20.00	9.00	0.00	0.00	0.00	0.00
3-20	220.00	175.00	70.00	20.00	8.00	0.00	0.00	0.00	0.00
3-21	250.00	195.00	100.00	21.00	7.00	0.00	0.00	0.00	0.00
3-22	250.00	210.00	140.00	21.00	6.00	0.00	0.00	0.00	0.00
3-23	250.00	240.00	180.00	25.00	5.00	0.00	0.00	0.00	0.00
3-24	400.00	300.00	220.00	30.00	5.00	0.00	0.00	0.00	0.00
3-25	500.00	401.00	260.00	35.00	5.00	0.00	0.00	0.00	0.00
3-26	591.00	437.00	262.00	44.00	6.00	0.50	0.00	0.00	0.00
3-27	700.00	454.00	254.00	45.00	17.00	1.20	0.00	0.00	0.00
3-28	1050.00	478.00	234.00	55.00	17.00	5.00	0.00	0.00	0.00
3-29	1230.00	513.00	229.00	80.00	31.00	5.00	0.00	0.00	0.00
3-30	1230.00	547.00	229.00	100.00	31.00	5.00	0.00	0.00	0.00
3-31	1220.00	579.00	237.00	96.00	30.00	6.00	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
4- 1	1260.00	612.00	237.00	90.00	30.00	8.00	0.00	0.00	0.00
4- 2	1430.00	657.00	231.00	85.00	30.00	11.00	0.00	0.00	0.00
4- 3	1670.00	740.00	228.00	95.00	30.00	12.00	0.00	0.00	0.00
4- 4	1820.00	828.00	230.00	105.00	30.00	12.00	0.00	0.00	0.00
4- 5	1910.00	905.00	231.00	101.00	40.00	13.00	0.00	0.00	0.00
4- 6	2110.00	959.00	231.00	98.00	45.00	15.00	0.00	0.00	0.00
4- 7	2270.00	978.00	231.00	98.00	49.00	16.00	0.00	0.00	0.00
4- 8	2360.00	974.00	231.00	141.00	52.00	17.00	0.00	0.00	0.00
4- 9	2380.00	966.00	230.00	163.00	52.00	17.00	0.00	0.00	0.00
4-10	2380.00	958.00	260.00	171.00	67.00	22.00	0.00	0.00	0.00
4-11	2290.00	957.00	287.00	177.00	97.00	29.00	0.00	0.00	0.00
4-12	2180.00	973.00	290.00	193.00	100.00	24.00	0.00	0.00	0.00
4-13	2060.00	973.00	298.00	208.00	100.00	20.00	0.00	0.00	0.00
4-14	1950.00	949.00	309.00	240.00	157.00	33.00	12.00	0.00	0.00
4-15	1880.00	927.00	415.00	274.00	154.00	33.00	11.00	0.00	0.00
4-16	2000.00	1810.00	455.00	306.00	148.00	33.00	14.00	0.00	0.00
4-17	2500.00	1720.00	496.00	338.00	140.00	33.00	18.00	0.00	0.00
4-18	2800.00	1670.00	514.00	356.00	137.00	33.00	19.00	0.00	0.00
4-19	3500.00	1650.00	531.00	363.00	151.00	33.00	18.00	0.40	0.00
4-20	4000.00	1580.00	554.00	375.00	163.00	35.00	18.00	6.00	0.00
4-21	4500.00	1500.00	583.00	389.00	170.00	37.00	17.00	8.00	0.00
4-22	4760.00	1460.00	607.00	402.00	176.00	41.00	26.00	7.00	0.00
4-23	4760.00	1460.00	633.00	418.00	181.00	46.00	28.00	6.00	0.00
4-24	4820.00	1460.00	657.00	441.00	184.00	48.00	30.00	6.00	0.00
4-25	4800.00	1460.00	670.00	459.00	186.00	48.00	39.00	5.00	0.00
4-26	4660.00	1470.00	672.00	475.00	186.00	50.00	38.00	4.90	0.00
4-27	4450.00	1430.00	680.00	485.00	189.00	53.00	38.00	4.30	0.00
4-28	4320.00	1380.00	681.00	496.00	193.00	55.00	38.00	3.60	0.00
4-29	4110.00	1380.00	677.00	504.00	207.00	58.00	38.00	2.80	0.00
4-30	3900.00	1370.00	665.00	531.00	218.00	60.00	38.00	2.30	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
5- 1	3690.00	1330.00	649.00	555.00	225.00	61.00	43.00	2.50	0.00
5- 2	3500.00	1280.00	633.00	568.00	228.00	61.00	45.00	2.90	0.00
5- 3	3340.00	1250.00	628.00	580.00	226.00	63.00	48.00	3.50	0.00
5- 4	3230.00	1220.00	644.00	580.00	221.00	65.00	55.00	4.10	0.00
5- 5	2960.00	1180.00	659.00	544.00	215.00	67.00	61.00	4.60	0.00
5- 6	2800.00	1160.00	644.00	510.00	208.00	71.00	64.00	5.00	0.00
5- 7	2630.00	1120.00	631.00	475.00	205.00	82.00	65.00	6.00	0.00
5- 8	2470.00	1110.00	628.00	440.00	207.00	82.00	65.00	6.00	0.00
5- 9	2330.00	1080.00	628.00	409.00	207.00	82.00	63.00	7.00	0.00
5-10	2210.00	1050.00	632.00	379.00	209.00	83.00	53.00	7.00	0.00
5-11	2080.00	1060.00	640.00	366.00	214.00	80.00	44.00	7.00	0.00
5-12	1970.00	1060.00	648.00	362.00	209.00	74.00	47.00	7.00	0.00
5-13	1860.00	1050.00	652.00	359.00	207.00	72.00	49.00	7.00	0.00
5-14	1790.00	1040.00	654.00	355.00	201.00	80.00	49.00	9.00	0.00
5-15	1640.00	1010.00	654.00	374.00	200.00	85.00	48.00	10.00	0.00
5-16	1820.00	990.00	654.00	403.00	199.00	88.00	47.00	10.00	0.00
5-17	1750.00	982.00	650.00	431.00	200.00	92.00	46.00	12.00	0.00
5-18	1670.00	958.00	644.00	449.00	200.00	93.00	44.00	11.00	0.00
5-19	1570.00	934.00	637.00	461.00	198.00	94.00	42.00	11.00	0.00
5-20	1480.00	910.00	625.00	469.00	196.00	84.00	40.00	11.00	0.00
5-21	1420.00	889.00	616.00	471.00	201.00	71.00	37.00	11.00	0.00
5-22	1360.00	854.00	601.00	469.00	205.00	73.00	35.00	10.00	0.00
5-23	1290.00	828.00	585.00	465.00	216.00	91.00	33.00	10.00	0.00
5-24	1230.00	810.00	571.00	455.00	212.00	111.00	32.00	9.00	0.00
5-25	1210.00	792.00	561.00	440.00	196.00	122.00	30.00	8.00	0.00
5-26	1160.00	786.00	552.00	421.00	183.00	122.00	29.00	9.00	0.00
5-27	1110.00	780.00	547.00	400.00	175.00	122.00	28.00	10.00	0.00
5-28	1050.00	760.00	542.00	374.00	172.00	120.00	28.00	11.00	0.00
5-29	1030.00	735.00	540.00	346.00	158.00	120.00	27.00	11.00	0.00
5-30	1010.00	718.00	535.00	315.00	146.00	123.00	26.00	11.00	0.00
5-31	1000.00	694.00	527.00	280.00	132.00	105.00	24.00	10.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	1020.00	666.00	510.00	243.00	165.00	86.00	23.00	10.00	0.00
6- 2	1000.00	652.00	482.00	236.00	168.00	69.00	21.00	10.00	0.00
6- 3	980.00	644.00	468.00	228.00	170.00	56.00	20.00	9.00	0.00
6- 4	960.00	638.00	450.00	222.00	142.00	58.00	18.00	9.00	0.00
6- 5	950.00	652.00	429.00	218.00	110.00	59.00	17.00	9.00	0.00
6- 6	940.00	650.00	411.00	213.00	110.00	59.00	18.00	8.00	0.00
6- 7	920.00	648.00	386.00	211.00	106.00	59.00	19.00	8.00	0.00
6- 8	910.00	640.00	381.00	233.00	103.00	46.00	28.00	8.00	0.00
6- 9	900.00	634.00	371.00	256.00	101.00	37.00	25.00	8.00	0.00
6-10	880.00	625.00	357.00	277.00	101.00	30.00	23.00	7.00	0.00
6-11	860.00	616.00	345.00	284.00	109.00	26.00	20.00	7.00	0.00
6-12	850.00	610.00	334.00	269.00	115.00	23.00	18.00	6.00	0.00
6-13	840.00	605.00	325.00	251.00	112.00	21.00	18.00	6.00	0.00
6-14	830.00	600.00	320.00	225.00	95.00	26.00	17.00	6.00	0.00
6-15	820.00	597.00	322.00	226.00	95.00	31.00	17.00	6.00	0.00
6-16	800.00	593.00	316.00	236.00	98.00	32.00	21.00	6.00	0.00
6-17	780.00	589.00	313.00	247.00	98.00	35.00	32.00	6.00	0.00
6-18	770.00	583.00	310.00	227.00	100.00	42.00	36.00	5.00	0.00
6-19	760.00	574.00	314.00	190.00	119.00	55.00	35.00	4.90	0.00
6-20	750.00	566.00	316.00	189.00	110.00	67.00	33.00	4.70	0.00
6-21	740.00	563.00	317.00	225.00	106.00	79.00	30.00	4.50	0.00
6-22	730.00	569.00	317.00	252.00	106.00	92.00	27.00	3.90	0.00
6-23	720.00	566.00	321.00	272.00	104.00	82.00	26.00	3.50	0.00
6-24	730.00	565.00	323.00	286.00	104.00	72.00	37.00	2.80	0.00
6-25	750.00	565.00	322.00	298.00	98.00	89.00	48.00	2.30	0.00
6-26	760.00	562.00	323.00	308.00	99.00	85.00	58.00	1.90	0.00
6-27	740.00	556.00	321.00	311.00	105.00	78.00	55.00	1.40	0.00
6-28	730.00	549.00	320.00	313.00	107.00	73.00	52.00	1.80	0.00
6-29	720.00	543.00	320.00	312.00	114.00	68.00	51.00	2.60	0.00
6-30	720.00	537.00	316.00	308.00	117.00	59.00	52.00	2.40	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
7- 1	720.00	530.00	326.00	307.00	117.00	53.00	47.00	2.10	0.00
7- 2	710.00	525.00	351.00	298.00	120.00	52.00	38.00	1.70	0.00
7- 3	710.00	522.00	360.00	294.00	122.00	53.00	30.00	1.40	0.00
7- 4	700.00	520.00	373.00	286.00	127.00	54.00	27.00	1.20	0.00
7- 5	700.00	518.00	384.00	278.00	129.00	54.00	24.00	1.00	0.00
7- 6	700.00	545.00	392.00	266.00	131.00	54.00	22.00	0.80	0.00
7- 7	700.00	580.00	400.00	246.00	138.00	53.00	20.00	0.50	0.00
7- 8	690.00	592.00	407.00	230.00	146.00	53.00	18.00	0.40	0.00
7- 9	690.00	604.00	409.00	205.00	156.00	54.00	17.00	0.30	0.00
7-10	680.00	616.00	413.00	189.00	164.00	55.00	20.00	0.20	0.00
7-11	680.00	627.00	413.00	189.00	136.00	53.00	19.00	0.10	0.00
7-12	680.00	638.00	414.00	190.00	105.00	50.00	17.00	0.10	0.00
7-13	690.00	644.00	416.00	191.00	102.00	47.00	17.00	0.10	0.00
7-14	690.00	644.00	425.00	195.00	102.00	45.00	25.00	0.00	0.00
7-15	700.00	644.00	444.00	197.00	98.00	46.00	22.00	0.00	0.00
7-16	710.00	644.00	459.00	197.00	94.00	41.00	19.00	0.00	0.00
7-17	720.00	642.00	475.00	196.00	89.00	38.00	16.00	0.00	0.00
7-18	720.00	640.00	469.00	193.00	106.00	35.00	12.00	0.00	0.00
7-19	710.00	642.00	462.00	187.00	120.00	33.00	10.00	0.00	0.00
7-20	700.00	640.00	452.00	181.00	132.00	31.00	9.00	0.00	0.00
7-21	700.00	639.00	442.00	172.00	128.00	30.00	8.00	0.00	0.00
7-22	690.00	645.00	434.00	165.00	118.00	29.00	7.00	0.00	0.00
7-23	690.00	650.00	424.00	164.00	108.00	27.00	6.00	0.00	0.00
7-24	680.00	648.00	413.00	174.00	97.00	26.00	4.70	0.00	0.00
7-25	680.00	642.00	402.00	180.00	86.00	26.00	3.60	0.00	0.00
7-26	680.00	651.00	405.00	184.00	76.00	24.00	2.50	0.00	0.00
7-27	680.00	663.00	406.00	184.00	69.00	23.00	1.70	0.00	0.00
7-28	678.00	670.00	404.00	185.00	63.00	22.00	1.00	0.00	0.00
7-29	694.00	670.00	399.00	182.00	58.00	20.00	0.73	0.00	0.00
7-30	708.00	670.00	393.00	177.00	53.00	18.00	0.67	0.00	0.00
7-31	717.00	660.00	385.00	171.00	48.00	18.00	0.97	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
8- 1	727.00	660.00	381.00	164.00	46.00	17.00	1.00	0.00	0.00
8- 2	743.00	660.00	374.00	149.00	46.00	16.00	0.86	0.00	0.00
8- 3	762.00	650.00	369.00	127.00	48.00	14.00	0.79	0.00	0.00
8- 4	779.00	640.00	361.00	110.00	48.00	13.00	0.76	0.00	0.00
8- 5	796.00	630.00	353.00	101.00	45.00	13.00	0.61	0.00	0.00
8- 6	823.00	620.00	342.00	96.00	48.00	12.00	0.51	0.00	0.00
8- 7	838.00	620.00	333.00	107.00	49.00	11.00	0.45	0.00	0.00
8- 8	838.00	610.00	329.00	110.00	40.00	11.00	0.39	0.00	0.00
8- 9	841.00	610.00	327.00	110.00	35.00	11.00	0.33	0.00	0.00
8-10	848.00	600.00	323.00	104.00	27.00	12.00	0.32	0.00	0.00
8-11	861.00	590.00	302.00	98.00	21.00	13.00	0.27	0.00	0.00
8-12	861.00	590.00	285.00	91.00	19.00	13.00	0.31	0.00	0.00
8-13	857.00	580.00	269.00	84.00	18.00	12.00	0.22	0.00	0.00
8-14	857.00	570.00	253.00	82.00	17.00	11.00	0.12	0.00	0.00
8-15	851.00	560.00	238.00	83.00	15.00	10.00	0.09	0.00	0.00
8-16	848.00	550.00	224.00	84.00	14.00	9.00	0.02	0.00	0.00
8-17	845.00	550.00	207.00	81.00	12.00	8.30	0.01	0.00	0.00
8-18	838.00	540.00	184.00	69.00	11.00	7.80	0.00	0.00	0.00
8-19	835.00	530.00	156.00	63.00	11.00	7.00	0.00	0.00	0.00
8-20	826.00	520.00	125.00	64.00	10.00	6.00	0.00	0.00	0.00
8-21	820.00	520.00	98.00	64.00	10.00	5.30	0.00	0.00	0.00
8-22	814.00	510.00	78.00	60.00	9.00	4.50	0.00	0.00	0.00
8-23	805.00	500.00	65.00	56.00	9.00	4.20	0.00	0.00	0.00
8-24	802.00	470.00	62.00	54.00	9.00	3.20	0.00	0.00	0.00
8-25	799.00	450.00	62.00	51.00	11.00	2.60	0.00	0.00	0.00
8-26	796.00	400.00	61.00	46.00	10.00	1.40	0.00	0.00	0.00
8-27	793.00	380.00	60.00	42.00	9.00	1.10	0.00	0.00	0.00
8-28	790.00	350.00	59.00	38.00	8.00	1.10	0.00	0.00	0.00
8-29	788.00	310.00	58.00	38.00	6.80	1.30	0.00	0.00	0.00
8-30	782.00	280.00	64.00	35.00	5.20	0.90	0.00	0.00	0.00
8-31	779.00	260.00	67.00	34.00	4.10	0.90	0.00	0.00	0.00

Table 11.--Discharge data for duration hydrograph for James River near Stratford, S. Dak. (station no. 06472000), for 19-year period October 1953 to September 1972--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
9- 1	770.00	250.00	70.00	36.00	3.20	0.90	0.00	0.00	0.00
9- 2	762.00	240.00	71.00	36.00	2.60	0.60	0.00	0.00	0.00
9- 3	756.00	213.00	71.00	36.00	2.00	0.60	0.00	0.00	0.00
9- 4	751.00	207.00	78.00	35.00	1.90	0.52	0.00	0.00	0.00
9- 5	740.00	201.00	85.00	35.00	2.20	0.30	0.00	0.00	0.00
9- 6	730.00	194.00	91.00	34.00	2.40	0.20	0.00	0.00	0.00
9- 7	720.00	188.00	97.00	34.00	2.80	0.16	0.00	0.00	0.00
9- 8	708.00	180.00	100.00	34.00	3.10	0.20	0.00	0.00	0.00
9- 9	703.00	172.00	100.00	33.00	2.80	0.10	0.00	0.00	0.00
9-10	703.00	166.00	90.00	32.00	2.50	0.10	0.00	0.00	0.00
9-11	696.00	160.00	86.00	34.00	2.20	0.00	0.00	0.00	0.00
9-12	685.00	152.00	80.00	37.00	1.90	0.00	0.00	0.00	0.00
9-13	672.00	146.00	80.00	39.00	1.60	0.00	0.00	0.00	0.00
9-14	659.00	140.00	77.00	40.00	1.30	0.00	0.00	0.00	0.00
9-15	647.00	135.00	71.00	39.00	1.00	0.00	0.00	0.00	0.00
9-16	649.00	128.00	65.00	39.00	1.00	0.00	0.00	0.00	0.00
9-17	633.00	117.00	59.00	38.00	1.00	0.00	0.00	0.00	0.00
9-18	613.00	102.00	56.00	37.00	0.80	0.00	0.00	0.00	0.00
9-19	587.00	82.00	55.00	37.00	0.60	0.00	0.00	0.00	0.00
9-20	563.00	70.00	56.00	38.00	0.50	0.00	0.00	0.00	0.00
9-21	534.00	68.00	52.00	37.00	0.50	0.00	0.00	0.00	0.00
9-22	507.00	66.00	49.00	36.00	0.72	0.00	0.00	0.00	0.00
9-23	478.00	65.00	47.00	34.00	1.10	0.00	0.00	0.00	0.00
9-24	446.00	67.00	46.00	28.00	1.00	0.00	0.00	0.00	0.00
9-25	414.00	69.00	43.00	24.00	0.96	0.00	0.00	0.00	0.00
9-26	384.00	70.00	41.00	22.00	0.84	0.00	0.00	0.00	0.00
9-27	355.00	75.00	38.00	18.00	0.60	0.00	0.00	0.00	0.00
9-28	329.00	82.00	35.00	15.00	0.48	0.00	0.00	0.00	0.00
9-29	302.00	91.00	33.00	12.00	0.40	0.00	0.00	0.00	0.00
9-30	280.00	98.00	32.00	9.40	0.28	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
10- 1	405.00	128.00	47.00	15.00	0.60	0.00	0.00	0.00	0.00
10- 2	394.00	129.00	47.00	14.00	0.60	0.00	0.00	0.00	0.00
10- 3	388.00	130.00	47.00	13.00	0.50	0.00	0.00	0.00	0.00
10- 4	384.00	135.00	48.00	12.00	0.60	0.00	0.00	0.00	0.00
10- 5	378.00	133.00	49.00	13.00	0.50	0.00	0.00	0.00	0.00
10- 6	371.00	134.00	48.00	13.00	0.90	0.00	0.00	0.00	0.00
10- 7	365.00	135.00	48.00	12.00	1.00	0.00	0.00	0.00	0.00
10- 8	361.00	137.00	50.00	14.00	1.00	0.00	0.00	0.00	0.00
10- 9	355.00	138.00	50.00	16.00	0.90	0.00	0.00	0.00	0.00
10-10	348.00	139.00	49.00	14.00	0.70	0.00	0.00	0.00	0.00
10-11	343.00	139.00	48.00	13.00	0.70	0.00	0.00	0.00	0.00
10-12	338.00	146.00	47.00	12.00	0.60	0.00	0.00	0.00	0.00
10-13	333.00	148.00	48.00	11.00	0.60	0.00	0.00	0.00	0.00
10-14	328.00	147.00	50.00	10.00	0.50	0.00	0.00	0.00	0.00
10-15	312.00	148.00	50.00	9.90	0.40	0.00	0.00	0.00	0.00
10-16	312.00	149.00	49.00	8.20	0.40	0.00	0.00	0.00	0.00
10-17	307.00	150.00	49.00	8.00	0.40	0.00	0.00	0.00	0.00
10-18	306.00	151.00	49.00	9.00	1.00	0.00	0.00	0.00	0.00
10-19	300.00	152.00	49.00	9.00	0.40	0.00	0.00	0.00	0.00
10-20	294.00	152.00	50.00	8.00	0.32	0.00	0.00	0.00	0.00
10-21	292.00	152.00	49.00	10.00	0.40	0.00	0.00	0.00	0.00
10-22	289.00	153.00	49.00	9.00	0.40	0.00	0.00	0.00	0.00
10-23	288.00	156.00	53.00	12.00	1.10	0.00	0.00	0.00	0.00
10-24	301.00	159.00	55.00	16.00	1.00	0.00	0.00	0.00	0.00
10-25	306.00	159.00	54.00	17.00	0.80	0.00	0.00	0.00	0.00
10-26	309.00	159.00	53.00	17.00	0.70	0.00	0.00	0.00	0.00
10-27	312.00	163.00	53.00	17.00	0.50	0.00	0.00	0.00	0.00
10-28	316.00	163.00	55.00	17.00	0.50	0.00	0.00	0.00	0.00
10-29	316.00	163.00	59.00	16.00	1.00	0.00	0.00	0.00	0.00
10-30	316.00	165.00	68.00	24.00	1.00	0.00	0.00	0.00	0.00
10-31	316.00	163.00	81.00	23.00	1.00	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
11- 1	316.00	166.00	89.00	23.00	0.90	0.00	0.00	0.00	0.00
11- 2	318.00	162.00	87.00	21.00	0.80	0.00	0.00	0.00	0.00
11- 3	320.00	155.00	89.00	20.00	0.80	0.00	0.00	0.00	0.00
11- 4	320.00	146.00	89.00	20.00	0.70	0.00	0.00	0.00	0.00
11- 5	319.00	144.00	94.00	19.00	0.60	0.00	0.00	0.00	0.00
11- 6	319.00	149.00	95.00	20.00	0.60	0.00	0.00	0.00	0.00
11- 7	319.00	155.00	96.00	34.00	2.00	0.00	0.00	0.00	0.00
11- 8	318.00	157.00	92.00	37.00	1.50	0.00	0.00	0.00	0.00
11- 9	314.00	159.00	80.00	40.00	0.90	0.00	0.00	0.00	0.00
11-10	312.00	161.00	77.00	41.00	1.00	0.00	0.00	0.00	0.00
11-11	312.00	175.00	76.00	47.00	1.00	0.00	0.00	0.00	0.00
11-12	313.00	181.00	75.00	47.00	1.00	0.00	0.00	0.00	0.00
11-13	312.00	175.00	70.00	47.00	1.00	0.00	0.00	0.00	0.00
11-14	312.00	167.00	71.00	44.00	1.00	0.00	0.00	0.00	0.00
11-15	310.00	167.00	69.00	44.00	0.80	0.00	0.00	0.00	0.00
11-16	308.00	167.00	75.00	44.00	1.80	0.00	0.00	0.00	0.00
11-17	307.00	166.00	83.00	44.00	2.80	0.00	0.00	0.00	0.00
11-18	306.00	167.00	75.00	44.00	3.00	0.00	0.00	0.00	0.00
11-19	306.00	167.00	70.00	44.00	4.00	0.00	0.00	0.00	0.00
11-20	305.00	162.00	70.00	43.00	2.00	0.00	0.00	0.00	0.00
11-21	305.00	160.00	64.00	43.00	1.20	0.00	0.00	0.00	0.00
11-22	290.00	158.00	62.00	42.00	3.00	0.00	0.00	0.00	0.00
11-23	277.00	156.00	65.00	42.00	4.00	0.00	0.00	0.00	0.00
11-24	275.00	154.00	65.00	42.00	4.00	0.00	0.00	0.00	0.00
11-25	273.00	152.00	65.00	43.00	4.50	0.03	0.00	0.00	0.00
11-26	270.00	150.00	70.00	43.00	4.30	0.03	0.00	0.00	0.00
11-27	265.00	150.00	74.00	43.00	4.20	0.02	0.00	0.00	0.00
11-28	260.00	147.00	67.00	44.00	4.30	0.01	0.00	0.00	0.00
11-29	255.00	146.00	68.00	44.00	4.50	0.01	0.00	0.00	0.00
11-30	255.00	148.00	75.00	43.00	4.50	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
12- 1	255.00	150.00	80.00	42.00	4.50	0.06	0.00	0.00	0.00
12- 2	257.00	151.00	85.00	42.00	4.50	0.06	0.00	0.00	0.00
12- 3	257.00	151.00	80.00	42.00	5.00	0.00	0.00	0.00	0.00
12- 4	258.00	146.00	60.00	40.00	6.00	0.00	0.00	0.00	0.00
12- 5	260.00	145.00	58.00	40.00	6.00	0.00	0.00	0.00	0.00
12- 6	260.00	140.00	55.00	40.00	6.00	0.00	0.00	0.00	0.00
12- 7	255.00	140.00	52.00	39.00	6.00	0.00	0.00	0.00	0.00
12- 8	250.00	137.00	44.00	33.00	6.00	0.01	0.00	0.00	0.00
12- 9	243.00	134.00	43.00	33.00	6.00	0.01	0.00	0.00	0.00
12-10	235.00	134.00	40.00	32.00	6.00	0.00	0.00	0.00	0.00
12-11	225.00	130.00	40.00	31.00	6.00	0.00	0.00	0.00	0.00
12-12	220.00	128.00	40.00	31.00	6.00	0.00	0.00	0.00	0.00
12-13	210.00	115.00	60.00	30.00	5.00	0.00	0.00	0.00	0.00
12-14	202.00	115.00	71.00	32.00	5.00	0.00	0.00	0.00	0.00
12-15	195.00	120.00	69.00	33.00	5.00	0.00	0.00	0.00	0.00
12-16	187.00	120.00	65.00	32.00	5.00	0.00	0.00	0.00	0.00
12-17	185.00	120.00	64.00	29.00	5.00	0.00	0.00	0.00	0.00
12-18	210.00	110.00	55.00	30.00	4.80	0.00	0.00	0.00	0.00
12-19	230.00	110.00	45.00	29.00	4.50	0.00	0.00	0.00	0.00
12-20	245.00	100.00	40.00	28.00	4.30	0.00	0.00	0.00	0.00
12-21	265.00	100.00	37.00	30.00	4.30	0.00	0.00	0.00	0.00
12-22	285.00	100.00	35.00	30.00	4.00	0.00	0.00	0.00	0.00
12-23	305.00	95.00	36.00	28.00	4.00	0.00	0.00	0.00	0.00
12-24	310.00	95.00	36.00	27.00	4.00	0.00	0.00	0.00	0.00
12-25	310.00	95.00	37.00	26.00	4.00	0.00	0.00	0.00	0.00
12-26	310.00	95.00	36.00	24.00	4.00	0.00	0.00	0.00	0.00
12-27	305.00	90.00	31.00	23.00	3.50	0.00	0.00	0.00	0.00
12-28	295.00	90.00	29.00	22.00	3.30	0.00	0.00	0.00	0.00
12-29	280.00	85.00	29.00	21.00	3.10	0.00	0.00	0.00	0.00
12-30	260.00	85.00	29.00	19.00	3.30	0.00	0.00	0.00	0.00
12-31	235.00	80.00	28.00	18.00	2.80	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
1- 1	210.00	75.00	28.00	15.00	2.60	0.00	0.00	0.00	0.00
1- 2	180.00	70.00	28.00	14.00	2.30	0.00	0.00	0.00	0.00
1- 3	160.00	62.00	27.00	15.00	2.10	0.00	0.00	0.00	0.00
1- 4	145.00	55.00	27.00	16.00	2.10	0.00	0.00	0.00	0.00
1- 5	130.00	50.00	26.00	15.00	2.00	0.00	0.00	0.00	0.00
1- 6	120.00	45.00	26.00	15.00	2.00	0.00	0.00	0.00	0.00
1- 7	110.00	41.00	26.00	14.00	2.00	0.00	0.00	0.00	0.00
1- 8	110.00	37.00	26.00	14.00	2.00	0.00	0.00	0.00	0.00
1- 9	100.00	38.00	25.00	14.00	2.00	0.00	0.00	0.00	0.00
1-10	100.00	38.00	24.00	13.00	1.80	0.00	0.00	0.00	0.00
1-11	95.00	36.00	22.00	13.00	1.50	0.00	0.00	0.00	0.00
1-12	90.00	35.00	20.00	13.00	1.20	0.00	0.00	0.00	0.00
1-13	80.00	29.00	18.00	13.00	1.00	0.00	0.00	0.00	0.00
1-14	75.00	32.00	16.00	12.00	1.00	0.00	0.00	0.00	0.00
1-15	70.00	30.00	16.00	12.00	1.00	0.00	0.00	0.00	0.00
1-16	65.00	30.00	16.00	11.00	1.00	0.00	0.00	0.00	0.00
1-17	60.00	31.00	14.00	10.00	0.85	0.00	0.00	0.00	0.00
1-18	55.00	31.00	16.00	10.00	0.90	0.00	0.00	0.00	0.00
1-19	50.00	29.00	16.00	10.00	0.70	0.00	0.00	0.00	0.00
1-20	45.00	28.00	15.00	9.50	0.70	0.00	0.00	0.00	0.00
1-21	42.00	26.00	14.00	8.70	0.70	0.00	0.00	0.00	0.00
1-22	38.00	25.00	13.00	8.00	0.70	0.00	0.00	0.00	0.00
1-23	34.00	24.00	12.00	7.00	0.60	0.00	0.00	0.00	0.00
1-24	31.00	22.00	12.00	6.50	0.80	0.00	0.00	0.00	0.00
1-25	27.00	21.00	12.00	6.00	0.50	0.00	0.00	0.00	0.00
1-26	25.00	19.00	10.00	5.80	0.40	0.00	0.00	0.00	0.00
1-27	23.00	17.00	9.50	5.50	0.40	0.00	0.00	0.00	0.00
1-28	23.00	16.00	9.20	5.50	0.40	0.00	0.00	0.00	0.00
1-29	23.00	15.00	9.00	5.70	0.30	0.00	0.00	0.00	0.00
1-30	24.00	14.00	8.70	4.00	0.20	0.00	0.00	0.00	0.00
1-31	24.00	14.00	8.50	4.00	0.10	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
2- 1	25.00	14.00	8.20	3.80	0.20	0.00	0.00	0.00	0.00
2- 2	25.00	14.00	8.00	3.20	0.30	0.00	0.00	0.00	0.00
2- 3	24.00	14.00	7.80	3.00	0.40	0.00	0.00	0.00	0.00
2- 4	23.00	14.00	7.00	4.00	0.50	0.00	0.00	0.00	0.00
2- 5	22.00	14.00	7.10	6.00	0.50	0.00	0.00	0.00	0.00
2- 6	22.00	13.00	7.70	5.20	0.50	0.00	0.00	0.00	0.00
2- 7	22.00	14.00	7.60	4.80	0.50	0.00	0.00	0.00	0.00
2- 8	23.00	16.00	7.50	3.50	0.50	0.00	0.00	0.00	0.00
2- 9	24.00	16.00	7.30	3.20	0.50	0.00	0.00	0.00	0.00
2-10	25.00	15.00	7.00	3.20	0.92	0.00	0.00	0.00	0.00
2-11	27.00	15.00	7.50	3.20	0.80	0.00	0.00	0.00	0.00
2-12	30.00	15.00	7.50	3.30	0.80	0.00	0.00	0.00	0.00
2-13	30.00	15.00	8.00	3.30	0.80	0.00	0.00	0.00	0.00
2-14	33.00	15.00	9.00	6.00	1.00	0.00	0.00	0.00	0.00
2-15	36.00	14.00	9.00	5.80	1.00	0.00	0.00	0.00	0.00
2-16	40.00	15.00	8.00	5.60	1.00	0.00	0.00	0.00	0.00
2-17	43.00	20.00	8.00	5.40	1.10	0.00	0.00	0.00	0.00
2-18	45.00	22.00	8.00	5.20	1.10	0.00	0.00	0.00	0.00
2-19	46.00	21.00	8.00	5.00	1.20	0.00	0.00	0.00	0.00
2-20	46.00	21.00	10.00	4.80	1.20	0.00	0.00	0.00	0.00
2-21	50.00	20.00	9.00	4.50	1.20	0.00	0.00	0.00	0.00
2-22	65.00	23.00	9.00	4.00	1.20	0.00	0.00	0.00	0.00
2-23	75.00	22.00	9.00	4.00	1.00	0.00	0.00	0.00	0.00
2-24	79.00	23.00	9.00	4.00	1.30	0.00	0.00	0.00	0.00
2-25	77.00	21.00	10.00	4.00	1.30	0.00	0.00	0.00	0.00
2-26	75.00	18.00	11.00	5.00	1.30	0.00	0.00	0.00	0.00
2-27	73.00	25.00	10.00	6.00	2.00	0.00	0.00	0.00	0.00
2-28	72.00	30.00	12.00	8.00	2.00	0.00	0.00	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
3- 1	70.00	31.00	12.00	10.00	2.00	0.00	0.00	0.00	0.00
3- 2	80.00	29.00	15.00	10.00	2.00	0.00	0.00	0.00	0.00
3- 3	95.00	38.00	15.00	10.00	2.00	0.00	0.00	0.00	0.00
3- 4	110.00	37.00	20.00	10.00	2.10	0.00	0.00	0.00	0.00
3- 5	130.00	35.00	23.00	9.50	2.30	0.00	0.00	0.00	0.00
3- 6	160.00	35.00	26.00	10.00	3.00	0.00	0.00	0.00	0.00
3- 7	180.00	40.00	25.00	9.20	3.00	0.00	0.00	0.00	0.00
3- 8	190.00	45.00	25.00	8.90	3.00	0.00	0.00	0.00	0.00
3- 9	190.00	50.00	30.00	9.10	3.70	0.00	0.00	0.00	0.00
3-10	180.00	50.00	35.00	10.00	4.00	0.00	0.00	0.00	0.00
3-11	160.00	50.00	40.00	13.00	4.00	0.10	0.00	0.00	0.00
3-12	150.00	55.00	45.00	20.00	4.30	1.00	0.00	0.00	0.00
3-13	140.00	80.00	60.00	38.00	5.00	1.00	0.00	0.00	0.00
3-14	200.00	90.00	65.00	56.00	5.00	1.00	0.00	0.00	0.00
3-15	200.00	95.00	83.00	70.00	5.00	1.00	0.00	0.00	0.00
3-16	200.00	106.00	90.00	75.00	6.00	0.80	0.00	0.00	0.00
3-17	230.00	126.00	90.00	70.00	6.00	1.00	0.00	0.00	0.00
3-18	260.00	189.00	85.00	60.00	6.00	1.00	0.00	0.00	0.00
3-19	350.00	236.00	85.00	55.00	8.00	1.00	0.00	0.00	0.00
3-20	400.00	260.00	81.00	60.00	10.00	1.00	0.10	0.00	0.00
3-21	660.00	230.00	100.00	55.00	14.00	1.50	0.70	0.00	0.00
3-22	700.00	265.00	120.00	80.00	14.00	1.50	0.50	0.00	0.00
3-23	660.00	300.00	150.00	80.00	14.00	2.00	0.60	0.00	0.00
3-24	614.00	320.00	160.00	80.00	14.00	1.00	0.00	0.00	-49.99
3-25	525.00	350.00	180.00	80.00	18.00	1.10	0.00	0.00	-399.99
3-26	530.00	400.00	190.00	79.00	24.00	3.00	0.50	0.00	-449.99
3-27	550.00	359.00	205.00	76.00	32.00	3.40	0.60	0.00	-349.99
3-28	600.00	350.00	220.00	110.00	50.00	7.00	0.90	0.00	0.00
3-29	700.00	450.00	283.00	181.00	50.00	9.30	1.00	0.00	0.00
3-30	759.00	520.00	320.00	250.00	65.00	11.00	1.00	0.00	0.00
3-31	800.00	550.00	320.00	230.00	64.00	10.00	1.90	0.00	-174.99

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
4- 1	1500.00	580.00	335.00	214.00	64.00	11.00	1.80	0.00	-179.99
4- 2	1300.00	600.00	350.00	210.00	62.00	11.00	3.00	0.00	-179.99
4- 3	1200.00	650.00	350.00	266.00	65.00	17.00	6.00	0.00	-169.99
4- 4	1100.00	673.00	380.00	261.00	70.00	27.00	5.00	0.20	-129.99
4- 5	1130.00	690.00	388.00	260.00	92.00	30.00	9.10	0.50	0.00
4- 6	1140.00	705.00	400.00	306.00	112.00	33.00	9.00	0.30	-29.99
4- 7	1130.00	716.00	392.00	306.00	101.00	30.00	11.00	1.50	-99.99
4- 8	1140.00	733.00	410.00	304.00	114.00	26.00	9.30	1.20	-799.99
4- 9	1440.00	746.00	440.00	296.00	118.00	26.00	9.80	0.90	-2099.99
4-10	1750.00	759.00	477.00	300.00	132.00	42.00	12.00	1.10	-1649.99
4-11	1970.00	767.00	460.00	302.00	157.00	49.00	16.00	1.10	-1049.99
4-12	2100.00	774.00	435.00	307.00	181.00	49.00	14.00	0.90	-399.99
4-13	2150.00	780.00	450.00	350.00	204.00	55.00	38.00	12.00	0.00
4-14	2170.00	967.00	562.00	420.00	191.00	65.00	43.00	10.00	0.00
4-15	2200.00	998.00	579.00	443.00	193.00	66.00	42.00	8.00	0.00
4-16	2450.00	1200.00	596.00	446.00	235.00	67.00	40.00	8.00	0.00
4-17	2700.00	1500.00	613.00	448.00	240.00	67.00	37.00	8.00	0.00
4-18	3000.00	1660.00	680.00	456.00	246.00	66.00	36.00	8.00	0.00
4-19	3700.00	1670.00	750.00	466.00	249.00	73.00	34.00	16.00	0.00
4-20	4600.00	1660.00	793.00	485.00	249.00	88.00	46.00	17.00	0.00
4-21	5230.00	1640.00	791.00	501.00	249.00	81.00	44.00	16.00	0.00
4-22	5510.00	1610.00	787.00	520.00	247.00	75.00	40.00	16.00	0.00
4-23	5640.00	1600.00	780.00	533.00	246.00	70.00	29.00	22.00	0.00
4-24	5670.00	1590.00	780.00	560.00	247.00	67.00	29.00	23.00	0.00
4-25	5650.00	1550.00	813.00	586.00	248.00	64.00	32.00	20.00	0.00
4-26	5590.00	1510.00	823.00	604.00	249.00	62.00	34.00	18.00	0.00
4-27	5540.00	1470.00	816.00	621.00	246.00	59.00	37.00	18.00	0.00
4-28	5460.00	1440.00	810.00	640.00	246.00	62.00	38.00	20.00	0.00
4-29	5310.00	1420.00	802.00	645.00	246.00	71.00	39.00	19.00	0.00
4-30	5060.00	1390.00	793.00	656.00	247.00	83.00	44.00	17.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
5- 1	4860.00	1350.00	786.00	666.00	247.00	91.00	46.00	18.00	0.00
5- 2	4640.00	1320.00	810.00	667.00	246.00	82.00	48.00	16.00	0.00
5- 3	4450.00	1280.00	840.00	669.00	250.00	81.00	50.00	13.00	0.00
5- 4	4440.00	1250.00	840.00	673.00	258.00	81.00	52.00	13.00	0.00
5- 5	4260.00	1210.00	876.00	678.00	279.00	79.00	54.00	10.00	0.00
5- 6	4020.00	1240.00	894.00	686.00	298.00	78.00	53.00	12.00	0.00
5- 7	3770.00	1220.00	912.00	696.00	324.00	80.00	48.00	9.20	0.00
5- 8	3510.00	1180.00	912.00	706.00	338.00	85.00	52.00	5.80	0.00
5- 9	3260.00	1150.00	920.00	698.00	352.00	90.00	51.00	7.50	0.00
5-10	3050.00	1140.00	930.00	699.00	371.00	94.00	50.00	6.40	0.00
5-11	2880.00	1130.00	976.00	698.00	385.00	86.00	47.00	6.30	0.00
5-12	2710.00	1640.00	984.00	715.00	393.00	87.00	46.00	5.90	0.00
5-13	2820.00	1580.00	1020.00	717.00	399.00	87.00	45.00	4.90	0.00
5-14	3480.00	1520.00	1050.00	727.00	374.00	92.00	48.00	3.50	0.00
5-15	4080.00	1470.00	1030.00	750.00	352.00	97.00	50.00	2.80	0.00
5-16	4630.00	1420.00	1010.00	756.00	365.00	100.00	42.00	3.00	0.00
5-17	5020.00	1380.00	983.00	752.00	392.00	100.00	40.00	7.00	0.00
5-18	5170.00	1330.00	961.00	744.00	382.00	100.00	38.00	8.00	0.00
5-19	5170.00	1280.00	940.00	744.00	371.00	100.00	37.00	9.90	0.00
5-20	4880.00	1240.00	923.00	745.00	361.00	104.00	35.00	9.10	0.00
5-21	4750.00	1210.00	904.00	761.00	377.00	110.00	32.00	7.20	0.00
5-22	4630.00	1180.00	881.00	769.00	381.00	112.00	28.00	7.50	0.00
5-23	4520.00	1150.00	865.00	786.00	362.00	105.00	26.00	7.20	0.00
5-24	4420.00	1120.00	855.00	768.00	342.00	105.00	23.00	6.90	0.00
5-25	4330.00	1090.00	847.00	768.00	322.00	100.00	20.00	7.50	0.00
5-26	4240.00	1070.00	836.00	750.00	309.00	101.00	19.00	7.80	0.00
5-27	4240.00	1040.00	818.00	730.00	301.00	115.00	21.00	8.60	0.00
5-28	4330.00	1020.00	800.00	715.00	297.00	126.00	21.00	6.70	0.00
5-29	4330.00	1000.00	785.00	701.00	297.00	130.00	21.00	8.60	0.00
5-30	4420.00	972.00	794.00	698.00	291.00	129.00	20.00	9.90	0.00
5-31	4330.00	960.00	788.00	673.00	290.00	128.00	21.00	9.90	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	4240.00	940.00	758.00	658.00	280.00	130.00	23.00	9.40	0.00
6- 2	4160.00	922.00	729.00	644.00	271.00	126.00	23.00	9.10	0.00
6- 3	4080.00	910.00	713.00	631.00	258.00	122.00	24.00	10.00	0.00
6- 4	3930.00	904.00	695.00	618.00	235.00	117.00	19.00	11.00	0.00
6- 5	3790.00	886.00	673.00	611.00	223.00	110.00	19.00	11.00	0.00
6- 6	3660.00	886.00	676.00	578.00	217.00	102.00	22.00	10.00	0.00
6- 7	3480.00	869.00	668.00	540.00	207.00	93.00	27.00	9.60	0.00
6- 8	3360.00	852.00	646.00	517.00	204.00	84.00	30.00	8.80	0.00
6- 9	3140.00	852.00	608.00	502.00	215.00	78.00	26.00	7.80	0.00
6-10	2930.00	835.00	588.00	488.00	218.00	74.00	28.00	6.90	0.00
6-11	2770.00	822.00	570.00	484.00	209.00	70.00	23.00	5.60	0.00
6-12	2620.00	822.00	552.00	454.00	205.00	68.00	21.00	4.60	0.00
6-13	2530.00	822.00	530.00	454.00	196.00	68.00	22.00	3.80	0.00
6-14	2390.00	804.00	527.00	445.00	188.00	72.00	23.00	2.70	0.00
6-15	2260.00	804.00	552.00	445.00	192.00	77.00	21.00	10.00	0.00
6-16	2130.00	804.00	611.00	422.00	192.00	80.00	20.00	11.00	0.00
6-17	2010.00	804.00	646.00	410.00	188.00	83.00	20.00	8.90	0.00
6-18	1940.00	822.00	646.00	397.00	183.00	73.00	22.00	9.20	0.00
6-19	1830.00	804.00	636.00	381.00	166.00	63.00	24.00	7.40	0.00
6-20	1760.00	804.00	609.00	365.00	163.00	57.00	25.00	4.30	0.00
6-21	1660.00	804.00	614.00	365.00	161.00	92.00	26.00	1.10	0.00
6-22	1580.00	840.00	631.00	350.00	180.00	95.00	27.00	1.10	0.00
6-23	1520.00	804.00	635.00	355.00	166.00	97.00	23.00	2.50	0.00
6-24	1470.00	804.00	628.00	340.00	162.00	96.00	26.00	2.20	0.00
6-25	1440.00	804.00	604.00	335.00	143.00	91.00	28.00	2.00	0.00
6-26	1400.00	804.00	525.00	321.00	135.00	86.00	26.00	1.90	0.00
6-27	1350.00	786.00	525.00	321.00	126.00	90.00	24.00	0.82	0.00
6-28	1300.00	858.00	602.00	321.00	118.00	89.00	23.00	0.75	0.00
6-29	1260.00	850.00	614.00	315.00	124.00	87.00	25.00	0.60	0.00
6-30	1220.00	716.00	609.00	321.00	140.00	96.00	21.00	0.60	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
7- 1	1200.00	700.00	588.00	348.00	155.00	85.00	19.00	0.60	0.00
7- 2	1170.00	681.00	542.00	343.00	152.00	81.00	16.00	0.75	0.00
7- 3	1150.00	668.00	558.00	346.00	147.00	68.00	15.00	0.45	0.00
7- 4	1130.00	686.00	570.00	345.00	149.00	58.00	19.00	0.30	0.00
7- 5	1110.00	710.00	580.00	338.00	157.00	56.00	16.00	0.30	0.00
7- 6	1100.00	735.00	579.00	342.00	149.00	54.00	13.00	0.30	0.00
7- 7	1060.00	754.00	545.00	339.00	136.00	51.00	19.00	0.15	0.00
7- 8	1020.00	769.00	494.00	330.00	139.00	48.00	12.00	0.10	0.00
7- 9	1020.00	788.00	461.00	334.00	143.00	48.00	7.80	0.00	0.00
7-10	1020.00	800.00	483.00	318.00	139.00	48.00	6.40	0.00	0.00
7-11	984.00	809.00	495.00	313.00	130.00	48.00	6.00	0.00	0.00
7-12	966.00	813.00	471.00	311.00	122.00	48.00	4.00	0.12	0.00
7-13	948.00	813.00	446.00	306.00	115.00	50.00	3.50	0.00	0.00
7-14	930.00	814.00	429.00	302.00	113.00	53.00	3.10	0.10	0.00
7-15	930.00	834.00	436.00	298.00	112.00	53.00	2.90	0.00	0.00
7-16	930.00	835.00	459.00	295.00	99.00	53.00	4.60	0.00	0.00
7-17	912.00	838.00	485.00	288.00	100.00	51.00	3.70	0.00	0.00
7-18	912.00	814.00	508.00	280.00	100.00	46.00	2.60	0.00	0.00
7-19	894.00	783.00	529.00	273.00	100.00	44.00	2.30	0.00	0.00
7-20	890.00	755.00	548.00	257.00	95.00	53.00	1.50	0.00	0.00
7-21	902.00	720.00	570.00	260.00	94.00	43.00	1.00	0.00	0.00
7-22	915.00	688.00	573.00	246.00	98.00	34.00	0.68	0.00	0.00
7-23	926.00	663.00	564.00	243.00	94.00	32.00	0.36	0.00	0.00
7-24	940.00	662.00	548.00	235.00	94.00	34.00	0.66	0.00	0.00
7-25	952.00	658.00	532.00	229.00	94.00	30.00	0.68	0.00	0.00
7-26	968.00	730.00	543.00	223.00	92.00	31.00	0.30	0.00	0.00
7-27	986.00	710.00	538.00	219.00	90.00	31.00	0.04	0.00	0.00
7-28	1010.00	768.00	547.00	219.00	89.00	27.00	0.04	0.00	0.00
7-29	1020.00	750.00	556.00	213.00	87.00	25.00	0.50	0.00	0.00
7-30	1030.00	660.00	493.00	203.00	84.00	26.00	1.40	0.00	0.00
7-31	1040.00	654.00	482.00	190.00	62.00	25.00	0.47	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
8- 1	1050.00	644.00	470.00	188.00	82.00	22.00	0.30	0.00	0.00
8- 2	1060.00	627.00	540.00	184.00	81.00	20.00	0.46	0.00	0.00
8- 3	1070.00	681.00	547.00	191.00	81.00	18.00	0.51	0.00	0.00
8- 4	1090.00	664.00	537.00	184.00	79.00	16.00	0.74	0.00	0.00
8- 5	1100.00	647.00	524.00	175.00	77.00	14.00	0.06	0.00	0.00
8- 6	1110.00	630.00	513.00	176.00	67.00	13.00	0.00	0.00	0.00
8- 7	1120.00	613.00	480.00	167.00	60.00	11.00	0.90	0.00	0.00
8- 8	1120.00	614.00	448.00	159.00	61.00	14.00	0.40	0.00	0.00
8- 9	1130.00	625.00	418.00	150.00	63.00	16.00	0.30	0.00	0.00
8-10	1130.00	634.00	422.00	143.00	61.00	15.00	0.20	0.00	0.00
8-11	1120.00	655.00	424.00	136.00	49.00	14.00	0.10	0.00	0.00
8-12	1120.00	660.00	429.00	129.00	48.00	14.00	0.65	0.00	0.00
8-13	1110.00	630.00	419.00	122.00	40.00	12.00	1.10	0.00	0.00
8-14	1090.00	605.00	398.00	115.00	38.00	12.00	0.76	0.00	0.00
8-15	1080.00	570.00	416.00	108.00	32.00	9.90	0.32	0.00	0.00
8-16	1060.00	535.00	417.00	105.00	26.00	10.00	0.16	0.00	0.00
8-17	1050.00	500.00	409.00	103.00	22.00	8.00	0.10	0.00	0.00
8-18	1040.00	460.00	397.00	100.00	23.00	7.00	0.06	0.00	0.00
8-19	1030.00	430.00	350.00	96.00	16.00	9.00	0.07	0.00	0.00
8-20	1010.00	421.00	300.00	104.00	15.00	8.00	0.06	0.00	0.00
8-21	1000.00	433.00	252.00	127.00	14.00	9.00	0.00	0.00	0.00
8-22	986.00	413.00	226.00	120.00	14.00	5.80	0.47	0.00	0.00
8-23	972.00	397.00	220.00	110.00	14.00	4.90	1.60	0.00	0.00
8-24	956.00	381.00	195.00	97.00	13.00	3.70	1.40	0.00	0.00
8-25	930.00	357.00	177.00	81.00	12.00	4.70	0.82	0.00	0.00
8-26	909.00	334.00	169.00	77.00	12.00	4.10	0.58	0.00	0.00
8-27	886.00	311.00	162.00	77.00	11.00	3.70	0.82	0.00	0.00
8-28	886.00	315.00	150.00	77.00	10.00	3.70	0.54	0.00	0.00
8-29	865.00	293.00	123.00	75.00	10.00	3.30	0.43	0.00	0.00
8-30	838.00	269.00	110.00	71.00	10.00	2.80	0.32	0.00	0.00
8-31	814.00	258.00	94.00	67.00	9.00	2.40	0.36	0.00	0.00

Table 12.--Discharge data for duration hydrograph for James River at Ashton, S. Dak. (station no. 06473000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
9- 1	802.00	250.00	86.00	64.00	8.00	1.80	0.00	0.00	0.00
9- 2	802.00	245.00	82.00	64.00	7.00	1.40	0.00	0.00	0.00
9- 3	798.00	245.00	81.00	64.00	7.00	1.30	0.00	0.00	0.00
9- 4	793.00	241.00	81.00	64.00	6.00	1.10	0.00	0.00	0.00
9- 5	791.00	235.00	80.00	57.00	6.00	1.20	0.00	0.00	0.00
9- 6	785.00	229.00	80.00	53.00	5.00	0.84	0.00	0.00	0.00
9- 7	780.00	221.00	79.00	49.00	4.50	0.90	0.00	0.00	0.00
9- 8	774.00	214.00	78.00	48.00	4.00	0.80	0.00	0.00	0.00
9- 9	767.00	206.00	80.00	44.00	4.00	0.60	0.00	0.00	0.00
9-10	763.00	197.00	80.00	42.00	3.80	0.20	0.00	0.00	0.00
9-11	758.00	191.00	77.00	39.00	3.10	0.20	0.00	0.00	0.00
9-12	750.00	183.00	78.00	37.00	3.10	0.20	0.00	0.00	0.00
9-13	737.00	178.00	80.00	35.00	3.10	0.10	0.00	0.00	0.00
9-14	724.00	169.00	80.00	33.00	3.30	0.10	0.00	0.00	0.00
9-15	718.00	165.00	77.00	34.00	2.60	0.00	0.00	0.00	0.00
9-16	718.00	157.00	72.00	38.00	2.60	0.00	0.00	0.00	0.00
9-17	708.00	152.00	68.00	40.00	2.10	0.00	0.00	0.00	0.00
9-18	696.00	147.00	62.00	38.00	2.40	0.00	0.00	0.00	0.00
9-19	684.00	146.00	57.00	34.00	1.70	0.00	0.00	0.00	0.00
9-20	672.00	145.00	53.00	30.00	1.50	0.00	0.00	0.00	0.00
9-21	659.00	144.00	52.00	31.00	1.60	0.00	0.00	0.00	0.00
9-22	644.00	141.00	52.00	32.00	2.20	0.00	0.00	0.00	0.00
9-23	631.00	140.00	53.00	30.00	2.60	0.00	0.00	0.00	0.00
9-24	614.00	135.00	54.00	29.00	3.30	0.00	0.00	0.00	0.00
9-25	597.00	133.00	54.00	26.00	3.50	0.00	0.00	0.00	0.00
9-26	574.00	131.00	47.00	25.00	4.30	0.00	0.00	0.00	0.00
9-27	547.00	130.00	45.00	20.00	4.50	0.00	0.00	0.00	0.00
9-28	512.00	134.00	45.00	20.00	4.00	0.00	0.00	0.00	0.00
9-29	474.00	129.00	45.00	16.00	3.10	0.00	0.00	0.00	0.00
9-30	437.00	131.00	45.00	16.00	2.80	0.00	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
10- 1	465.00	138.00	61.00	41.00	4.60	0.00	0.00	0.00	0.00
10- 2	426.00	131.00	73.00	40.00	3.80	0.00	0.00	0.00	0.00
10- 3	393.00	132.00	70.00	38.00	3.80	0.00	0.00	0.00	0.00
10- 4	363.00	135.00	74.00	41.00	2.00	0.00	0.00	0.00	0.00
10- 5	341.00	139.00	74.00	36.00	2.80	0.00	0.00	0.00	0.00
10- 6	346.00	138.00	77.00	38.00	3.30	0.00	0.00	0.00	0.00
10- 7	357.00	139.00	72.00	40.00	3.20	0.00	0.00	0.00	0.00
10- 8	361.00	139.00	70.00	31.00	3.20	0.00	0.00	0.00	0.00
10- 9	310.00	144.00	94.00	29.00	2.00	0.00	0.00	0.00	0.00
10-10	297.00	146.00	95.00	31.00	2.00	0.00	0.00	0.00	0.00
10-11	301.00	140.00	91.00	30.00	1.60	0.00	0.00	0.00	0.00
10-12	293.00	137.00	92.00	30.00	1.60	0.00	0.00	0.00	0.00
10-13	281.00	141.00	91.00	37.00	1.70	0.00	0.00	0.00	0.00
10-14	278.00	137.00	93.00	30.00	1.80	0.00	0.00	0.00	0.00
10-15	268.00	175.00	96.00	30.00	2.00	0.00	0.00	0.00	0.00
10-16	272.00	172.00	98.00	38.00	2.00	0.00	0.00	0.00	0.00
10-17	269.00	154.00	101.00	41.00	2.30	0.00	0.00	0.00	0.00
10-18	282.00	150.00	106.00	42.00	2.40	0.00	0.00	0.00	0.00
10-19	274.00	162.00	106.00	43.00	2.40	0.00	0.00	0.00	0.00
10-20	260.00	141.00	106.00	47.00	2.60	0.00	0.00	0.00	0.00
10-21	257.00	146.00	110.00	45.00	2.50	0.00	0.00	0.00	0.00
10-22	257.00	148.00	111.00	41.00	2.20	0.00	0.00	0.00	0.00
10-23	245.00	135.00	108.00	48.00	2.50	0.00	0.00	0.00	0.00
10-24	255.00	156.00	111.00	57.00	2.90	0.00	0.00	0.00	0.00
10-25	270.00	143.00	109.00	41.00	2.20	0.00	0.00	0.00	0.00
10-26	286.00	144.00	112.00	39.00	2.60	0.00	0.00	0.00	0.00
10-27	286.00	144.00	119.00	34.00	2.40	0.00	0.00	0.00	0.00
10-28	287.00	160.00	120.00	46.00	2.60	0.00	0.00	0.00	0.00
10-29	296.00	162.00	119.00	52.00	2.70	0.00	0.00	0.00	0.00
10-30	308.00	148.00	125.00	46.00	2.20	0.00	0.00	0.00	0.00
10-31	304.00	157.00	129.00	46.00	2.40	0.00	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
11- 1	306.00	163.00	134.00	48.00	2.70	0.00	0.00	0.00	0.00
11- 2	311.00	174.00	137.00	49.00	2.70	0.00	0.00	0.00	0.00
11- 3	314.00	174.00	126.00	48.00	2.80	0.00	0.00	0.00	0.00
11- 4	315.00	177.00	139.00	55.00	2.70	0.00	0.00	0.00	0.00
11- 5	320.00	181.00	141.00	50.00	2.50	0.00	0.00	0.00	0.00
11- 6	351.00	180.00	131.00	47.00	2.70	0.00	0.00	0.00	0.00
11- 7	331.00	183.00	114.00	52.00	3.20	0.00	0.00	0.00	0.00
11- 8	319.00	183.00	112.00	50.00	2.20	0.00	0.00	0.00	0.00
11- 9	316.00	183.00	114.00	51.00	5.10	0.00	0.00	0.00	0.00
11-10	316.00	184.00	117.00	56.00	6.10	0.00	0.00	0.00	0.00
11-11	317.00	187.00	121.00	50.00	4.40	0.00	0.00	0.00	0.00
11-12	265.00	191.00	123.00	52.00	4.90	0.00	0.00	0.00	0.00
11-13	298.00	194.00	118.00	55.00	5.30	0.00	0.00	0.00	0.00
11-14	314.00	194.00	108.00	56.00	4.90	0.00	0.00	0.00	0.00
11-15	307.00	194.00	114.00	62.00	5.10	0.00	0.00	0.00	0.00
11-16	308.00	194.00	121.00	52.00	4.70	0.00	0.00	0.00	0.00
11-17	304.00	194.00	126.00	56.00	4.40	0.00	0.00	0.00	0.00
11-18	301.00	194.00	104.00	54.00	4.30	0.00	0.00	0.00	0.00
11-19	282.00	194.00	108.00	55.00	4.40	0.00	0.00	0.00	0.00
11-20	273.00	194.00	94.00	55.00	4.40	0.00	0.00	0.00	0.00
11-21	292.00	193.00	82.00	55.00	7.20	0.00	0.00	0.00	0.00
11-22	300.00	193.00	86.00	55.00	9.00	0.00	0.00	0.00	0.00
11-23	284.00	188.00	93.00	60.00	9.10	0.00	0.00	0.00	0.00
11-24	255.00	196.00	80.00	59.00	10.00	0.00	0.00	0.00	0.00
11-25	257.00	194.00	90.00	50.00	11.00	0.00	0.00	0.00	0.00
11-26	252.00	195.00	80.00	56.00	18.00	0.00	0.00	0.00	0.00
11-27	250.00	197.00	94.00	58.00	26.00	0.00	0.00	0.00	0.00
11-28	248.00	185.00	86.00	56.00	27.00	0.00	0.00	0.00	0.00
11-29	250.00	185.00	84.00	54.00	28.00	0.00	0.00	0.00	0.00
11-30	260.00	185.00	96.00	50.00	26.00	0.00	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
12- 1	250.00	180.00	100.00	48.00	24.00	0.00	0.00	0.00	0.00
12- 2	242.00	180.00	103.00	46.00	23.00	0.00	0.00	0.00	0.00
12- 3	243.00	175.00	106.00	45.00	21.00	0.00	0.00	0.00	0.00
12- 4	244.00	175.00	104.00	47.00	20.00	0.00	0.00	0.00	0.00
12- 5	246.00	175.00	85.00	47.00	20.00	0.00	0.00	0.00	0.00
12- 6	247.00	170.00	100.00	48.00	19.00	0.00	0.00	0.00	0.00
12- 7	246.00	170.00	95.00	50.00	18.00	0.00	0.00	0.00	0.00
12- 8	239.00	165.00	95.00	45.00	18.00	0.00	0.00	0.00	0.00
12- 9	239.00	165.00	95.00	43.00	20.00	0.00	0.00	0.00	0.00
12-10	235.00	160.00	94.00	43.00	20.00	0.00	0.00	0.00	0.00
12-11	224.00	155.00	90.00	42.00	17.00	0.00	0.00	0.00	0.00
12-12	219.00	145.00	90.00	43.00	17.00	0.00	0.00	0.00	0.00
12-13	217.00	147.00	85.00	42.00	22.00	0.00	0.00	0.00	0.00
12-14	212.00	140.00	80.00	41.00	24.00	0.00	0.00	0.00	0.00
12-15	206.00	130.00	80.00	40.00	25.00	0.00	0.00	0.00	0.00
12-16	196.00	130.00	75.00	41.00	26.00	0.00	0.00	0.00	0.00
12-17	191.00	130.00	70.00	40.00	27.00	0.00	0.00	0.00	0.00
12-18	186.00	120.00	70.00	43.00	28.00	0.00	0.00	0.00	0.00
12-19	179.00	120.00	62.00	47.00	29.00	0.00	0.00	0.00	0.00
12-20	177.00	134.00	60.00	45.00	31.00	0.00	0.00	0.00	0.00
12-21	200.00	134.00	58.00	40.00	30.00	0.00	0.00	0.00	0.00
12-22	220.00	132.00	58.00	39.00	27.00	0.00	0.00	0.00	0.00
12-23	250.00	129.00	56.00	36.00	24.00	0.00	0.00	0.00	0.00
12-24	270.00	126.00	54.00	36.00	23.00	0.00	0.00	0.00	0.00
12-25	290.00	125.00	52.00	36.00	23.00	0.00	0.00	0.00	0.00
12-26	300.00	123.00	50.00	36.00	22.00	0.00	0.00	0.00	0.00
12-27	310.00	123.00	48.00	34.00	20.00	0.00	0.00	0.00	0.00
12-28	310.00	118.00	45.00	30.00	18.00	0.00	0.00	0.00	0.00
12-29	300.00	113.00	44.00	30.00	18.00	0.00	0.00	0.00	0.00
12-30	290.00	104.00	42.00	29.00	18.00	0.00	0.00	0.00	0.00
12-31	280.00	96.00	40.00	29.00	16.00	0.00	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
1- 1	250.00	90.00	40.00	29.00	15.00	0.00	0.00	0.00	0.00
1- 2	230.00	85.00	41.00	28.00	14.00	0.00	0.00	0.00	0.00
1- 3	210.00	80.00	43.00	28.00	12.00	0.00	0.00	0.00	0.00
1- 4	190.00	71.00	43.00	28.00	11.00	0.00	0.00	0.00	0.00
1- 5	160.00	70.00	43.00	27.00	10.00	0.00	0.00	0.00	0.00
1- 6	140.00	60.00	46.00	26.00	8.60	0.00	0.00	0.00	0.00
1- 7	130.00	60.00	40.00	27.00	7.50	0.00	0.00	0.00	0.00
1- 8	130.00	55.00	35.00	26.00	6.40	0.00	0.00	0.00	0.00
1- 9	120.00	50.00	32.00	25.00	5.30	0.00	0.00	0.00	0.00
1-10	120.00	48.00	29.00	24.00	4.50	0.00	0.00	0.00	0.00
1-11	110.00	46.00	28.00	22.00	4.50	0.00	0.00	0.00	0.00
1-12	110.00	45.00	26.00	20.00	5.00	0.00	0.00	0.00	0.00
1-13	100.00	44.00	26.00	20.00	5.00	0.00	0.00	0.00	0.00
1-14	100.00	43.00	30.00	20.00	5.00	0.00	0.00	0.00	0.00
1-15	95.00	42.00	23.00	19.00	5.50	0.00	0.00	0.00	0.00
1-16	90.00	38.00	22.00	19.00	5.50	0.00	0.00	0.00	0.00
1-17	85.00	38.00	20.00	19.00	5.50	0.00	0.00	0.00	0.00
1-18	80.00	36.00	19.00	16.00	5.00	0.00	0.00	0.00	0.00
1-19	75.00	35.00	20.00	17.00	4.10	0.00	0.00	0.00	0.00
1-20	70.00	34.00	20.00	16.00	4.50	0.00	0.00	0.00	0.00
1-21	60.00	32.00	20.00	16.00	5.00	0.00	0.00	0.00	0.00
1-22	55.00	31.00	19.00	15.00	4.80	0.00	0.00	0.00	0.00
1-23	50.00	29.00	18.00	14.00	4.40	0.00	0.00	0.00	0.00
1-24	45.00	27.00	18.00	14.00	4.00	0.00	0.00	0.00	0.00
1-25	40.00	25.00	15.00	14.00	3.70	0.00	0.00	0.00	0.00
1-26	35.00	23.00	14.00	13.00	3.40	0.00	0.00	0.00	0.00
1-27	32.00	22.00	14.00	10.00	3.10	0.00	0.00	0.00	0.00
1-28	28.00	21.00	16.00	9.00	2.90	0.00	0.00	0.00	0.00
1-29	26.00	22.00	16.00	9.00	2.70	0.00	0.00	0.00	0.00
1-30	24.00	22.00	16.00	8.00	2.50	0.00	0.00	0.00	0.00
1-31	25.00	22.00	16.00	7.00	2.00	0.00	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
2- 1	26.00	22.00	15.00	7.00	1.50	0.00	0.00	0.00	0.00
2- 2	26.00	20.00	14.00	6.00	1.60	0.00	0.00	0.00	0.00
2- 3	26.00	20.00	12.00	6.00	1.60	0.00	0.00	0.00	0.00
2- 4	25.00	20.00	11.00	6.00	1.60	0.00	0.00	0.00	0.00
2- 5	24.00	18.00	11.00	6.00	1.60	0.00	0.00	0.00	0.00
2- 6	24.00	18.00	10.00	6.00	1.70	0.00	0.00	0.00	0.00
2- 7	23.00	18.00	10.00	6.00	1.70	0.00	0.00	0.00	0.00
2- 8	23.00	18.00	10.00	6.00	1.60	0.00	0.00	0.00	0.00
2- 9	23.00	18.00	10.00	6.00	1.60	0.00	0.00	0.00	0.00
2-10	23.00	18.00	10.00	6.00	1.60	0.00	0.00	0.00	0.00
2-11	24.00	17.00	9.00	6.00	2.00	0.00	0.00	0.00	0.00
2-12	25.00	17.00	9.00	7.00	2.10	0.00	0.00	0.00	0.00
2-13	27.00	17.00	9.00	6.80	2.10	0.00	0.00	0.00	0.00
2-14	30.00	17.00	10.00	8.00	2.20	0.00	0.00	0.00	0.00
2-15	32.00	18.00	10.00	8.00	2.20	0.00	0.00	0.00	0.00
2-16	35.00	20.00	12.00	7.50	2.30	0.00	0.00	0.00	0.00
2-17	40.00	22.00	12.00	7.50	2.30	0.00	0.00	0.00	0.00
2-18	45.00	23.00	13.00	7.00	3.00	0.00	0.00	0.00	0.00
2-19	50.00	25.00	14.00	6.50	3.00	0.00	0.00	0.00	0.00
2-20	52.00	25.00	14.00	10.00	3.00	0.00	0.00	0.00	0.00
2-21	54.00	25.00	18.00	10.00	3.10	0.10	0.00	0.00	0.00
2-22	60.00	54.00	18.00	10.00	4.00	0.00	0.00	0.00	0.00
2-23	65.00	50.00	18.00	10.00	4.50	0.00	0.00	0.00	0.00
2-24	80.00	40.00	18.00	10.00	4.50	0.00	0.00	0.00	0.00
2-25	90.00	30.00	20.00	11.00	4.00	0.20	0.00	0.00	0.00
2-26	90.00	30.00	20.00	11.00	4.00	0.30	0.00	0.00	0.00
2-27	85.00	50.00	18.00	11.00	4.50	0.40	0.00	0.00	0.00
2-28	100.00	80.00	18.00	11.00	5.30	0.50	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
3- 1	150.00	75.00	20.00	11.00	5.30	0.50	0.00	0.00	0.00
3- 2	180.00	75.00	20.00	11.00	5.10	1.20	0.00	0.00	0.00
3- 3	200.00	85.00	20.00	12.00	6.00	1.40	0.00	0.00	0.00
3- 4	250.00	100.00	21.00	15.00	6.00	1.80	0.00	0.00	0.00
3- 5	300.00	120.00	25.00	15.00	6.00	2.00	0.00	0.00	0.00
3- 6	350.00	140.00	40.00	14.00	5.00	2.00	0.00	0.00	0.00
3- 7	400.00	120.00	46.00	13.00	5.00	2.80	0.00	0.00	0.00
3- 8	450.00	100.00	44.00	14.00	5.00	2.80	0.00	0.00	0.00
3- 9	480.00	100.00	42.00	15.00	5.00	2.90	0.00	0.00	0.00
3-10	500.00	100.00	41.00	19.00	5.90	2.80	1.00	0.00	0.00
3-11	480.00	100.00	45.00	25.00	6.00	4.00	1.00	0.00	0.00
3-12	460.00	95.00	50.00	35.00	10.00	5.00	1.90	0.00	0.00
3-13	420.00	160.00	70.00	41.00	12.00	5.00	1.70	0.00	0.00
3-14	396.00	150.00	85.00	45.00	18.00	4.50	1.60	0.00	0.00
3-15	351.00	200.00	90.00	57.00	19.00	4.50	1.40	0.00	0.00
3-16	500.00	309.00	130.00	65.00	18.00	4.60	1.00	0.00	0.00
3-17	1800.00	280.00	120.00	90.00	20.00	6.00	1.10	0.00	0.00
3-18	2000.00	277.00	150.00	95.00	18.00	7.00	2.00	0.00	0.00
3-19	2200.00	400.00	198.00	100.00	20.00	10.00	4.40	0.00	0.00
3-20	2300.00	1230.00	200.00	100.00	35.00	10.00	6.00	0.00	0.00
3-21	2400.00	1500.00	220.00	110.00	50.00	10.00	7.00	0.00	0.00
3-22	2290.00	1600.00	240.00	150.00	45.00	10.00	7.00	0.00	0.00
3-23	1990.00	1500.00	270.00	140.00	40.00	11.00	7.00	0.00	0.00
3-24	1620.00	1360.00	300.00	140.00	50.00	15.00	7.00	0.00	0.00
3-25	2000.00	1350.00	330.00	160.00	71.00	15.00	7.00	0.00	0.00
3-26	3000.00	1260.00	473.00	187.00	70.00	15.00	7.00	0.00	0.00
3-27	3500.00	1200.00	498.00	198.00	79.00	21.00	7.00	1.80	0.00
3-28	3700.00	1100.00	523.00	244.00	75.00	25.00	7.00	1.80	0.00
3-29	3500.00	1020.00	554.00	275.00	80.00	29.00	8.00	1.50	0.00
3-30	3420.00	1000.00	595.00	406.00	72.00	28.00	7.00	1.30	0.00
3-31	3360.00	1200.00	636.00	394.00	119.00	37.00	6.00	1.10	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
4- 1	3420.00	1300.00	706.00	400.00	124.00	37.00	5.00	1.40	0.00
4- 2	3450.00	1500.00	677.00	491.00	120.00	22.00	10.00	1.10	0.00
4- 3	3340.00	1600.00	836.00	588.00	131.00	27.00	20.00	3.00	0.00
4- 4	3140.00	1800.00	899.00	552.00	144.00	33.00	18.00	3.30	0.00
4- 5	2890.00	1900.00	895.00	489.00	171.00	45.00	17.00	3.10	1.00
4- 6	2580.00	1700.00	917.00	699.00	204.00	55.00	24.00	3.00	1.80
4- 7	4000.00	2250.00	916.00	704.00	219.00	52.00	25.00	5.00	1.10
4- 8	5180.00	2090.00	918.00	783.00	230.00	50.00	30.00	12.00	0.40
4- 9	5870.00	1950.00	917.00	820.00	246.00	51.00	32.00	12.00	0.60
4-10	6480.00	1850.00	928.00	838.00	260.00	67.00	31.00	10.00	0.80
4-11	6810.00	1820.00	918.00	805.00	251.00	63.00	25.00	10.00	1.00
4-12	7180.00	1990.00	936.00	750.00	251.00	55.00	22.00	15.00	1.00
4-13	7280.00	1780.00	939.00	700.00	255.00	63.00	27.00	16.00	1.10
4-14	7010.00	1750.00	928.00	645.00	272.00	65.00	37.00	13.00	1.10
4-15	6500.00	1780.00	938.00	615.00	275.00	64.00	46.00	12.00	1.10
4-16	5880.00	1800.00	945.00	585.00	283.00	71.00	59.00	10.00	1.00
4-17	5270.00	1830.00	887.00	631.00	294.00	74.00	63.00	9.00	1.20
4-18	4840.00	1870.00	849.00	667.00	307.00	88.00	72.00	10.00	1.30
4-19	4660.00	1880.00	864.00	687.00	312.00	124.00	67.00	30.00	1.60
4-20	4950.00	1880.00	877.00	672.00	321.00	123.00	75.00	32.00	1.80
4-21	5420.00	1870.00	877.00	646.00	337.00	131.00	79.00	28.00	1.90
4-22	5860.00	1860.00	879.00	640.00	323.00	120.00	59.00	33.00	1.90
4-23	6150.00	1800.00	890.00	634.00	311.00	142.00	57.00	22.00	2.00
4-24	6260.00	1740.00	884.00	630.00	339.00	138.00	53.00	18.00	2.80
4-25	6250.00	1680.00	888.00	632.00	337.00	135.00	49.00	17.00	2.70
4-26	6210.00	1650.00	914.00	639.00	329.00	131.00	44.00	16.00	2.00
4-27	6180.00	1610.00	933.00	671.00	307.00	125.00	46.00	14.00	1.40
4-28	6140.00	1570.00	950.00	709.00	292.00	122.00	53.00	13.00	0.60
4-29	6040.00	1540.00	967.00	692.00	287.00	119.00	52.00	14.00	1.60
4-30	5870.00	1510.00	977.00	717.00	287.00	117.00	51.00	13.00	1.70

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
5- 1	5670.00	1490.00	988.00	721.00	297.00	112.00	46.00	7.20	1.60
5- 2	5380.00	1490.00	998.00	706.00	303.00	107.00	46.00	8.20	1.40
5- 3	5140.00	1470.00	1020.00	709.00	295.00	105.00	59.00	10.00	1.20
5- 4	5080.00	1420.00	1020.00	700.00	293.00	98.00	65.00	11.00	1.10
5- 5	4920.00	1370.00	1020.00	700.00	287.00	88.00	45.00	8.00	0.80
5- 6	4670.00	1330.00	1010.00	702.00	283.00	81.00	41.00	8.00	0.80
5- 7	4370.00	1440.00	1010.00	694.00	287.00	75.00	37.00	7.00	0.90
5- 8	4090.00	1480.00	1010.00	698.00	289.00	78.00	42.00	5.00	1.10
5- 9	3820.00	1470.00	1010.00	710.00	287.00	80.00	51.00	6.00	1.10
5-10	3600.00	1460.00	1010.00	700.00	279.00	88.00	39.00	6.00	1.00
5-11	3390.00	1430.00	990.00	690.00	280.00	70.00	25.00	5.00	0.80
5-12	3200.00	1410.00	983.00	693.00	293.00	69.00	37.00	4.70	0.50
5-13	3010.00	1370.00	975.00	705.00	298.00	98.00	38.00	4.40	0.20
5-14	2830.00	1340.00	1040.00	719.00	334.00	81.00	43.00	2.30	0.00
5-15	2650.00	1330.00	1060.00	715.00	363.00	85.00	41.00	2.20	0.00
5-16	2490.00	1320.00	1070.00	700.00	402.00	82.00	39.00	1.60	0.00
5-17	2360.00	1260.00	1070.00	694.00	434.00	74.00	38.00	1.50	0.20
5-18	2270.00	1200.00	1050.00	681.00	420.00	77.00	36.00	2.30	0.40
5-19	2220.00	1140.00	1030.00	667.00	399.00	100.00	35.00	2.80	0.17
5-20	2170.00	1080.00	1000.00	662.00	384.00	130.00	33.00	3.00	0.00
5-21	2120.00	1030.00	985.00	656.00	366.00	137.00	30.00	2.60	0.00
5-22	2060.00	1010.00	958.00	834.00	355.00	154.00	30.00	1.50	0.00
5-23	1990.00	963.00	918.00	871.00	350.00	120.00	29.00	1.20	0.20
5-24	1890.00	1010.00	925.00	802.00	347.00	106.00	25.00	1.60	0.10
5-25	1800.00	1030.00	912.00	702.00	334.00	96.00	22.00	1.50	0.00
5-26	1700.00	990.00	862.00	618.00	338.00	94.00	20.00	1.40	0.00
5-27	1630.00	950.00	828.00	616.00	329.00	100.00	24.00	0.92	0.00
5-28	1570.00	1010.00	802.00	610.00	317.00	106.00	22.00	0.26	0.00
5-29	1510.00	1130.00	866.00	608.00	312.00	97.00	22.00	0.23	0.00
5-30	1460.00	1120.00	856.00	599.00	306.00	102.00	23.00	0.19	0.00
5-31	1410.00	1070.00	849.00	592.00	300.00	100.00	21.00	0.12	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	1370.00	1010.00	843.00	584.00	295.00	107.00	25.00	0.10	0.00
6- 2	1320.00	968.00	808.00	560.00	295.00	111.00	22.00	0.20	0.00
6- 3	1280.00	927.00	755.00	545.00	287.00	117.00	19.00	0.60	0.00
6- 4	1240.00	881.00	722.00	533.00	272.00	121.00	18.00	0.70	0.00
6- 5	1210.00	828.00	715.00	519.00	250.00	115.00	19.00	1.00	0.00
6- 6	1180.00	816.00	692.00	509.00	224.00	108.00	19.00	0.70	0.00
6- 7	1170.00	807.00	663.00	495.00	219.00	103.00	19.00	0.50	0.00
6- 8	1150.00	795.00	647.00	487.00	215.00	94.00	17.00	0.40	0.00
6- 9	1130.00	780.00	656.00	483.00	220.00	88.00	19.00	0.30	0.00
6-10	1120.00	778.00	605.00	485.00	219.00	83.00	14.00	0.10	0.00
6-11	1100.00	763.00	577.00	485.00	226.00	77.00	14.00	0.03	0.00
6-12	1080.00	740.00	548.00	477.00	222.00	70.00	14.00	0.03	0.00
6-13	1070.00	725.00	557.00	454.00	202.00	63.00	14.00	0.04	0.00
6-14	1060.00	888.00	537.00	496.00	194.00	61.00	14.00	0.07	0.00
6-15	1040.00	751.00	576.00	467.00	167.00	61.00	13.00	0.10	0.00
6-16	1030.00	738.00	642.00	466.00	175.00	71.00	12.00	0.14	0.00
6-17	1010.00	839.00	612.00	452.00	175.00	63.00	12.00	0.22	0.00
6-18	998.00	853.00	652.00	434.00	173.00	61.00	11.00	0.31	0.00
6-19	980.00	838.00	656.00	393.00	175.00	91.00	10.00	0.43	0.00
6-20	962.00	788.00	658.00	352.00	186.00	91.00	9.00	0.55	0.00
6-21	952.00	848.00	652.00	332.00	195.00	62.00	8.00	0.65	0.00
6-22	980.00	934.00	636.00	321.00	203.00	72.00	7.00	0.73	0.00
6-23	1020.00	924.00	628.00	311.00	196.00	57.00	7.00	0.79	0.00
6-24	1040.00	910.00	628.00	296.00	180.00	62.00	6.00	0.83	0.00
6-25	1030.00	940.00	624.00	295.00	170.00	69.00	6.00	0.84	0.00
6-26	996.00	915.00	620.00	294.00	147.00	66.00	6.00	0.86	0.00
6-27	1190.00	912.00	604.00	296.00	154.00	70.00	5.00	0.62	0.00
6-28	1510.00	913.00	608.00	291.00	139.00	64.00	6.00	0.44	0.00
6-29	1560.00	910.00	618.00	277.00	132.00	66.00	6.00	0.22	0.00
6-30	1410.00	898.00	616.00	266.00	128.00	75.00	5.00	0.37	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
7- 1	1240.00	898.00	618.00	302.00	156.00	81.00	4.00	0.21	0.00
7- 2	1110.00	909.00	624.00	301.00	139.00	86.00	3.80	0.08	0.00
7- 3	1060.00	901.00	630.00	296.00	131.00	66.00	3.90	0.00	0.00
7- 4	996.00	893.00	613.00	295.00	126.00	64.00	3.80	0.00	0.00
7- 5	936.00	889.00	592.00	295.00	137.00	53.00	3.30	0.00	0.00
7- 6	934.00	866.00	590.00	315.00	150.00	42.00	3.00	0.00	0.00
7- 7	928.00	812.00	574.00	332.00	147.00	37.00	2.60	0.00	0.00
7- 8	916.00	760.00	555.00	336.00	146.00	41.00	2.30	0.00	0.00
7- 9	908.00	724.00	579.00	331.00	146.00	32.00	2.10	0.00	0.00
7-10	900.00	736.00	618.00	334.00	143.00	28.00	2.30	0.00	0.00
7-11	896.00	754.00	608.00	348.00	142.00	24.00	2.60	0.00	0.00
7-12	910.00	770.00	598.00	351.00	141.00	24.00	3.10	0.00	0.00
7-13	936.00	851.00	567.00	343.00	133.00	25.00	3.30	0.00	0.00
7-14	950.00	812.00	533.00	341.00	137.00	20.00	3.50	0.00	0.00
7-15	985.00	832.00	535.00	337.00	118.00	16.00	2.60	0.00	0.00
7-16	995.00	819.00	539.00	321.00	131.00	18.00	2.10	0.00	0.00
7-17	1050.00	806.00	544.00	311.00	119.00	22.00	1.60	0.00	0.00
7-18	1060.00	788.00	550.00	301.00	104.00	22.00	2.50	0.00	0.00
7-19	1080.00	768.00	561.00	291.00	82.00	20.00	1.30	0.00	0.00
7-20	1060.00	734.00	561.00	285.00	81.00	19.00	0.55	0.00	0.00
7-21	1060.00	709.00	579.00	278.00	72.00	16.00	0.23	0.00	0.00
7-22	1060.00	686.00	577.00	266.00	74.00	16.00	0.06	0.00	0.00
7-23	1040.00	650.00	583.00	260.00	74.00	16.00	0.04	0.00	0.00
7-24	1020.00	636.00	588.00	275.00	75.00	12.00	1.10	0.00	0.00
7-25	1020.00	643.00	589.00	278.00	75.00	11.00	1.20	0.00	0.00
7-26	1000.00	639.00	583.00	261.00	71.00	10.00	0.70	0.00	0.00
7-27	985.00	637.00	590.00	247.00	65.00	9.00	0.49	0.00	0.00
7-28	978.00	646.00	583.00	232.00	61.00	8.00	0.39	0.00	0.00
7-29	972.00	641.00	585.00	220.00	56.00	6.90	0.23	0.00	0.00
7-30	965.00	642.00	579.00	217.00	50.00	5.30	0.52	0.00	0.00
7-31	970.00	641.00	562.00	213.00	53.00	4.10	1.50	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
8- 1	975.00	639.00	545.00	209.00	54.00	3.80	1.20	0.00	0.00
8- 2	975.00	635.00	529.00	220.00	49.00	3.40	0.84	0.00	0.00
8- 3	980.00	629.00	511.00	222.00	46.00	3.40	0.59	0.00	0.00
8- 4	988.00	631.00	496.00	224.00	48.00	3.30	0.45	0.00	0.00
8- 5	998.00	640.00	480.00	232.00	54.00	3.10	0.33	0.00	0.00
8- 6	1020.00	643.00	470.00	230.00	53.00	2.90	0.25	0.00	0.00
8- 7	1020.00	645.00	456.00	253.00	56.00	2.60	0.17	0.00	0.00
8- 8	1000.00	647.00	454.00	228.00	58.00	2.40	0.15	0.00	0.00
8- 9	1000.00	659.00	445.00	255.00	58.00	2.20	0.14	0.00	0.00
8-10	1000.00	666.00	415.00	282.00	58.00	2.00	0.13	0.00	0.00
8-11	1020.00	686.00	409.00	277.00	55.00	1.40	0.13	0.00	0.00
8-12	1010.00	696.00	416.00	279.00	47.00	1.70	0.14	0.00	0.00
8-13	1010.00	707.00	424.00	284.00	36.00	1.60	0.90	0.00	0.00
8-14	1010.00	718.00	423.00	281.00	34.00	1.80	0.40	0.00	0.00
8-15	999.00	721.00	425.00	283.00	38.00	1.60	0.00	0.00	0.00
8-16	995.00	716.00	430.00	255.00	35.00	1.40	0.00	0.00	0.00
8-17	985.00	698.00	434.00	229.00	33.00	1.20	0.00	0.00	0.00
8-18	981.00	686.00	428.00	209.00	33.00	1.00	0.00	0.00	0.00
8-19	977.00	684.00	418.00	194.00	30.00	0.92	0.00	0.00	0.00
8-20	978.00	680.00	412.00	179.00	29.00	0.92	0.00	0.00	0.00
8-21	967.00	684.00	401.00	147.00	29.00	0.98	0.00	0.00	0.00
8-22	957.00	684.00	382.00	144.00	31.00	0.86	0.00	0.00	0.00
8-23	947.00	678.00	372.00	143.00	39.00	1.30	0.00	0.00	0.00
8-24	932.00	666.00	358.00	130.00	34.00	1.30	0.00	0.00	0.00
8-25	908.00	650.00	343.00	117.00	27.00	1.40	0.00	0.00	0.00
8-26	885.00	630.00	325.00	110.00	29.00	1.60	0.00	0.00	0.00
8-27	865.00	604.00	311.00	102.00	22.00	2.50	0.00	0.00	0.00
8-28	862.00	576.00	295.00	87.00	30.00	1.80	0.00	0.00	0.00
8-29	847.00	554.00	284.00	85.00	20.00	1.40	0.00	0.00	0.00
8-30	829.00	508.00	282.00	87.00	20.00	1.10	0.00	0.00	0.00
8-31	819.00	470.00	269.00	88.00	22.00	0.88	0.00	0.00	0.00

Table 13.--Discharge data for duration hydrograph for James River near Redfield, S. Dak. (station no. 06475000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
9- 1	819.00	428.00	259.00	88.00	25.00	0.70	0.00	0.00	0.00
9- 2	822.00	388.00	250.00	87.00	29.00	0.54	0.00	0.00	0.00
9- 3	817.00	352.00	242.00	85.00	23.00	0.46	0.00	0.00	0.00
9- 4	812.00	319.00	237.00	83.00	20.00	0.38	0.00	0.00	0.00
9- 5	810.00	293.00	233.00	81.00	20.00	0.33	0.00	0.00	0.00
9- 6	810.00	266.00	226.00	79.00	20.00	0.28	0.00	0.00	0.00
9- 7	807.00	262.00	220.00	77.00	18.00	0.25	0.00	0.00	0.00
9- 8	800.00	261.00	192.00	74.00	28.00	0.23	0.00	0.00	0.00
9- 9	790.00	260.00	161.00	80.00	23.00	0.20	0.00	0.00	0.00
9-10	786.00	252.00	133.00	70.00	23.00	0.17	0.00	0.00	0.00
9-11	786.00	235.00	110.00	66.00	20.00	0.14	0.00	0.00	0.00
9-12	776.00	220.00	104.00	86.00	18.00	0.12	0.00	0.00	0.00
9-13	769.00	202.00	114.00	83.00	16.00	0.10	0.00	0.00	0.00
9-14	767.00	189.00	113.00	77.00	15.00	0.08	0.00	0.00	0.00
9-15	758.00	189.00	94.00	63.00	14.00	0.07	0.00	0.00	0.00
9-16	764.00	181.00	85.00	58.00	15.00	0.06	0.00	0.00	0.00
9-17	748.00	182.00	88.00	55.00	11.00	0.04	0.00	0.00	0.00
9-18	739.00	176.00	89.00	53.00	11.00	0.02	0.00	0.00	0.00
9-19	728.00	173.00	92.00	47.00	8.60	0.01	0.00	0.00	0.00
9-20	718.00	167.00	91.00	44.00	8.00	0.00	0.00	0.00	0.00
9-21	707.00	165.00	74.00	43.00	7.30	0.00	0.00	0.00	0.00
9-22	691.00	160.00	63.00	41.00	6.70	0.00	0.00	0.00	0.00
9-23	679.00	155.00	64.00	37.00	5.10	0.00	0.00	0.00	0.00
9-24	666.00	152.00	74.00	41.00	4.40	0.00	0.00	0.00	0.00
9-25	647.00	144.00	80.00	36.00	3.70	0.00	0.00	0.00	0.00
9-26	626.00	140.00	75.00	38.00	3.20	0.00	0.00	0.00	0.00
9-27	606.00	137.00	58.00	38.00	3.10	0.00	0.00	0.00	0.00
9-28	583.00	141.00	49.00	41.00	3.60	0.00	0.00	0.00	0.00
9-29	577.00	136.00	56.00	39.00	4.50	0.00	0.00	0.00	0.00
9-30	508.00	138.00	65.00	36.00	5.00	0.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
10- 1	575.00	92.00	66.00	38.00	0.40	0.00	0.00	0.00	0.00
10- 2	500.00	94.00	56.00	31.00	0.00	0.00	0.00	0.00	0.00
10- 3	460.00	89.00	62.00	45.00	0.00	0.00	0.00	0.00	0.00
10- 4	430.00	90.00	62.00	41.00	0.00	0.00	0.00	0.00	0.00
10- 5	386.00	91.00	58.00	43.00	0.00	0.00	0.00	0.00	0.00
10- 6	366.00	87.00	65.00	39.00	0.20	0.00	0.00	0.00	0.00
10- 7	375.00	92.00	64.00	30.00	1.50	0.00	0.00	0.00	0.00
10- 8	314.00	102.00	57.00	43.00	2.00	0.00	0.00	0.00	0.00
10- 9	382.00	98.00	61.00	35.00	0.00	0.00	0.00	0.00	0.00
10-10	352.00	107.00	66.00	36.00	0.00	0.00	0.00	0.00	0.00
10-11	310.00	121.00	66.00	29.00	0.00	0.00	0.00	0.00	0.00
10-12	322.00	126.00	60.00	22.00	0.00	0.00	0.00	0.00	0.00
10-13	321.00	122.00	62.00	24.00	0.00	0.00	0.00	0.00	0.00
10-14	317.00	180.00	68.00	32.00	2.00	0.00	0.00	0.00	0.00
10-15	315.00	156.00	74.00	39.00	0.00	0.00	0.00	0.00	0.00
10-16	296.00	121.00	72.00	31.00	0.15	0.00	0.00	0.00	0.00
10-17	292.00	112.00	59.00	40.00	0.00	0.00	0.00	0.00	0.00
10-18	269.00	118.00	69.00	23.00	0.00	0.00	0.00	0.00	0.00
10-19	286.00	123.00	64.00	19.00	0.00	0.00	0.00	0.00	0.00
10-20	292.00	127.00	65.00	10.00	0.00	0.00	0.00	0.00	0.00
10-21	290.00	128.00	64.00	25.00	0.00	0.00	0.00	0.00	0.00
10-22	282.00	128.00	63.00	21.00	0.00	0.00	0.00	0.00	0.00
10-23	308.00	127.00	50.00	30.00	0.00	0.00	0.00	0.00	0.00
10-24	311.00	122.00	51.00	26.00	0.00	0.00	0.00	0.00	0.00
10-25	289.00	121.00	52.00	24.00	0.00	0.00	0.00	0.00	0.00
10-26	271.00	120.00	84.00	32.00	0.00	0.00	0.00	0.00	0.00
10-27	294.00	112.00	80.00	32.00	0.00	0.00	0.00	0.00	0.00
10-28	289.00	119.00	61.00	26.00	0.00	0.00	0.00	0.00	0.00
10-29	283.00	129.00	60.00	34.00	0.00	0.00	0.00	0.00	0.00
10-30	271.00	129.00	65.00	36.00	0.20	0.00	0.00	0.00	0.00
10-31	302.00	132.00	65.00	32.00	0.01	0.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
11- 1	292.00	131.00	75.00	35.00	0.07	0.00	0.00	0.00	0.00
11- 2	299.00	139.00	73.00	43.00	1.00	0.00	0.00	0.00	0.00
11- 3	277.00	142.00	79.00	30.00	0.00	0.00	0.00	0.00	0.00
11- 4	234.00	143.00	84.00	32.00	0.00	0.00	0.00	0.00	0.00
11- 5	254.00	135.00	86.00	32.00	0.13	0.00	0.00	0.00	0.00
11- 6	248.00	145.00	89.00	34.00	0.40	0.00	0.00	0.00	0.00
11- 7	297.00	148.00	89.00	39.00	0.30	0.00	0.00	0.00	0.00
11- 8	305.00	138.00	95.00	39.00	0.30	0.00	0.00	0.00	0.00
11- 9	315.00	141.00	108.00	36.00	0.20	0.00	0.00	0.00	0.00
11-10	303.00	148.00	98.00	32.00	0.00	0.00	0.00	0.00	0.00
11-11	303.00	160.00	98.00	32.00	0.15	0.00	0.00	0.00	0.00
11-12	389.00	161.00	99.00	30.00	0.15	0.00	0.00	0.00	0.00
11-13	280.00	165.00	87.00	29.00	0.10	0.00	0.00	0.00	0.00
11-14	264.00	178.00	91.00	36.00	2.70	0.00	0.00	0.00	0.00
11-15	278.00	159.00	103.00	44.00	4.00	0.00	0.00	0.00	0.00
11-16	287.00	157.00	91.00	54.00	6.00	0.00	0.00	0.00	0.00
11-17	291.00	164.00	78.00	52.00	2.00	0.00	0.00	0.00	0.00
11-18	338.00	171.00	72.00	54.00	0.40	0.00	0.00	0.00	0.00
11-19	303.00	164.00	72.00	45.00	5.00	0.00	0.00	0.00	0.00
11-20	314.00	160.00	85.00	54.00	0.50	0.00	0.00	0.00	0.00
11-21	337.00	166.00	87.00	54.00	4.00	0.00	0.00	0.00	0.00
11-22	315.00	161.00	75.00	46.00	9.90	0.00	0.00	0.00	0.00
11-23	287.00	134.00	78.00	49.00	6.00	0.00	0.00	0.00	0.00
11-24	267.00	155.00	79.00	50.00	6.00	0.00	0.00	0.00	0.00
11-25	262.00	152.00	78.00	50.00	4.00	0.00	0.00	0.00	0.00
11-26	259.00	149.00	78.00	49.00	4.00	0.00	0.00	0.00	0.00
11-27	261.00	148.00	62.00	50.00	4.00	0.00	0.00	0.00	0.00
11-28	263.00	147.00	78.00	50.00	4.00	0.00	0.00	0.00	0.00
11-29	268.00	145.00	78.00	46.00	6.00	0.00	0.00	0.00	0.00
11-30	285.00	140.00	80.00	46.00	8.00	0.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
12- 1	293.00	137.00	72.00	46.00	9.90	0.00	0.00	0.00	0.00
12- 2	277.00	136.00	77.00	46.00	9.90	0.00	0.00	0.00	0.00
12- 3	259.00	138.00	76.00	50.00	7.90	0.00	0.00	0.00	0.00
12- 4	245.00	138.00	75.00	46.00	6.00	0.00	0.00	0.00	0.00
12- 5	238.00	145.00	72.00	46.00	8.00	0.00	0.00	0.00	0.00
12- 6	242.00	140.00	75.00	46.00	8.00	0.00	0.00	0.00	0.00
12- 7	246.00	140.00	75.00	43.00	8.00	0.00	0.00	0.00	0.00
12- 8	244.00	140.00	75.00	44.00	8.00	0.00	0.00	0.00	0.00
12- 9	245.00	140.00	78.00	46.00	8.00	0.00	0.00	0.00	0.00
12-10	242.00	140.00	78.00	46.00	8.00	0.00	0.00	0.00	0.00
12-11	235.00	136.00	82.00	44.00	8.00	0.00	0.00	0.00	0.00
12-12	236.00	134.00	83.00	44.00	8.00	0.00	0.00	0.00	0.00
12-13	227.00	131.00	83.00	43.00	10.00	0.00	0.00	0.00	0.00
12-14	224.00	128.00	75.00	47.00	8.00	0.00	0.00	0.00	0.00
12-15	218.00	131.00	78.00	47.00	8.00	0.00	0.00	0.00	0.00
12-16	214.00	129.00	79.00	51.00	8.00	0.00	0.00	0.00	0.00
12-17	210.00	128.00	82.00	49.00	8.00	0.00	0.00	0.00	0.00
12-18	206.00	127.00	81.00	49.00	8.00	0.00	0.00	0.00	0.00
12-19	199.00	120.00	77.00	46.00	8.00	0.00	0.00	0.00	0.00
12-20	198.00	125.00	78.00	46.00	8.00	0.00	0.00	0.00	0.00
12-21	192.00	123.00	78.00	46.00	8.00	0.00	0.00	0.00	0.00
12-22	191.00	121.00	78.00	43.00	8.00	0.00	0.00	0.00	0.00
12-23	188.00	120.00	75.00	43.00	12.00	0.00	0.00	0.00	0.00
12-24	215.00	118.00	75.00	43.00	8.00	0.00	0.00	0.00	0.00
12-25	237.00	113.00	72.00	44.00	8.00	0.00	0.00	0.00	0.00
12-26	255.00	113.00	68.00	44.00	8.00	0.00	0.00	0.00	0.00
12-27	275.00	116.00	68.00	43.00	11.00	0.00	0.00	0.00	0.00
12-28	284.00	110.00	63.00	41.00	10.00	0.00	0.00	0.00	0.00
12-29	270.00	110.00	60.00	41.00	10.00	0.00	0.00	0.00	0.00
12-30	287.00	107.00	58.00	39.00	10.00	0.00	0.00	0.00	0.00
12-31	323.00	105.00	55.00	38.00	10.00	0.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
1- 1	310.00	99.00	52.00	36.00	10.00	0.00	0.00	0.00	0.00
1- 2	284.00	95.00	48.00	35.00	9.00	0.00	0.00	0.00	0.00
1- 3	270.00	92.00	46.00	34.00	8.00	0.00	0.00	0.00	0.00
1- 4	246.00	88.00	44.00	34.00	9.00	0.00	0.00	0.00	0.00
1- 5	255.00	85.00	41.00	34.00	9.00	0.00	0.00	0.00	0.00
1- 6	282.00	81.00	39.00	34.00	9.00	0.00	0.00	0.00	0.00
1- 7	294.00	79.00	39.00	34.00	9.00	0.00	0.00	0.00	0.00
1- 8	305.00	76.00	39.00	34.00	8.00	0.00	0.00	0.00	0.00
1- 9	304.00	69.00	38.00	32.00	8.00	0.00	0.00	0.00	0.00
1-10	267.00	67.00	37.00	32.00	8.00	0.00	0.00	0.00	0.00
1-11	207.00	63.00	37.00	30.00	7.00	0.00	0.00	0.00	0.00
1-12	168.00	60.00	36.00	30.00	7.00	0.00	0.00	0.00	0.00
1-13	146.00	57.00	34.00	30.00	7.00	0.00	0.00	0.00	0.00
1-14	138.00	54.00	34.00	27.00	7.00	0.00	0.00	0.00	0.00
1-15	118.00	52.00	34.00	27.00	7.00	0.00	0.00	0.00	0.00
1-16	113.00	52.00	36.00	27.00	6.00	0.00	0.00	0.00	0.00
1-17	112.00	54.00	37.00	27.00	5.00	0.00	0.00	0.00	0.00
1-18	109.00	52.00	42.00	27.00	5.00	0.00	0.00	0.00	0.00
1-19	107.00	54.00	41.00	27.00	5.00	0.00	0.00	0.00	0.00
1-20	104.00	52.00	39.00	27.00	5.00	0.00	0.00	0.00	0.00
1-21	103.00	52.00	37.00	27.00	5.00	0.00	0.00	0.00	0.00
1-22	100.00	44.00	37.00	26.00	4.00	0.00	0.00	0.00	0.00
1-23	87.00	44.00	37.00	24.00	4.00	0.00	0.00	0.00	0.00
1-24	77.00	44.00	34.00	24.00	4.00	0.00	0.00	0.00	0.00
1-25	69.00	40.00	34.00	24.00	4.00	0.00	0.00	0.00	0.00
1-26	65.00	39.00	34.00	24.00	4.00	0.00	0.00	0.00	0.00
1-27	65.00	39.00	32.00	23.00	3.00	0.00	0.00	0.00	0.00
1-28	63.00	35.00	30.00	24.00	4.00	0.00	0.00	0.00	0.00
1-29	62.00	35.00	30.00	23.00	4.00	0.00	0.00	0.00	0.00
1-30	61.00	34.00	29.00	24.00	3.00	0.00	0.00	0.00	0.00
1-31	62.00	34.00	29.00	23.00	3.00	0.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
2- 1	63.00	34.00	28.00	22.00	3.00	0.00	0.00	0.00	0.00
2- 2	65.00	34.00	27.00	21.00	2.00	0.00	0.00	0.00	0.00
2- 3	63.00	36.00	25.00	19.00	2.00	0.00	0.00	0.00	0.00
2- 4	64.00	36.00	25.00	18.00	4.00	0.00	0.00	0.00	0.00
2- 5	65.00	34.00	25.00	16.00	3.00	0.00	0.00	0.00	0.00
2- 6	65.00	34.00	24.00	20.00	2.00	0.00	0.00	0.00	0.00
2- 7	66.00	34.00	25.00	20.00	2.00	0.00	0.00	0.00	0.00
2- 8	58.00	36.00	25.00	22.00	4.00	0.00	0.00	0.00	0.00
2- 9	57.00	44.00	25.00	21.00	4.00	0.00	0.00	0.00	0.00
2-10	67.00	43.00	24.00	21.00	4.00	0.00	0.00	0.00	0.00
2-11	87.00	43.00	25.00	18.00	4.00	0.00	0.00	0.00	0.00
2-12	92.00	42.00	25.00	18.00	7.00	0.00	0.00	0.00	0.00
2-13	119.00	46.00	27.00	19.00	7.00	0.00	0.00	0.00	0.00
2-14	119.00	43.00	29.00	19.00	7.90	0.00	0.00	0.00	0.00
2-15	87.00	41.00	29.00	19.00	7.90	0.00	0.00	0.00	0.00
2-16	87.00	41.00	29.00	20.00	8.10	0.00	0.00	0.00	0.00
2-17	90.00	46.00	31.00	19.00	7.90	0.00	0.00	0.00	0.00
2-18	100.00	46.00	31.00	18.00	8.00	0.00	0.00	0.00	0.00
2-19	103.00	46.00	33.00	21.00	10.00	0.00	0.00	0.00	0.00
2-20	120.00	49.00	33.00	19.00	9.00	0.00	0.00	0.00	0.00
2-21	136.00	62.00	35.00	32.00	12.00	1.00	0.00	0.00	0.00
2-22	163.00	100.00	39.00	34.00	12.00	4.00	0.00	0.00	0.00
2-23	307.00	106.00	46.00	37.00	12.00	5.00	0.00	0.00	0.00
2-24	468.00	104.00	41.00	36.00	14.00	4.00	0.00	0.00	0.00
2-25	575.00	100.00	47.00	30.00	14.00	3.00	0.00	0.00	0.00
2-26	600.00	99.00	49.00	31.00	13.00	4.00	0.00	0.00	0.00
2-27	494.00	96.00	45.00	32.00	12.00	4.10	0.00	0.00	0.00
2-28	416.00	92.00	65.00	35.00	13.00	4.10	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
3- 1	424.00	101.00	72.00	36.00	15.00	4.10	0.00	0.00	0.00
3- 2	510.00	164.00	78.00	43.00	13.00	6.00	0.00	0.00	0.00
3- 3	608.00	244.00	72.00	51.00	18.00	4.10	0.00	0.00	0.00
3- 4	1370.00	244.00	91.00	50.00	17.00	4.10	0.00	0.00	0.00
3- 5	1810.00	193.00	90.00	48.00	17.00	2.40	0.00	0.00	0.00
3- 6	1460.00	163.00	123.00	57.00	18.00	5.00	0.00	0.00	0.00
3- 7	1100.00	236.00	111.00	62.00	24.00	7.90	0.00	0.00	0.00
3- 8	1030.00	208.00	111.00	56.00	24.00	9.00	0.20	0.00	0.00
3- 9	947.00	194.00	105.00	60.00	24.00	10.00	0.31	0.00	0.00
3-10	862.00	250.00	108.00	67.00	30.00	10.00	0.28	0.00	0.00
3-11	738.00	482.00	104.00	75.00	41.00	10.00	0.33	0.00	0.00
3-12	660.00	600.00	150.00	94.00	46.00	12.00	5.00	0.00	0.00
3-13	1850.00	619.00	293.00	96.00	50.00	12.00	5.00	0.00	0.00
3-14	1900.00	740.00	508.00	113.00	49.00	14.00	4.00	0.00	0.00
3-15	1810.00	740.00	531.00	112.00	62.00	11.00	2.00	0.00	0.00
3-16	1400.00	970.00	479.00	113.00	64.00	9.90	4.00	0.00	0.00
3-17	1560.00	1050.00	434.00	114.00	61.00	19.00	4.00	0.00	0.00
3-18	2130.00	1080.00	364.00	119.00	72.00	15.00	3.60	0.00	0.00
3-19	2500.00	1360.00	650.00	200.00	75.00	13.0	6.00	0.00	0.00
3-20	2740.00	1530.00	630.00	211.00	75.00	14.0[illegible]	8.00	0.00	0.00
3-21	2980.00	1810.00	627.00	213.00	68.00	16.00	10.00	0.00	0.00
3-22	3080.00	1750.00	546.00	193.00	74.00	19.00	12.00	0.00	0.00
3-23	2520.00	1970.00	462.00	215.00	77.00	27.00	13.00	0.00	0.00
3-24	3130.00	1930.00	382.00	230.00	75.00	43.00	16.00	0.00	0.00
3-25	4180.00	2010.00	411.00	280.00	78.00	49.00	19.00	2.00	0.00
3-26	4480.00	1800.00	536.00	305.00	88.00	51.00	28.00	11.00	0.00
3-27	4580.00	1560.00	795.00	385.00	111.00	52.00	32.00	3.10	0.00
3-28	4820.00	1530.00	773.00	428.00	150.00	52.00	35.00	14.00	0.00
3-29	5550.00	1600.00	900.00	482.00	174.00	57.00	31.00	10.00	0.00
3-30	5790.00	3550.00	928.00	519.00	168.00	55.00	30.00	12.00	0.00
3-31	5730.00	3520.00	1210.00	583.00	168.00	52.00	35.00	22.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
4- 1	5560.00	2900.00	1150.00	662.00	184.00	58.00	39.00	22.00	0.00
4- 2	5960.00	2520.00	1040.00	642.00	200.00	64.00	31.00	16.00	0.00
4- 3	5730.00	2580.00	1070.00	608.00	178.00	86.00	62.00	21.00	0.00
4- 4	5500.00	2650.00	1060.00	639.00	231.00	83.00	39.00	18.00	0.00
4- 5	5880.00	2650.00	1040.00	693.00	280.00	82.00	62.00	25.00	0.00
4- 6	5980.00	2840.00	1110.00	777.00	280.00	81.00	43.00	9.00	0.00
4- 7	5510.00	3860.00	1030.00	746.00	250.00	88.00	58.00	29.00	0.00
4- 8	5190.00	3570.00	1080.00	746.00	220.00	83.00	49.00	23.00	0.00
4- 9	5880.00	3140.00	1020.00	746.00	214.00	73.00	51.00	16.00	0.00
4-10	8240.00	3050.00	1040.00	713.00	325.00	65.00	39.00	12.00	0.00
4-11	8830.00	2740.00	1220.00	847.00	323.00	73.00	51.00	21.00	0.00
4-12	8940.00	2460.00	1130.00	890.00	275.00	78.00	62.00	6.50	0.00
4-13	8930.00	2200.00	1210.00	876.00	290.00	74.00	56.00	21.00	0.00
4-14	8780.00	2140.00	1220.00	792.00	302.00	77.00	45.00	40.00	0.00
4-15	8440.00	2220.00	1110.00	792.00	306.00	95.00	51.00	18.00	0.00
4-16	8080.00	2020.00	1070.00	816.00	281.00	72.00	58.00	30.00	0.00
4-17	7610.00	2010.00	1040.00	719.00	270.00	95.00	58.00	26.00	0.00
4-18	7110.00	2080.00	1040.00	747.00	276.00	69.00	47.00	22.00	0.00
4-19	6630.00	2100.00	1020.00	788.00	259.00	94.00	40.00	21.00	0.00
4-20	6180.00	2050.00	1030.00	788.00	283.00	94.00	51.00	9.00	0.00
4-21	5810.00	2020.00	1010.00	834.00	324.00	88.00	70.00	25.00	0.00
4-22	5650.00	1980.00	966.00	820.00	339.00	133.00	58.00	32.00	0.00
4-23	5650.00	1940.00	906.00	833.00	338.00	145.00	54.00	32.00	0.00
4-24	5770.00	1890.00	960.00	796.00	364.00	133.00	51.00	26.00	0.00
4-25	5940.00	1830.00	894.00	770.00	321.00	136.00	51.00	34.00	0.00
4-26	5970.00	1750.00	960.00	820.00	323.00	103.00	62.00	29.00	0.00
4-27	5980.00	1710.00	960.00	820.00	324.00	107.00	66.00	35.00	0.00
4-28	5920.00	1710.00	901.00	764.00	364.00	106.00	54.00	31.00	0.00
4-29	5930.00	1660.00	896.00	792.00	310.00	135.00	68.00	25.00	0.00
4-30	5920.00	1630.00	982.00	764.00	264.00	178.00	69.00	25.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
5- 1	5840.00	1540.00	964.00	795.00	335.00	164.00	54.00	24.00	0.00
5- 2	5700.00	1570.00	960.00	722.00	371.00	166.00	65.00	6.40	0.00
5- 3	5650.00	1470.00	960.00	722.00	364.00	143.00	62.00	19.00	0.00
5- 4	5750.00	1420.00	1040.00	710.00	314.00	158.00	55.00	32.00	0.00
5- 5	5500.00	1370.00	1070.00	729.00	412.00	138.00	60.00	15.00	0.00
5- 6	5310.00	1330.00	1040.00	745.00	456.00	122.00	62.00	5.70	0.00
5- 7	5120.00	1320.00	1030.00	730.00	390.00	118.00	66.00	0.07	0.00
5- 8	4890.00	1370.00	973.00	685.00	434.00	125.00	52.00	12.00	0.00
5- 9	4650.00	1330.00	991.00	659.00	478.00	137.00	66.00	13.00	0.00
5-10	4390.00	1250.00	1030.00	722.00	456.00	111.00	66.00	0.34	0.00
5-11	4110.00	1290.00	1030.00	764.00	462.00	103.00	60.00	0.00	0.00
5-12	3850.00	1300.00	1030.00	740.00	420.00	105.00	76.00	11.00	0.00
5-13	3620.00	1310.00	1170.00	751.00	382.00	110.00	61.00	12.00	0.00
5-14	3410.00	1780.00	1120.00	751.00	451.00	104.00	62.00	6.00	0.00
5-15	3240.00	1780.00	1160.00	820.00	462.00	146.00	56.00	3.00	0.00
5-16	3130.00	1860.00	1120.00	817.00	420.00	129.00	51.00	0.00	0.00
5-17	3570.00	1820.00	1160.00	784.00	382.00	141.00	54.00	0.00	0.00
5-18	3920.00	1700.00	1120.00	800.00	402.00	120.00	48.00	0.05	0.00
5-19	4270.00	1560.00	1160.00	822.00	438.00	114.00	43.00	0.00	0.00
5-20	4480.00	1460.00	1140.00	800.00	435.00	73.00	51.00	0.00	0.00
5-21	4620.00	1400.00	1050.00	836.00	446.00	85.00	60.00	0.00	0.00
5-22	4690.00	1570.00	1080.00	803.00	423.00	87.00	56.00	0.00	0.00
5-23	4760.00	1990.00	1100.00	792.00	411.00	100.00	51.00	0.00	0.00
5-24	4840.00	1930.00	985.00	816.00	430.00	106.00	51.00	7.50	0.00
5-25	4840.00	1920.00	1060.00	900.00	420.00	98.00	50.00	0.75	0.00
5-26	4840.00	1810.00	1030.00	892.00	478.00	88.00	41.00	11.00	0.00
5-27	4760.00	1740.00	991.00	866.00	430.00	105.00	48.00	7.00	0.00
5-28	4760.00	1640.00	932.00	824.00	414.00	93.00	38.00	4.90	0.00
5-29	4760.00	1560.00	956.00	842.00	408.00	93.00	43.00	11.00	0.00
5-30	4690.00	1420.00	960.00	775.00	398.00	111.00	39.00	6.00	0.00
5-31	4690.00	1440.00	960.00	761.00	447.00	143.00	43.00	2.20	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	4690.00	1420.00	900.00	766.00	426.00	123.00	51.00	0.92	0.00
6- 2	4690.00	1320.00	913.00	730.00	350.00	90.00	47.00	0.46	0.00
6- 3	4620.00	1270.00	891.00	705.00	348.00	111.00	47.00	4.00	0.00
6- 4	4620.00	1260.00	913.00	698.00	306.00	123.00	47.00	4.50	0.00
6- 5	4550.00	1230.00	919.00	659.00	287.00	152.00	51.00	9.00	0.00
6- 6	4270.00	1210.00	890.00	682.00	277.00	146.00	54.00	11.00	0.00
6- 7	3990.00	1210.00	874.00	654.00	258.00	117.00	61.00	7.50	0.00
6- 8	3800.00	1190.00	834.00	586.00	229.00	105.00	90.00	6.50	0.00
6- 9	3620.00	1160.00	806.00	630.00	202.00	124.00	78.00	1.60	0.00
6-10	3460.00	1150.00	781.00	627.00	208.00	118.00	78.00	3.10	0.00
6-11	3300.00	1120.00	778.00	641.00	236.00	104.00	47.00	4.50	0.00
6-12	3180.00	1050.00	737.00	595.00	215.00	97.00	51.00	2.80	0.00
6-13	3080.00	1010.00	746.00	590.00	236.00	98.00	64.00	0.62	0.00
6-14	2900.00	1000.00	740.00	551.00	243.00	96.00	73.00	0.00	0.00
6-15	2780.00	1070.00	726.00	583.00	280.00	99.00	48.00	0.00	0.00
6-16	2580.00	1070.00	806.00	663.00	276.00	96.00	39.00	0.00	0.00
6-17	2460.00	1070.00	839.00	641.00	220.00	93.00	39.00	0.23	0.00
6-18	2320.00	1250.00	718.00	564.00	272.00	101.00	47.00	0.44	0.00
6-19	2390.00	1300.00	718.00	430.00	250.00	91.00	52.00	0.90	0.00
6-20	2410.00	1750.00	696.00	451.00	222.00	76.00	58.00	5.20	0.00
6-21	3100.00	1360.00	685.00	411.00	245.00	68.00	47.00	5.60	0.00
6-22	3290.00	1030.00	707.00	451.00	243.00	70.00	32.00	0.00	0.00
6-23	2600.00	1030.00	729.00	462.00	229.00	66.00	39.00	0.01	0.00
6-24	2330.00	960.00	722.00	430.00	231.00	70.00	33.00	0.00	0.00
6-25	2140.00	960.00	710.00	396.00	208.00	66.00	30.00	0.00	0.00
6-26	2070.00	1040.00	685.00	430.00	207.00	66.00	28.00	0.00	0.00
6-27	1970.00	1050.00	746.00	430.00	207.00	58.00	16.00	0.00	0.00
6-28	1870.00	987.00	758.00	430.00	238.00	54.00	26.00	0.00	0.00
6-29	1650.00	1150.00	795.00	373.00	216.00	62.00	35.00	0.00	0.00
6-30	1530.00	1090.00	778.00	430.00	235.00	80.00	32.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
7- 1	1480.00	1070.00	729.00	303.00	220.00	58.00	35.00	0.00	0.00
7- 2	1390.00	1110.00	750.00	293.00	208.00	62.00	30.00	0.00	0.00
7- 3	1400.00	949.00	724.00	310.00	202.00	64.00	28.00	0.00	0.00
7- 4	1360.00	1000.00	686.00	354.00	187.00	70.00	25.00	0.00	0.00
7- 5	1290.00	966.00	696.00	330.00	178.00	58.00	23.00	0.00	0.00
7- 6	1220.00	933.00	620.00	358.00	171.00	62.00	30.00	0.00	0.00
7- 7	1220.00	946.00	584.00	366.00	177.00	62.00	28.00	0.00	0.00
7- 8	1270.00	925.00	609.00	330.00	184.00	56.00	24.00	0.00	0.00
7- 9	1220.00	873.00	629.00	348.00	168.00	68.00	26.00	0.00	0.00
7-10	1160.00	872.00	638.00	314.00	156.00	54.00	20.00	0.00	0.00
7-11	1100.00	886.00	663.00	373.00	151.00	39.00	8.00	0.00	0.00
7-12	1160.00	874.00	597.00	335.00	157.00	46.00	0.08	0.00	0.00
7-13	1100.00	835.00	652.00	348.00	142.00	46.00	16.00	0.00	0.00
7-14	1030.00	836.00	685.00	357.00	116.00	47.00	20.00	0.00	0.00
7-15	1030.00	872.00	704.00	384.00	116.00	44.00	16.00	0.00	0.00
7-16	1030.00	838.00	675.00	390.00	125.00	36.00	12.00	0.00	0.00
7-17	1030.00	824.00	641.00	353.00	126.00	31.00	4.00	0.00	0.00
7-18	1050.00	797.00	587.00	328.00	131.00	47.00	12.00	0.00	0.00
7-19	1040.00	793.00	559.00	313.00	112.00	46.00	7.00	0.00	0.00
7-20	1030.00	783.00	550.00	297.00	106.00	35.00	3.00	0.00	0.00
7-21	996.00	777.00	528.00	275.00	106.00	43.00	4.00	0.00	0.00
7-22	1000.00	822.00	564.00	283.00	117.00	48.00	0.00	0.00	0.00
7-23	1030.00	827.00	553.00	266.00	95.00	39.00	0.00	0.00	0.00
7-24	995.00	784.00	616.00	244.00	84.00	26.00	0.00	0.00	0.00
7-25	981.00	801.00	608.00	236.00	94.00	19.00	0.00	0.00	0.00
7-26	1040.00	828.00	627.00	238.00	90.00	32.00	0.33	0.00	0.00
7-27	1040.00	844.00	594.00	218.00	92.00	35.00	0.19	0.00	0.00
7-28	1080.00	820.00	579.00	205.00	95.00	32.00	0.00	0.00	0.00
7-29	1450.00	792.00	597.00	207.00	83.00	30.00	0.00	0.00	0.00
7-30	1670.00	841.00	550.00	235.00	85.00	31.00	0.00	0.00	0.00
7-31	1660.00	848.00	572.00	182.00	99.00	35.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
8- 1	1550.00	737.00	572.00	243.00	88.00	26.00	0.00	0.00	0.00
8- 2	1500.00	711.00	592.00	234.00	87.00	34.00	0.01	0.00	0.00
8- 3	1610.00	716.00	583.00	254.00	85.00	39.00	0.00	0.00	0.00
8- 4	1980.00	942.00	574.00	251.00	70.00	32.00	0.00	0.00	0.00
8- 5	2400.00	835.00	526.00	275.00	61.00	12.00	0.00	0.00	0.00
8- 6	2640.00	718.00	546.00	276.00	62.00	12.00	0.00	0.00	0.00
8- 7	2630.00	737.00	539.00	281.00	58.00	13.00	0.00	0.00	0.00
8- 8	2450.00	698.00	462.00	267.00	55.00	11.00	0.00	0.00	0.00
8- 9	2230.00	674.00	411.00	244.00	54.00	13.00	0.00	0.00	0.00
8-10	2080.00	663.00	402.00	220.00	51.00	5.00	0.00	0.00	0.00
8-11	1960.00	729.00	375.00	187.00	51.00	1.90	0.00	0.00	0.00
8-12	1810.00	707.00	361.00	185.00	51.00	0.65	0.00	0.00	0.00
8-13	1670.00	674.00	393.00	171.00	47.00	4.00	0.00	0.00	0.00
8-14	1560.00	663.00	393.00	143.00	43.00	1.50	0.00	0.00	0.00
8-15	1450.00	752.00	430.00	138.00	35.00	5.50	0.00	0.00	0.00
8-16	1390.00	718.00	402.00	126.00	39.00	1.40	0.00	0.00	0.00
8-17	1300.00	707.00	379.00	132.00	38.00	0.50	0.00	0.00	0.00
8-18	1170.00	707.00	392.00	143.00	35.00	8.00	0.00	0.00	0.00
8-19	1080.00	679.00	399.00	143.00	35.00	4.10	0.00	0.00	0.00
8-20	994.00	522.00	379.00	201.00	35.00	3.30	0.00	0.00	0.00
8-21	1030.00	492.00	386.00	207.00	29.00	0.00	0.00	0.00	0.00
8-22	983.00	544.00	371.00	143.00	27.00	0.10	0.00	0.00	0.00
8-23	971.00	560.00	352.00	143.00	30.00	0.00	0.00	0.00	0.00
8-24	952.00	589.00	265.00	119.00	24.00	0.00	0.00	0.00	0.00
8-25	938.00	558.00	265.00	119.00	27.00	0.00	0.00	0.00	0.00
8-26	1030.00	462.00	220.00	117.00	28.00	0.24	0.00	0.00	0.00
8-27	966.00	482.00	217.00	106.00	27.00	0.20	0.00	0.00	0.00
8-28	977.00	430.00	223.00	107.00	24.00	0.00	0.00	0.00	0.00
8-29	928.00	438.00	210.00	107.00	23.00	0.01	0.00	0.00	0.00
8-30	907.00	416.00	200.00	95.00	27.00	0.00	0.00	0.00	0.00
8-31	855.00	361.00	189.00	84.00	25.00	1.00	0.00	0.00	0.00

Table 14.--Discharge data for duration hydrograph for James River at Huron, S. Dak. (station no. 06476000), for 39-year period October 1946 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
9- 1	892.00	394.00	172.00	91.00	21.00	0.00	0.00	0.00	0.00
9- 2	818.00	361.00	177.00	97.00	17.00	0.00	0.00	0.00	0.00
9- 3	886.00	317.00	162.00	91.00	15.00	0.00	0.00	0.00	0.00
9- 4	824.00	306.00	151.00	91.00	15.00	0.00	0.00	0.00	0.00
9- 5	780.00	290.00	146.00	66.00	17.00	0.00	0.00	0.00	0.00
9- 6	764.00	284.00	138.00	75.00	13.00	0.00	0.00	0.00	0.00
9- 7	812.00	273.00	106.00	66.00	19.00	0.00	0.00	0.00	0.00
9- 8	836.00	262.00	116.00	66.00	11.00	0.00	0.00	0.00	0.00
9- 9	860.00	262.00	122.00	66.00	19.00	0.00	0.00	0.00	0.00
9-10	812.00	266.00	117.00	66.00	13.00	0.00	0.00	0.00	0.00
9-11	776.00	262.00	120.00	68.00	7.00	0.00	0.00	0.00	0.00
9-12	812.00	238.00	121.00	62.00	9.00	0.00	0.00	0.00	0.00
9-13	788.00	240.00	114.00	62.00	12.00	0.00	0.00	0.00	0.00
9-14	764.00	231.00	114.00	62.00	6.00	0.00	0.00	0.00	0.00
9-15	764.00	222.00	112.00	62.00	11.00	0.00	0.00	0.00	0.00
9-16	788.00	201.00	109.00	62.00	2.00	0.00	0.00	0.00	0.00
9-17	764.00	213.00	112.00	82.00	17.00	0.00	0.00	0.00	0.00
9-18	764.00	195.00	107.00	75.00	12.00	0.00	0.00	0.00	0.00
9-19	740.00	176.00	96.00	54.00	23.00	0.00	0.00	0.00	0.00
9-20	707.00	163.00	97.00	63.00	22.00	0.00	0.00	0.00	0.00
9-21	718.00	159.00	98.00	62.00	12.00	0.00	0.00	0.00	0.00
9-22	718.00	129.00	87.00	62.00	4.80	0.00	0.00	0.00	0.00
9-23	663.00	122.00	82.00	56.00	2.80	0.00	0.00	0.00	0.00
9-24	729.00	116.00	74.00	46.00	6.00	0.00	0.00	0.00	0.00
9-25	674.00	110.00	70.00	56.00	3.30	0.00	0.00	0.00	0.00
9-26	663.00	92.00	75.00	39.00	6.00	0.00	0.00	0.00	0.00
9-27	608.00	92.00	73.00	44.00	0.50	0.00	0.00	0.00	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
10- 1	595.00	141.00	76.00	54.00	8.90	3.00	0.40	0.00	0.00
10- 2	578.00	141.00	78.00	51.00	8.00	3.30	0.40	0.00	0.00
10- 3	530.00	136.00	75.00	46.00	9.00	3.30	0.60	0.03	0.00
10- 4	481.00	135.00	69.00	52.00	9.20	2.70	0.50	0.02	0.00
10- 5	443.00	133.00	73.00	50.00	8.80	1.40	0.60	0.02	0.00
10- 6	414.00	126.00	68.00	54.00	10.00	1.50	0.60	0.01	0.00
10- 7	398.00	120.00	72.00	55.00	11.00	1.50	0.63	0.00	0.00
10- 8	387.00	118.00	69.00	53.00	11.00	2.60	0.84	0.01	0.00
10- 9	360.00	114.00	67.00	51.00	11.00	4.20	1.20	0.00	0.00
10-10	336.00	138.00	66.00	50.00	14.00	4.50	1.10	0.00	0.00
10-11	359.00	157.00	69.00	49.00	15.00	4.80	2.40	0.00	0.00
10-12	342.00	168.00	75.00	47.00	18.00	5.70	2.60	0.00	0.00
10-13	327.00	202.00	73.00	46.00	14.00	5.60	2.20	0.00	0.00
10-14	326.00	216.00	78.00	53.00	12.00	4.40	2.20	0.00	0.00
10-15	323.00	211.00	109.00	47.00	12.00	4.20	2.40	0.00	0.00
10-16	320.00	225.00	117.00	47.00	12.00	2.80	2.20	0.04	0.00
10-17	310.00	193.00	123.00	55.00	13.00	2.60	1.80	0.00	0.00
10-18	298.00	183.00	116.00	60.00	15.00	3.30	1.60	0.00	0.00
10-19	288.00	183.00	108.00	59.00	14.00	4.00	1.60	0.02	0.00
10-20	285.00	184.00	118.00	59.00	15.00	3.90	2.20	0.02	0.00
10-21	292.00	177.00	127.00	54.00	16.00	4.10	2.40	0.04	0.00
10-22	294.00	166.00	134.00	45.00	20.00	4.50	2.60	0.04	0.00
10-23	296.00	163.00	137.00	43.00	15.00	4.20	2.40	0.00	0.00
10-24	307.00	152.00	133.00	42.00	14.00	4.50	2.20	0.02	0.00
10-25	316.00	154.00	127.00	46.00	17.00	4.50	2.40	0.02	0.00
10-26	307.00	151.00	115.00	46.00	16.00	7.00	2.60	0.06	0.00
10-27	292.00	150.00	108.00	43.00	15.00	7.00	3.30	0.87	0.00
10-28	291.00	152.00	109.00	62.00	15.00	7.00	3.30	2.20	0.00
10-29	294.00	148.00	116.00	65.00	17.00	7.80	4.20	2.20	0.00
10-30	289.00	159.00	103.00	64.00	16.00	7.80	4.20	2.20	0.00
10-31	284.00	190.00	98.00	61.00	16.00	7.70	4.50	2.20	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
11- 1	293.00	193.00	97.00	63.00	16.00	7.60	4.50	2.20	0.00
11- 2	311.00	188.00	104.00	55.00	17.00	7.40	4.80	2.20	0.00
11- 3	316.00	193.00	111.00	55.00	15.00	7.10	4.80	2.20	0.00
11- 4	313.00	191.00	115.00	66.00	15.00	7.60	4.80	2.40	0.00
11- 5	283.00	184.00	120.00	57.00	15.00	7.60	6.30	2.40	0.00
11- 6	265.00	170.00	127.00	58.00	15.00	7.20	6.00	2.60	0.00
11- 7	276.00	140.00	135.00	58.00	14.00	7.20	5.90	2.20	0.00
11- 8	296.00	150.00	135.00	56.00	13.00	7.20	5.30	2.00	0.00
11- 9	310.00	170.00	132.00	57.00	13.00	7.60	5.10	2.20	0.00
11-10	326.00	177.00	127.00	59.00	13.00	7.00	6.60	2.20	0.00
11-11	325.00	178.00	130.00	70.00	13.00	7.00	5.70	2.40	0.00
11-12	341.00	173.00	140.00	68.00	13.00	6.90	5.10	2.60	0.00
11-13	356.00	168.00	129.00	61.00	13.00	7.00	4.90	3.30	0.00
11-14	335.00	197.00	124.00	57.00	13.00	6.00	5.10	3.60	0.00
11-15	301.00	226.00	123.00	55.00	14.00	7.00	4.80	3.60	0.00
11-16	292.00	210.00	120.00	69.00	10.00	6.00	4.70	3.60	0.00
11-17	297.00	190.00	120.00	80.00	9.60	6.30	4.30	3.30	0.00
11-18	303.00	177.00	127.00	80.00	13.00	7.00	3.90	2.80	0.00
11-19	316.00	178.00	114.00	75.00	13.00	7.00	4.30	3.00	0.00
11-20	300.00	185.00	119.00	70.00	20.00	7.90	4.00	3.00	0.00
11-21	299.00	184.00	123.00	80.00	18.00	8.10	4.50	2.40	0.00
11-22	305.00	188.00	118.00	80.00	16.00	7.20	5.00	2.20	0.00
11-23	305.00	186.00	120.00	76.00	19.00	7.00	5.50	2.10	0.00
11-24	290.00	190.00	123.00	68.00	21.00	6.00	4.90	2.10	0.00
11-25	272.00	210.00	116.00	69.00	22.00	7.00	4.80	1.40	0.00
11-26	260.00	209.00	113.00	67.00	16.00	7.00	5.60	2.80	0.00
11-27	250.00	197.00	110.00	68.00	14.00	6.00	5.00	2.70	0.00
11-28	260.00	196.00	105.00	67.00	15.00	7.00	5.00	2.70	0.00
11-29	280.00	197.00	100.00	63.00	17.00	6.00	4.40	2.60	0.00
11-30	300.00	196.00	96.00	62.00	28.00	6.00	4.60	2.40	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
12- 1	290.00	194.00	100.00	79.00	27.00	5.70	4.50	1.80	0.00
12- 2	290.00	193.00	100.00	85.00	26.00	6.00	4.50	2.60	0.00
12- 3	280.00	187.00	95.00	85.00	25.00	7.00	5.00	3.30	0.00
12- 4	270.00	173.00	95.00	82.00	22.00	8.00	5.00	3.50	0.00
12- 5	260.00	176.00	106.00	82.00	20.00	8.00	5.00	3.70	0.00
12- 6	250.00	178.00	109.00	80.00	19.00	8.00	5.10	3.10	0.00
12- 7	240.00	147.00	111.00	75.00	41.00	7.00	5.40	2.90	0.00
12- 8	230.00	140.00	110.00	73.00	18.00	7.00	5.70	2.80	0.00
12- 9	220.00	140.00	90.00	70.00	12.00	7.00	5.70	2.00	0.00
12-10	220.00	140.00	95.00	65.00	18.00	7.00	6.00	1.60	0.00
12-11	218.00	145.00	95.00	69.00	30.00	6.20	6.00	1.40	0.00
12-12	216.00	145.00	93.00	69.00	31.00	6.50	5.00	1.40	0.00
12-13	210.00	145.00	90.00	69.00	28.00	6.50	4.30	1.60	0.00
12-14	208.00	145.00	90.00	60.00	29.00	6.30	4.00	1.70	0.00
12-15	200.00	145.00	95.00	60.00	30.00	6.30	4.20	1.80	0.00
12-16	196.00	135.00	95.00	58.00	35.00	6.00	4.00	2.10	0.00
12-17	193.00	130.00	95.00	58.00	35.00	6.00	3.00	1.90	0.00
12-18	191.00	130.00	93.00	65.00	30.00	5.70	3.00	1.80	0.00
12-19	189.00	130.00	90.00	60.00	25.00	6.00	3.20	1.40	0.00
12-20	186.00	130.00	90.00	60.00	25.00	5.90	3.00	1.40	0.00
12-21	182.00	130.00	98.00	58.00	26.00	6.00	3.00	1.40	0.00
12-22	179.00	125.00	100.00	58.00	27.00	6.00	3.00	1.40	0.00
12-23	177.00	135.00	95.00	57.00	30.00	5.10	3.30	1.40	0.00
12-24	172.00	145.00	90.00	52.00	32.00	5.60	3.30	1.20	0.00
12-25	180.00	165.00	85.00	53.00	35.00	6.00	3.30	1.40	0.00
12-26	210.00	160.00	80.00	51.00	34.00	6.00	3.60	1.40	0.00
12-27	240.00	155.00	76.00	50.00	33.00	6.00	3.60	1.40	0.00
12-28	255.00	150.00	73.00	52.00	31.00	6.00	3.80	0.94	0.00
12-29	260.00	140.00	68.00	57.00	29.00	6.00	3.50	0.86	0.00
12-30	275.00	135.00	65.00	58.00	27.00	6.00	3.50	0.78	0.00
12-31	290.00	130.00	65.00	55.00	26.00	5.00	3.50	0.95	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
1- 1	300.00	125.00	60.00	49.00	24.00	6.00	3.90	0.90	0.00
1- 2	310.00	120.00	60.00	47.00	32.00	5.00	3.80	0.97	0.00
1- 3	320.00	115.00	60.00	46.00	31.00	4.00	3.90	1.10	0.00
1- 4	310.00	110.00	60.00	44.00	28.00	4.30	3.30	0.90	0.00
1- 5	290.00	110.00	60.00	41.00	23.00	4.30	2.40	0.76	0.00
1- 6	280.00	104.00	60.00	39.00	23.00	3.90	2.60	0.77	0.00
1- 7	270.00	102.00	60.00	38.00	23.00	3.80	2.30	0.75	0.00
1- 8	260.00	98.00	60.00	37.00	23.00	3.80	3.00	0.75	0.00
1- 9	260.00	93.00	60.00	37.00	22.00	3.30	2.90	0.74	0.00
1-10	265.00	89.00	60.00	36.00	21.00	4.00	2.50	0.70	0.00
1-11	270.00	86.00	55.00	35.00	19.00	3.90	2.10	0.60	0.00
1-12	240.00	82.00	50.00	35.00	18.00	3.50	2.20	0.48	0.00
1-13	200.00	79.00	49.00	33.00	18.00	3.00	2.40	0.36	0.00
1-14	160.00	75.00	47.00	33.00	20.00	3.30	2.20	0.51	0.00
1-15	120.00	70.00	45.00	32.00	20.00	3.70	2.10	0.47	0.00
1-16	115.00	66.00	45.00	32.00	20.00	3.00	1.90	0.58	0.00
1-17	115.00	63.00	45.00	32.00	20.00	3.60	1.80	0.70	0.00
1-18	113.00	62.00	50.00	32.00	18.00	4.50	1.70	0.67	0.00
1-19	110.00	65.00	45.00	34.00	15.00	4.30	1.60	0.59	0.00
1-20	110.00	75.00	45.00	36.00	15.00	2.50	1.50	0.52	0.00
1-21	108.00	81.00	45.00	36.00	16.00	2.00	1.60	0.42	0.00
1-22	105.00	80.00	45.00	36.00	15.00	2.00	1.40	0.42	0.00
1-23	100.00	70.00	45.00	35.00	15.00	1.80	1.40	0.36	0.00
1-24	95.00	60.00	43.00	33.00	14.00	1.70	1.20	0.39	0.00
1-25	90.00	50.00	43.00	32.00	14.00	1.70	1.40	0.55	0.00
1-26	85.00	48.00	43.00	31.00	13.00	1.60	1.40	0.59	0.00
1-27	80.00	45.00	42.00	30.00	13.00	2.00	1.60	0.40	0.00
1-28	75.00	42.00	38.00	30.00	13.00	2.00	1.40	0.36	0.00
1-29	72.00	41.00	35.00	30.00	13.00	2.00	1.50	0.32	0.00
1-30	70.00	40.00	34.00	30.00	13.00	2.50	1.50	0.28	0.00
1-31	68.00	40.00	34.00	30.00	13.00	3.00	1.40	0.25	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
2- 1	66.00	40.00	32.00	29.00	13.00	3.00	1.40	0.23	0.00
2- 2	65.00	36.00	31.00	28.00	12.00	3.00	1.50	0.21	0.00
2- 3	63.00	35.00	30.00	28.00	12.00	2.60	1.40	0.23	0.00
2- 4	62.00	35.00	30.00	29.00	12.00	3.00	1.70	0.25	0.00
2- 5	60.00	35.00	30.00	26.00	13.00	2.80	1.80	0.27	0.00
2- 6	58.00	35.00	28.00	24.00	14.00	2.80	2.00	0.31	0.00
2- 7	57.00	35.00	27.00	22.00	12.00	3.30	2.00	0.37	0.00
2- 8	56.00	35.00	26.00	20.00	10.00	3.90	2.00	0.45	0.00
2- 9	55.00	37.00	25.00	19.00	9.00	3.90	2.50	0.56	0.00
2-10	54.00	42.00	25.00	20.00	9.00	4.00	2.50	0.68	0.00
2-11	55.00	43.00	24.00	20.00	9.00	4.50	2.50	0.85	0.00
2-12	56.00	42.00	24.00	21.00	9.00	4.80	2.50	0.90	0.00
2-13	57.00	40.00	27.00	21.00	9.00	5.00	2.30	0.85	0.00
2-14	60.00	38.00	27.00	20.00	10.00	5.00	2.60	0.75	0.00
2-15	62.00	36.00	28.00	21.00	11.00	6.60	3.00	0.60	0.00
2-16	65.00	35.00	28.00	22.00	11.00	6.90	3.70	0.56	0.00
2-17	68.00	37.00	30.00	21.00	10.00	6.00	4.00	0.48	0.00
2-18	71.00	44.00	30.00	22.00	14.00	6.00	4.00	0.40	0.00
2-19	90.00	50.00	30.00	24.00	16.00	6.00	4.00	0.46	0.00
2-20	110.00	65.00	31.00	25.00	17.00	7.00	5.00	0.54	0.00
2-21	135.00	85.00	35.00	30.00	18.00	7.60	5.00	0.70	0.00
2-22	150.00	100.00	40.00	31.00	18.00	8.00	4.80	0.80	0.00
2-23	165.00	97.00	55.00	40.00	18.00	7.20	5.00	0.90	0.00
2-24	180.00	93.00	65.00	40.00	19.00	8.00	6.00	1.00	0.00
2-25	200.00	120.00	60.00	40.00	18.00	9.20	6.80	1.00	0.00
2-26	250.00	180.00	65.00	44.00	20.00	9.20	7.00	1.00	0.00
2-27	350.00	170.00	85.00	50.00	19.00	10.00	6.00	1.20	0.00
2-28	550.00	165.00	125.00	50.00	20.00	14.00	7.40	1.40	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
3- 1	800.00	215.00	150.00	60.00	25.00	14.00	7.20	2.60	0.00
3- 2	850.00	335.00	160.00	75.00	22.00	14.00	7.60	2.40	0.00
3- 3	1120.00	425.00	130.00	100.00	20.00	14.00	7.20	2.40	0.00
3- 4	1450.00	530.00	150.00	115.00	18.00	15.00	6.90	2.20	0.00
3- 5	1650.00	600.00	170.00	110.00	18.00	15.00	6.60	2.20	0.00
3- 6	1800.00	695.00	180.00	100.00	24.00	14.00	6.60	2.40	0.00
3- 7	2620.00	700.00	170.00	100.00	37.00	14.00	6.60	2.40	0.00
3- 8	2410.00	665.00	160.00	110.00	40.00	14.00	7.00	2.40	0.00
3- 9	2320.00	575.00	200.00	120.00	40.00	13.00	6.70	2.60	0.00
3-10	2200.00	485.00	150.00	125.00	40.00	14.00	6.70	2.60	0.00
3-11	2060.00	410.00	300.00	130.00	40.00	19.00	10.00	6.00	0.50
3-12	1840.00	600.00	325.00	135.00	64.00	20.00	10.00	6.00	1.50
3-13	1620.00	1100.00	280.00	140.00	60.00	19.00	10.00	6.00	2.00
3-14	2300.00	1480.00	375.00	150.00	100.00	26.00	11.00	6.00	2.50
3-15	3960.00	1370.00	650.00	270.00	102.00	26.00	12.00	6.00	4.00
3-16	3940.00	1260.00	800.00	270.00	89.00	26.00	15.00	8.00	5.00
3-17	3630.00	2200.00	900.00	275.00	100.00	32.00	14.00	8.80	5.00
3-18	3170.00	2600.00	950.00	325.00	95.00	33.00	16.00	8.90	5.00
3-19	3150.00	2520.00	921.00	450.00	100.00	31.00	18.00	9.20	5.00
3-20	3290.00	1970.00	819.00	460.00	110.00	27.00	19.00	9.60	5.00
3-21	3270.00	1750.00	800.00	400.00	121.00	30.00	22.00	11.00	5.00
3-22	3190.00	2050.00	800.00	350.00	121.00	32.00	22.00	10.00	5.00
3-23	3100.00	2340.00	661.00	316.00	126.00	36.00	21.00	11.00	4.00
3-24	3020.00	2360.00	549.00	320.00	134.00	35.00	21.00	12.00	6.00
3-25	2940.00	2510.00	566.00	400.00	137.00	37.00	14.00	12.00	9.00
3-26	2990.00	2670.00	569.00	390.00	135.00	40.00	20.00	11.00	8.60
3-27	3090.00	2610.00	801.00	390.00	153.00	50.00	22.00	12.00	8.20
3-28	3230.00	2330.00	767.00	526.00	225.00	52.00	22.00	11.00	7.80
3-29	3400.00	2130.00	1430.00	580.00	219.00	61.00	24.00	12.00	6.60
3-30	7450.00	1970.00	1570.00	620.00	180.00	62.00	28.00	14.00	5.10
3-31	11100.00	4400.00	1300.00	650.00	185.00	63.00	43.00	18.00	5.40

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
4- 1	9310.00	4760.00	1200.00	677.00	195.00	79.00	49.00	19.00	5.10
4- 2	9240.00	4770.00	1100.00	732.00	186.00	76.00	51.00	15.00	6.00
4- 3	8230.00	4710.00	1070.00	716.00	201.00	69.00	57.00	26.00	7.00
4- 4	8120.00	4620.00	1080.00	716.00	197.00	67.00	57.00	37.00	6.00
4- 5	8180.00	4470.00	1050.00	722.00	256.00	66.00	58.00	43.00	4.80
4- 6	7650.00	4360.00	1040.00	736.00	237.00	75.00	60.00	42.00	3.20
4- 7	7850.00	4270.00	1000.00	757.00	205.00	72.00	63.00	44.00	2.20
4- 8	7040.00	5750.00	971.00	814.00	239.00	88.00	63.00	34.00	2.40
4- 9	11100.00	6010.00	954.00	780.00	239.00	89.00	71.00	29.00	3.90
4-10	12200.00	5270.00	958.00	786.00	241.00	95.00	76.00	29.00	4.20
4-11	11900.00	4710.00	969.00	804.00	232.00	100.00	63.00	24.00	6.00
4-12	11300.00	4220.00	1100.00	794.00	238.00	88.00	64.00	20.00	6.00
4-13	10800.00	3690.00	1400.00	799.00	259.00	83.00	62.00	36.00	6.00
4-14	10300.00	3200.00	1600.00	790.00	270.00	96.00	62.00	32.00	4.80
4-15	9770.00	2760.00	1750.00	761.00	276.00	94.00	66.00	31.00	6.00
4-16	9440.00	2450.00	1820.00	741.00	272.00	78.00	63.00	30.00	6.00
4-17	9240.00	2320.00	1820.00	741.00	273.00	90.00	58.00	43.00	6.00
4-18	8180.00	2290.00	1750.00	719.00	271.00	86.00	60.00	52.00	6.00
4-19	7220.00	2270.00	1480.00	702.00	269.00	92.00	67.00	46.00	7.00
4-20	6670.00	2240.00	1340.00	744.00	273.00	116.00	76.00	34.00	7.00
4-21	6380.00	2140.00	1190.00	884.00	277.00	148.00	86.00	24.00	5.00
4-22	5980.00	2160.00	1090.00	907.00	296.00	148.00	96.00	20.00	4.20
4-23	5760.00	2150.00	1040.00	938.00	361.00	154.00	104.00	17.00	3.90
4-24	5540.00	2130.00	1080.00	902.00	363.00	158.00	91.00	16.00	3.30
4-25	5400.00	2100.00	1040.00	906.00	421.00	152.00	80.00	14.00	3.30
4-26	5560.00	2050.00	948.00	866.00	385.00	142.00	76.00	18.00	3.30
4-27	5880.00	1980.00	969.00	864.00	352.00	170.00	79.00	26.00	3.00
4-28	6010.00	1920.00	986.00	864.00	356.00	167.00	101.00	31.00	3.00
4-29	5940.00	1880.00	969.00	865.00	385.00	167.00	102.00	33.00	2.80
4-30	5790.00	1810.00	946.00	852.00	388.00	187.00	94.00	35.00	2.80

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
5- 1	5980.00	1740.00	1040.00	860.00	349.00	208.00	83.00	35.00	2.40
5- 2	5940.00	1670.00	1040.00	848.00	311.00	207.00	80.00	30.00	2.20
5- 3	5880.00	1630.00	1060.00	824.00	282.00	182.00	79.00	26.00	2.80
5- 4	5740.00	1620.00	1070.00	800.00	296.00	173.00	73.00	22.00	3.60
5- 5	5740.00	1680.00	1080.00	778.00	290.00	168.00	66.00	20.00	3.60
5- 6	5680.00	1630.00	1090.00	768.00	250.00	166.00	57.00	18.00	3.60
5- 7	5510.00	1610.00	1110.00	762.00	246.00	160.00	58.00	16.00	4.20
5- 8	5350.00	1600.00	1160.00	752.00	282.00	143.00	57.00	15.00	5.00
5- 9	5140.00	1590.00	1230.00	732.00	316.00	130.00	57.00	13.00	6.00
5-10	5030.00	1490.00	1220.00	693.00	309.00	122.00	66.00	12.00	8.00
5-11	4790.00	1450.00	1180.00	679.00	322.00	121.00	75.00	12.00	8.00
5-12	4540.00	1480.00	1170.00	709.00	320.00	120.00	74.00	11.00	7.00
5-13	4300.00	1460.00	1130.00	712.00	300.00	102.00	73.00	9.10	4.50
5-14	4060.00	1630.00	1120.00	718.00	360.00	110.00	68.00	7.80	4.20
5-15	3830.00	1720.00	1110.00	711.00	373.00	124.00	60.00	7.10	3.60
5-16	3760.00	1760.00	1100.00	732.00	356.00	143.00	60.00	6.80	3.00
5-17	3610.00	1790.00	1200.00	753.00	334.00	153.00	53.00	7.00	2.80
5-18	3400.00	1830.00	1200.00	758.00	359.00	155.00	48.00	6.60	2.60
5-19	3220.00	2490.00	1180.00	751.00	369.00	172.00	52.00	6.40	2.40
5-20	3160.00	2450.00	1150.00	742.00	399.00	180.00	59.00	6.50	3.30
5-21	3400.00	2350.00	1120.00	740.00	397.00	155.00	60.00	8.60	3.30
5-22	3470.00	2240.00	1080.00	797.00	387.00	138.00	53.00	12.00	2.60
5-23	3520.00	2210.00	1040.00	807.00	421.00	145.00	57.00	10.00	2.80
5-24	3690.00	2260.00	977.00	812.00	413.00	117.00	58.00	10.00	2.60
5-25	4290.00	2280.00	940.00	836.00	427.00	127.00	73.00	8.90	2.60
5-26	4910.00	2320.00	924.00	884.00	433.00	130.00	85.00	8.60	2.60
5-27	4910.00	2220.00	972.00	910.00	438.00	110.00	80.00	8.40	2.60
5-28	4670.00	2120.00	996.00	910.00	423.00	122.00	69.00	8.00	2.40
5-29	4300.00	2020.00	1010.00	883.00	395.00	113.00	57.00	8.00	2.00
5-30	4040.00	1910.00	999.00	860.00	418.00	124.00	49.00	12.00	1.80
5-31	3920.00	1770.00	968.00	860.00	427.00	126.00	40.00	12.00	1.20

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
6- 1	3790.00	1670.00	939.00	850.00	413.00	132.00	35.00	16.00	1.00
6- 2	3560.00	1600.00	939.00	777.00	395.00	134.00	32.00	12.00	0.86
6- 3	3220.00	1530.00	944.00	674.00	377.00	128.00	32.00	11.00	0.70
6- 4	2830.00	1480.00	936.00	650.00	361.00	126.00	38.00	8.00	0.56
6- 5	2650.00	1440.00	929.00	750.00	327.00	159.00	42.00	8.00	0.47
6- 6	2520.00	1390.00	951.00	729.00	289.00	160.00	44.00	8.00	0.37
6- 7	2340.00	1350.00	944.00	718.00	267.00	157.00	62.00	7.00	0.34
6- 8	2520.00	1310.00	862.00	723.00	251.00	130.00	72.00	5.00	0.43
6- 9	2830.00	1280.00	816.00	635.00	269.00	135.00	78.00	5.00	0.50
6-10	3500.00	1250.00	797.00	596.00	280.00	137.00	76.00	4.50	0.56
6-11	4220.00	1220.00	767.00	597.00	279.00	129.00	71.00	5.00	0.54
6-12	4340.00	1180.00	776.00	643.00	274.00	116.00	66.00	10.00	0.47
6-13	4090.00	1160.00	781.00	637.00	262.00	108.00	72.00	15.00	0.42
6-14	3690.00	1060.00	769.00	624.00	256.00	103.00	74.00	12.00	0.38
6-15	3300.00	1120.00	751.00	652.00	256.00	113.00	72.00	11.00	0.45
6-16	3030.00	1100.00	776.00	598.00	253.00	113.00	67.00	10.00	0.60
6-17	2880.00	1090.00	745.00	637.00	248.00	102.00	61.00	10.00	0.62
6-18	2760.00	1060.00	858.00	635.00	241.00	98.00	58.00	11.00	0.53
6-19	2700.00	1320.00	742.00	620.00	234.00	93.00	54.00	8.20	0.37
6-20	2710.00	1690.00	682.00	590.00	236.00	74.00	49.00	7.40	0.36
6-21	3120.00	1870.00	670.00	529.00	236.00	68.00	43.00	6.00	0.31
6-22	3780.00	1900.00	650.00	496.00	221.00	72.00	33.00	5.00	0.28
6-23	5020.00	1860.00	675.00	445.00	217.00	84.00	32.00	4.80	0.20
6-24	5940.00	1860.00	691.00	406.00	257.00	86.00	38.00	4.20	0.16
6-25	6030.00	1820.00	639.00	401.00	174.00	82.00	36.00	3.90	0.11
6-26	5650.00	1660.00	615.00	360.00	185.00	79.00	36.00	3.30	0.10
6-27	5200.00	1500.00	632.00	344.00	158.00	75.00	33.00	3.30	0.05
6-28	4720.00	1390.00	641.00	360.00	121.00	67.00	24.00	2.40	0.04
6-29	4280.00	1200.00	663.00	332.00	148.00	59.00	18.00	2.20	0.04
6-30	3880.00	1040.00	705.00	310.00	164.00	60.00	18.00	2.40	0.02

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
7- 1	3550.00	936.00	718.00	286.00	167.00	55.00	17.00	2.40	0.00
7- 2	3200.00	917.00	702.00	278.00	183.00	47.00	16.00	2.20	0.00
7- 3	2850.00	948.00	689.00	335.00	140.00	41.00	15.00	2.20	0.03
7- 4	2600.00	981.00	679.00	353.00	187.00	36.00	13.00	2.00	0.02
7- 5	2380.00	981.00	675.00	344.00	171.00	29.00	24.00	1.60	0.02
7- 6	2170.00	960.00	643.00	339.00	154.00	60.00	19.00	1.70	0.00
7- 7	1950.00	938.00	599.00	333.00	142.00	52.00	16.00	1.60	0.00
7- 8	1760.00	933.00	584.00	349.00	170.00	44.00	16.00	1.40	0.00
7- 9	1740.00	938.00	586.00	331.00	141.00	41.00	14.00	1.00	0.00
7-10	1680.00	953.00	599.00	301.00	118.00	41.00	13.00	0.98	0.00
7-11	1580.00	941.00	584.00	289.00	104.00	46.00	14.00	1.80	0.00
7-12	1500.00	917.00	573.00	306.00	101.00	45.00	12.00	1.50	0.00
7-13	1480.00	867.00	566.00	299.00	102.00	48.00	9.00	1.10	0.00
7-14	1420.00	871.00	562.00	321.00	105.00	39.00	7.80	0.85	0.00
7-15	1570.00	851.00	608.00	338.00	110.00	33.00	7.40	0.76	0.00
7-16	1600.00	856.00	635.00	349.00	112.00	36.00	6.30	0.63	0.00
7-17	1600.00	814.00	652.00	358.00	118.00	37.00	5.70	0.54	0.00
7-18	1560.00	793.00	666.00	370.00	130.00	33.00	4.80	0.30	0.00
7-19	1480.00	776.00	679.00	390.00	114.00	30.00	4.00	0.40	0.00
7-20	1390.00	764.00	645.00	367.00	101.00	23.00	3.60	0.31	0.00
7-21	1340.00	744.00	586.00	340.00	105.00	19.00	3.20	0.52	0.00
7-22	1270.00	719.00	582.00	322.00	104.00	16.00	3.30	0.46	0.00
7-23	1200.00	728.00	550.00	377.00	102.00	14.00	3.60	0.39	0.00
7-24	1120.00	755.00	534.00	420.00	100.00	13.00	6.50	0.46	0.00
7-25	1140.00	748.00	539.00	433.00	85.00	13.00	7.10	0.40	0.00
7-26	998.00	738.00	557.00	432.00	79.00	14.00	7.00	0.40	0.00
7-27	960.00	742.00	585.00	401.00	82.00	13.00	6.30	0.40	0.00
7-28	972.00	755.00	597.00	369.00	78.00	12.00	5.50	0.20	0.00
7-29	967.00	751.00	587.00	371.00	71.00	20.00	4.60	0.10	0.00
7-30	933.00	753.00	582.00	352.00	64.00	18.00	4.10	0.09	0.00
7-31	905.00	768.00	531.00	328.00	71.00	18.00	4.60	0.08	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
8- 1	897.00	841.00	531.00	300.00	63.00	17.00	3.90	0.06	0.00
8- 2	885.00	860.00	545.00	276.00	53.00	14.00	3.30	0.05	0.00
8- 3	895.00	860.00	557.00	260.00	45.00	11.00	2.80	0.08	0.02
8- 4	929.00	850.00	551.00	261.00	39.00	9.30	2.40	0.23	0.00
8- 5	931.00	850.00	535.00	269.00	43.00	7.50	1.70	0.43	0.00
8- 6	902.00	850.00	511.00	275.00	43.00	6.90	1.60	0.30	0.00
8- 7	886.00	840.00	496.00	290.00	48.00	7.00	1.40	0.18	0.00
8- 8	952.00	840.00	499.00	310.00	43.00	9.60	3.30	0.10	0.00
8- 9	1030.00	840.00	483.00	311.00	55.00	8.00	4.40	0.00	0.00
8-10	1010.00	830.00	428.00	313.00	53.00	6.60	4.10	0.00	0.00
8-11	980.00	792.00	397.00	321.00	49.00	5.40	3.80	0.00	0.00
8-12	964.00	764.00	380.00	286.00	45.00	5.10	3.00	0.00	0.00
8-13	968.00	742.00	370.00	277.00	40.00	5.60	3.00	0.00	0.00
8-14	975.00	744.00	359.00	280.00	44.00	5.90	2.60	0.00	0.00
8-15	972.00	744.00	395.00	284.00	38.00	7.00	2.60	0.06	0.00
8-16	966.00	721.00	407.00	283.00	28.00	7.20	1.80	0.06	0.00
8-17	963.00	696.00	412.00	289.00	25.00	6.30	2.00	0.08	0.00
8-18	962.00	686.00	401.00	294.00	24.00	5.10	1.80	0.08	0.00
8-19	963.00	689.00	391.00	286.00	24.00	3.90	1.80	0.03	0.00
8-20	939.00	672.00	397.00	267.00	21.00	3.30	1.80	0.02	0.00
8-21	946.00	604.00	391.00	254.00	22.00	2.40	1.60	0.00	0.00
8-22	965.00	536.00	386.00	246.00	21.00	2.40	1.10	0.10	0.00
8-23	959.00	531.00	382.00	238.00	23.00	3.00	0.80	0.10	0.00
8-24	941.00	544.00	371.00	222.00	24.00	2.60	0.60	0.21	0.00
8-25	917.00	558.00	363.00	206.00	21.00	2.10	0.50	0.25	0.00
8-26	906.00	562.00	351.00	184.00	22.00	2.50	1.60	0.30	0.00
8-27	929.00	549.00	344.00	153.00	20.00	2.30	1.20	0.30	0.00
8-28	960.00	538.00	342.00	137.00	20.00	2.10	0.98	0.30	0.00
8-29	961.00	520.00	328.00	139.00	24.00	1.90	0.71	0.20	0.00
8-30	937.00	509.00	319.00	135.00	30.00	2.00	0.56	0.10	0.00
8-31	906.00	520.00	306.00	132.00	31.00	2.00	0.46	0.10	0.00

Table 15.--Discharge data for duration hydrograph for James River near Forestburg, S. Dak. (station no. 06477000), for 29-year period October 1956 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
9- 1	872.00	516.00	283.00	128.00	33.00	2.10	0.50	0.26	0.00
9- 2	852.00	483.00	267.00	125.00	28.00	2.00	0.32	0.29	0.00
9- 3	840.00	449.00	270.00	118.00	22.00	4.00	0.40	0.10	0.00
9- 4	840.00	409.00	268.00	110.00	17.00	4.30	0.26	0.02	0.00
9- 5	840.00	407.00	270.00	110.00	16.00	4.00	0.21	0.00	0.00
9- 6	840.00	388.00	266.00	107.00	13.00	3.30	0.20	0.00	0.00
9- 7	840.00	367.00	261.00	98.00	12.00	2.40	0.20	0.00	0.00
9- 8	840.00	346.00	248.00	97.00	16.00	2.30	0.20	0.00	0.00
9- 9	840.00	326.00	238.00	96.00	16.00	2.30	0.30	0.00	0.00
9-10	830.00	310.00	243.00	92.00	16.00	2.30	0.60	0.00	0.00
9-11	820.00	298.00	245.00	89.00	17.00	2.00	0.40	0.00	0.00
9-12	810.00	288.00	231.00	103.00	22.00	1.80	0.40	0.00	0.00
9-13	800.00	260.00	223.00	113.00	20.00	2.00	0.30	0.00	0.00
9-14	790.00	243.00	226.00	114.00	18.00	1.80	0.10	0.00	0.00
9-15	780.00	254.00	225.00	112.00	23.00	2.00	0.10	0.00	0.00
9-16	760.00	245.00	218.00	110.00	22.00	2.40	0.16	0.00	0.00
9-17	740.00	228.00	199.00	107.00	19.00	2.60	0.26	0.00	0.00
9-18	732.00	214.00	174.00	103.00	16.00	3.00	0.80	0.00	0.00
9-19	717.00	207.00	163.00	99.00	16.00	3.00	1.20	0.00	0.00
9-20	705.00	201.00	148.00	96.00	22.00	2.60	1.60	0.00	0.00
9-21	682.00	192.00	137.00	93.00	26.00	2.20	1.20	0.00	0.00
9-22	677.00	183.00	124.00	89.00	28.00	2.20	0.60	0.10	0.00
9-23	679.00	170.00	118.00	82.00	29.00	1.80	0.40	0.13	0.00
9-24	662.00	159.00	114.00	78.00	20.00	1.20	0.50	0.10	0.00
9-25	662.00	154.00	101.00	75.00	16.00	2.20	1.00	0.07	0.00
9-26	652.00	151.00	90.00	71.00	15.00	2.20	1.00	0.10	0.00
9-27	631.00	148.00	85.00	66.00	14.00	2.60	0.80	0.08	0.00
9-28	606.00	146.00	88.00	62.00	14.00	3.30	0.70	0.07	0.00
9-29	572.00	146.00	82.00	61.00	12.00	6.30	0.50	0.05	0.00
9-30	576.00	143.00	79.00	58.00	12.00	5.70	0.40	0.05	0.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
10- 1	1640.00	152.00	117.00	67.00	31.00	12.00	6.00	2.60	0.00
10- 2	1340.00	151.00	122.00	79.00	30.00	10.00	4.60	2.30	0.00
10- 3	1050.00	146.00	118.00	72.00	30.00	13.00	4.80	2.20	0.00
10- 4	900.00	146.00	112.00	69.00	32.00	14.00	5.00	2.00	0.00
10- 5	820.00	167.00	110.00	75.00	32.00	12.00	4.50	1.80	0.00
10- 6	762.00	163.00	105.00	74.00	32.00	10.00	4.50	1.80	0.00
10- 7	807.00	154.00	104.00	70.00	31.00	11.00	4.70	1.50	0.00
10- 8	741.00	152.00	106.00	65.00	28.00	11.00	4.50	1.70	0.00
10- 9	785.00	262.00	106.00	62.00	30.00	15.00	4.20	1.80	0.00
10-10	741.00	314.00	104.00	77.00	33.00	15.00	5.00	1.80	0.00
10-11	631.00	279.00	101.00	68.00	29.00	14.00	6.00	1.80	0.00
10-12	545.00	245.00	98.00	67.00	29.00	14.00	5.00	2.00	0.00
10-13	502.00	206.00	101.00	67.00	29.00	14.00	5.00	1.80	0.00
10-14	462.00	184.00	109.00	69.00	26.00	13.00	5.00	1.60	0.00
10-15	428.00	194.00	110.00	68.00	29.00	14.00	5.00	1.50	0.00
10-16	408.00	191.00	112.00	70.00	29.00	16.00	4.50	1.60	0.00
10-17	372.00	196.00	109.00	73.00	30.00	16.00	4.00	1.80	0.00
10-18	338.00	205.00	120.00	69.00	26.00	17.00	5.00	1.80	0.00
10-19	325.00	214.00	114.00	70.00	27.00	16.00	6.00	1.90	0.00
10-20	368.00	189.00	105.00	75.00	26.00	16.00	6.00	1.90	0.00
10-21	370.00	171.00	107.00	66.00	26.00	15.00	7.00	1.60	0.00
10-22	351.00	159.00	107.00	68.00	24.00	15.00	5.70	0.80	0.00
10-23	330.00	170.00	106.00	70.00	26.00	15.00	6.00	0.80	0.00
10-24	311.00	169.00	106.00	70.00	28.00	13.00	7.00	1.40	0.00
10-25	313.00	163.00	108.00	64.00	31.00	16.00	8.20	2.90	0.00
10-26	308.00	164.00	107.00	63.00	33.00	17.00	8.80	3.40	0.00
10-27	306.00	163.00	101.00	62.00	31.00	17.00	8.20	3.30	0.00
10-28	316.00	159.00	93.00	62.00	32.00	16.00	7.90	3.10	0.00
10-29	322.00	162.00	88.00	62.00	31.00	17.00	7.00	2.10	0.00
10-30	322.00	161.00	95.00	66.00	31.00	17.00	7.60	1.60	0.00
10-31	322.00	167.00	109.00	69.00	33.00	17.00	7.20	1.40	0.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
11- 1	322.00	168.00	113.00	74.00	37.00	17.00	7.20	1.60	0.00
11- 2	328.00	162.00	110.00	70.00	39.00	18.00	7.40	3.80	0.00
11- 3	315.00	152.00	109.00	69.00	41.00	18.00	8.00	4.00	0.00
11- 4	315.00	152.00	106.00	67.00	42.00	20.00	9.00	4.70	0.00
11- 5	315.00	152.00	97.00	63.00	39.00	20.00	11.00	5.00	0.00
11- 6	315.00	168.00	99.00	66.00	35.00	19.00	11.00	4.50	0.00
11- 7	315.00	174.00	107.00	66.00	32.00	18.00	11.00	3.60	0.00
11- 8	328.00	175.00	107.00	70.00	32.00	19.00	11.00	3.10	0.00
11- 9	334.00	179.00	107.00	67.00	31.00	21.00	10.00	2.90	0.00
11-10	322.00	192.00	109.00	70.00	31.00	21.00	12.00	2.90	0.00
11-11	315.00	199.00	112.00	74.00	33.00	21.00	12.00	2.20	0.00
11-12	589.00	184.00	113.00	72.00	33.00	22.00	14.00	2.10	0.00
11-13	469.00	187.00	113.00	71.00	37.00	24.00	14.00	2.10	0.00
11-14	460.00	199.00	112.00	74.00	43.00	23.00	13.00	2.00	0.00
11-15	445.00	207.00	109.00	76.00	45.00	23.00	13.00	1.80	0.00
11-16	360.00	210.00	102.00	79.00	43.00	23.00	11.00	1.80	0.00
11-17	374.00	206.00	95.00	82.00	42.00	23.00	11.00	2.00	0.00
11-18	374.00	202.00	105.00	85.00	42.00	24.00	11.00	2.10	0.00
11-19	380.00	240.00	113.00	85.00	44.00	22.00	13.00	2.10	0.00
11-20	693.00	252.00	115.00	88.00	50.00	21.00	12.00	2.20	0.00
11-21	726.00	260.00	136.00	89.00	51.00	22.00	13.00	2.40	0.00
11-22	623.00	224.00	118.00	90.00	49.00	22.00	15.00	2.60	0.00
11-23	371.00	196.00	107.00	83.00	47.00	22.00	17.00	2.60	0.00
11-24	335.00	210.00	107.00	77.00	50.00	22.00	13.00	2.90	0.00
11-25	345.00	201.00	111.00	76.00	44.00	24.00	13.00	4.70	0.00
11-26	350.00	200.00	124.00	72.00	46.00	23.00	10.00	4.50	0.00
11-27	310.00	202.00	123.00	70.00	37.00	22.00	11.00	4.70	0.00
11-28	322.00	177.00	123.00	70.00	37.00	22.00	10.00	5.60	0.00
11-29	360.00	160.00	130.00	70.00	35.00	20.00	9.80	5.60	0.00
11-30	374.00	160.00	126.00	68.00	38.00	23.00	14.00	5.70	0.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
12- 1	354.00	184.00	121.00	69.00	39.00	24.00	16.00	5.00	0.00
12- 2	322.00	168.00	109.00	69.00	39.00	24.00	16.00	4.60	0.00
12- 3	296.00	164.00	99.00	69.00	39.00	25.00	16.00	5.00	0.00
12- 4	295.00	154.00	92.00	72.00	40.00	24.00	16.00	4.50	0.00
12- 5	300.00	160.00	93.00	69.00	39.00	24.00	16.00	4.70	2.60
12- 6	285.00	131.00	103.00	71.00	38.00	25.00	16.00	4.70	3.30
12- 7	305.00	127.00	100.00	70.00	37.00	25.00	17.00	6.90	3.30
12- 8	287.00	136.00	93.00	72.00	37.00	26.00	15.00	6.90	3.00
12- 9	289.00	152.00	85.00	68.00	36.00	26.00	15.00	6.00	3.00
12-10	286.00	167.00	94.00	63.00	35.00	25.00	15.00	5.00	3.00
12-11	254.00	177.00	94.00	67.00	36.00	23.00	16.00	5.00	2.00
12-12	250.00	178.00	93.00	65.00	36.00	22.00	16.00	7.30	2.00
12-13	238.00	156.00	90.00	64.00	33.00	21.00	16.00	7.30	2.00
12-14	235.00	163.00	91.00	60.00	32.00	21.00	16.00	7.50	2.00
12-15	230.00	168.00	81.00	60.00	32.00	20.00	16.00	7.70	2.00
12-16	220.00	180.00	98.00	58.00	34.00	21.00	16.00	7.90	2.00
12-17	226.00	171.00	96.00	60.00	32.00	20.00	16.00	8.00	2.20
12-18	213.00	150.00	95.00	62.00	32.00	21.00	16.00	8.00	2.10
12-19	205.00	146.00	91.00	63.00	32.00	20.00	16.00	8.00	2.00
12-20	208.00	142.00	89.00	64.00	31.00	20.00	16.00	9.00	1.90
12-21	208.00	142.00	90.00	61.00	30.00	20.00	16.00	8.00	1.80
12-22	208.00	134.00	93.00	60.00	31.00	20.00	16.00	8.00	1.60
12-23	202.00	127.00	85.00	60.00	30.00	20.00	15.00	8.00	1.60
12-24	208.00	116.00	89.00	58.00	32.00	20.00	16.00	7.10	1.80
12-25	208.00	117.00	89.00	60.00	34.00	20.00	15.00	6.90	1.90
12-26	204.00	119.00	86.00	59.00	34.00	21.00	15.00	6.90	1.90
12-27	200.00	119.00	87.00	59.00	34.00	21.00	15.00	6.70	1.60
12-28	194.00	115.00	88.00	58.00	31.00	21.00	15.00	6.70	1.80
12-29	192.00	122.00	87.00	57.00	30.00	21.00	15.00	6.50	1.50
12-30	190.00	136.00	84.00	56.00	27.00	20.00	14.00	8.00	1.50
12-31	188.00	140.00	80.00	54.00	30.00	19.00	14.00	9.00	1.50

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
1- 1	180.00	130.00	76.00	54.00	33.00	19.00	14.00	6.00	1.50
1- 2	190.00	128.00	72.00	55.00	31.00	18.00	14.00	4.80	1.50
1- 3	215.00	125.00	70.00	49.00	28.00	18.00	14.00	4.30	1.50
1- 4	230.00	122.00	73.00	49.00	29.00	18.00	13.00	4.00	1.50
1- 5	240.00	119.00	74.00	48.00	28.00	17.00	13.00	4.00	1.50
1- 6	235.00	116.00	72.00	50.00	28.00	16.00	13.00	3.90	1.50
1- 7	225.00	112.00	70.00	51.00	28.00	16.00	13.00	4.00	1.50
1- 8	220.00	110.00	67.00	50.00	28.00	16.00	13.00	4.00	1.50
1- 9	213.00	111.00	63.00	50.00	28.00	17.00	14.00	4.00	1.50
1-10	210.00	108.00	60.00	50.00	28.00	18.00	14.00	4.70	1.50
1-11	215.00	105.00	57.00	50.00	28.00	17.00	13.00	3.60	1.50
1-12	220.00	96.00	55.00	48.00	27.00	16.00	12.00	3.60	1.50
1-13	210.00	92.00	56.00	48.00	28.00	16.00	12.00	4.00	1.50
1-14	190.00	90.00	56.00	48.00	26.00	17.00	14.00	4.50	1.50
1-15	182.00	85.00	56.00	47.00	27.00	16.00	14.00	6.00	1.50
1-16	180.00	82.00	61.00	47.00	25.00	15.00	13.00	6.00	1.50
1-17	175.00	86.00	65.00	47.00	26.00	15.00	13.00	6.00	1.50
1-18	165.00	96.00	65.00	46.00	32.00	15.00	13.00	6.00	1.00
1-19	236.00	95.00	64.00	46.00	35.00	16.00	13.00	5.00	1.00
1-20	220.00	96.00	61.00	46.00	34.00	15.00	13.00	5.00	1.00
1-21	254.00	94.00	60.00	46.00	32.00	16.00	13.00	5.00	1.00
1-22	292.00	93.00	57.00	47.00	29.00	15.00	13.00	4.40	1.00
1-23	273.00	93.00	56.00	45.00	29.00	15.00	13.00	4.40	1.00
1-24	250.00	89.00	57.00	45.00	27.00	15.00	13.00	5.00	1.00
1-25	234.00	88.00	59.00	46.00	28.00	14.00	13.00	5.00	1.00
1-26	208.00	85.00	55.00	47.00	28.00	13.00	12.00	5.00	1.00
1-27	188.00	86.00	55.00	48.00	30.00	13.00	12.00	6.00	1.00
1-28	158.00	80.00	55.00	47.00	29.00	14.00	12.00	6.00	1.00
1-29	144.00	73.00	55.00	45.00	29.00	14.00	12.00	6.00	1.00
1-30	138.00	71.00	55.00	47.00	27.00	14.00	12.00	7.00	0.00
1-31	148.00	71.00	55.00	50.00	28.00	14.00	12.00	7.00	0.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
2- 1	143.00	79.00	55.00	50.00	29.00	14.00	12.00	7.00	0.00
2- 2	150.00	80.00	55.00	46.00	29.00	15.00	12.00	7.00	0.00
2- 3	150.00	80.00	55.00	45.00	29.00	16.00	12.00	7.00	0.00
2- 4	143.00	90.00	68.00	48.00	30.00	16.00	12.00	8.00	0.00
2- 5	130.00	90.00	69.00	46.00	32.00	16.00	12.00	8.00	1.00
2- 6	130.00	90.00	67.00	50.00	32.00	16.00	12.00	8.00	1.00
2- 7	135.00	100.00	66.00	47.00	31.00	17.00	12.00	8.00	1.00
2- 8	150.00	93.00	66.00	46.00	35.00	17.00	12.00	8.00	1.00
2- 9	200.00	100.00	64.00	45.00	31.00	18.00	12.00	8.00	1.00
2-10	330.00	125.00	63.00	49.00	31.00	18.00	12.00	8.00	1.00
2-11	500.00	125.00	69.00	46.00	30.00	18.00	15.00	8.00	2.00
2-12	700.00	90.00	78.00	42.00	32.00	20.00	15.00	8.00	2.00
2-13	1000.00	93.00	75.00	50.00	32.00	20.00	15.00	9.00	2.00
2-14	1200.00	120.00	75.00	54.00	32.00	20.00	15.00	12.00	2.00
2-15	1400.00	120.00	78.00	55.00	33.00	21.00	16.00	12.00	2.00
2-16	1450.00	147.00	93.00	55.00	35.00	22.00	18.00	12.00	2.00
2-17	1500.00	229.00	100.00	51.00	35.00	23.00	19.00	12.00	2.00
2-18	1450.00	286.00	115.00	65.00	43.00	24.00	18.00	14.00	2.00
2-19	1400.00	300.00	140.00	87.00	40.00	26.00	18.00	14.00	2.00
2-20	1650.00	300.00	200.00	92.00	42.00	25.00	18.00	14.00	2.00
2-21	1700.00	280.00	182.00	110.00	44.00	25.00	20.00	15.00	2.00
2-22	1650.00	310.00	212.00	118.00	43.00	26.00	18.00	14.00	2.00
2-23	1600.00	400.00	238.00	114.00	51.00	27.00	18.00	15.00	2.00
2-24	1600.00	450.00	243.00	130.00	50.00	30.00	19.00	14.00	2.00
2-25	1550.00	480.00	267.00	110.00	52.00	30.00	20.00	14.00	2.00
2-26	1500.00	450.00	330.00	190.00	58.00	30.00	18.00	14.00	2.00
2-27	1400.00	450.00	401.00	200.00	60.00	25.00	21.00	14.00	3.00
2-28	1570.00	500.00	420.00	150.00	70.00	30.00	22.00	18.00	3.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
3- 1	1520.00	450.00	340.00	200.00	60.00	32.00	23.00	18.00	5.00
3- 2	1930.00	550.00	318.00	170.00	71.00	33.00	28.00	19.00	6.00
3- 3	2150.00	757.00	350.00	200.00	84.00	35.00	27.00	20.00	7.00
3- 4	2250.00	710.00	360.00	225.00	90.00	45.00	29.00	21.00	8.20
3- 5	2200.00	1310.00	370.00	250.00	99.00	46.00	30.00	23.00	9.00
3- 6	2200.00	1310.00	550.00	250.00	92.00	45.00	30.00	26.00	9.40
3- 7	2850.00	1310.00	460.00	230.00	90.00	40.00	32.00	28.00	9.80
3- 8	3120.00	1300.00	440.00	340.00	85.00	49.00	32.00	27.00	10.00
3- 9	3110.00	1200.00	680.00	390.00	102.00	47.00	32.00	24.00	10.00
3-10	3100.00	1000.00	800.00	490.00	124.00	45.00	32.00	24.00	9.80
3-11	3170.00	1250.00	950.00	600.00	130.00	50.00	39.00	25.00	9.80
3-12	3210.00	1660.00	1070.00	613.00	158.00	58.00	42.00	25.00	8.20
3-13	3240.00	1770.00	1150.00	700.00	180.00	65.00	44.00	25.00	7.00
3-14	3380.00	1780.00	1250.00	780.00	206.00	70.00	43.00	22.00	9.40
3-15	3490.00	1560.00	1330.00	760.00	232.00	70.00	45.00	26.00	12.00
3-16	3500.00	1460.00	1210.00	966.00	230.00	110.00	51.00	30.00	14.00
3-17	3450.00	1700.00	1300.00	960.00	280.00	104.00	50.00	25.00	14.00
3-18	3350.00	1760.00	1350.00	1050.00	360.00	91.00	55.00	23.00	16.00
3-19	3220.00	2290.00	1450.00	1110.00	358.00	90.00	55.00	22.00	16.00
3-20	4120.00	2450.00	1470.00	1170.00	384.00	100.00	65.00	22.00	16.00
3-21	4350.00	2330.00	1580.00	1020.00	370.00	110.00	70.00	25.00	18.00
3-22	4840.00	2330.00	1650.00	1150.00	310.00	110.00	80.00	30.00	16.00
3-23	4590.00	2470.00	1690.00	1260.00	320.00	130.00	85.00	39.00	16.00
3-24	4400.00	2540.00	1700.00	1310.00	412.00	130.00	107.00	33.00	14.00
3-25	4340.00	2570.00	1890.00	1410.00	419.00	204.00	98.00	33.00	10.00
3-26	4210.00	2600.00	1900.00	1450.00	468.00	175.00	98.00	33.00	9.80
3-27	4140.00	3000.00	2000.00	1700.00	561.00	187.00	105.00	55.00	9.00
3-28	4070.00	3700.00	2290.00	1680.00	692.00	199.00	99.00	52.00	9.80
3-29	5250.00	3950.00	2540.00	1700.00	741.00	203.00	97.00	45.00	28.00
3-30	9380.00	4070.00	2590.00	1680.00	864.00	192.00	101.00	61.00	30.00
3-31	11300.00	4080.00	2600.00	1660.00	734.00	200.00	108.00	66.00	31.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
4- 1	12400.00	4120.00	2760.00	1680.00	616.00	164.00	102.00	86.00	31.00
4- 2	12200.00	4110.00	3000.00	1790.00	538.00	173.00	110.00	75.00	28.00
4- 3	14300.00	4060.00	3110.00	1930.00	492.00	222.00	118.00	66.00	27.00
4- 4	15000.00	4290.00	3080.00	2000.00	443.00	200.00	136.00	90.00	26.00
4- 5	14500.00	4830.00	2900.00	1960.00	429.00	184.00	134.00	88.00	30.00
4- 6	13800.00	5100.00	3110.00	1990.00	409.00	184.00	132.00	75.00	25.00
4- 7	13300.00	5200.00	2990.00	1910.00	393.00	188.00	139.00	81.00	21.00
4- 8	12200.00	4980.00	2830.00	1780.00	372.00	201.00	146.00	84.00	18.00
4- 9	11500.00	5260.00	2790.00	1590.00	365.00	193.00	144.00	73.00	15.00
4-10	10800.00	5380.00	2850.00	1410.00	388.00	185.00	138.00	70.00	18.00
4-11	10600.00	5340.00	2500.00	1370.00	377.00	178.00	134.00	70.00	18.00
4-12	12900.00	5250.00	2210.00	1300.00	393.00	173.00	136.00	76.00	19.00
4-13	13900.00	5200.00	2330.00	1300.00	362.00	181.00	151.00	78.00	21.00
4-14	13700.00	4970.00	2370.00	1300.00	324.00	180.00	156.00	77.00	21.00
4-15	13200.00	4870.00	2370.00	1320.00	424.00	176.00	151.00	73.00	17.00
4-16	12600.00	4860.00	2700.00	1200.00	493.00	168.00	140.00	82.00	17.00
4-17	12000.00	4990.00	2540.00	1110.00	477.00	164.00	124.00	86.00	16.00
4-18	11500.00	4860.00	2410.00	1000.00	490.00	152.00	118.00	76.00	12.00
4-19	11100.00	4530.00	2410.00	977.00	515.00	143.00	116.00	70.00	13.00
4-20	10500.00	4190.00	2370.00	1020.00	588.00	134.00	115.00	64.00	13.00
4-21	10000.00	3920.00	2250.00	1110.00	578.00	137.00	115.00	61.00	13.00
4-22	9520.00	3680.00	2060.00	1100.00	536.00	146.00	110.00	60.00	17.00
4-23	8970.00	3500.00	1870.00	1120.00	512.00	138.00	119.00	65.00	18.00
4-24	8310.00	3320.00	1740.00	1170.00	474.00	151.00	120.00	60.00	21.00
4-25	7600.00	3190.00	1830.00	1150.00	456.00	148.00	119.00	60.00	22.00
4-26	6980.00	3090.00	1840.00	1110.00	466.00	184.00	119.00	67.00	20.00
4-27	6470.00	2910.00	1780.00	1010.00	466.00	187.00	117.00	72.00	21.00
4-28	6140.00	2770.00	1700.00	986.00	456.00	204.00	116.00	72.00	20.00
4-29	5910.00	2590.00	1590.00	986.00	416.00	214.00	122.00	68.00	20.00
4-30	5750.00	2370.00	1470.00	986.00	421.00	210.00	119.00	62.00	19.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
5- 1	5670.00	2410.00	1350.00	1010.00	442.00	226.00	164.00	56.00	18.00
5- 2	5710.00	2460.00	1700.00	1030.00	445.00	216.00	150.00	72.00	14.00
5- 3	5780.00	2540.00	1420.00	1170.00	450.00	246.00	168.00	82.00	14.00
5- 4	5770.00	2550.00	1900.00	1070.00	458.00	229.00	147.00	78.00	14.00
5- 5	5800.00	2640.00	1940.00	1080.00	461.00	223.00	153.00	72.00	13.00
5- 6	5880.00	2690.00	1990.00	1050.00	472.00	238.00	159.00	63.00	16.00
5- 7	5930.00	2690.00	1760.00	1010.00	498.00	238.00	155.00	59.00	17.00
5- 8	5930.00	2740.00	1550.00	1020.00	477.00	224.00	141.00	61.00	17.00
5- 9	5880.00	2690.00	1510.00	950.00	456.00	232.00	126.00	59.00	20.00
5-10	5690.00	2440.00	1470.00	945.00	404.00	219.00	115.00	57.00	21.00
5-11	6700.00	2320.00	1480.00	952.00	365.00	204.00	113.00	52.00	24.00
5-12	8300.00	2290.00	1400.00	983.00	351.00	189.00	111.00	47.00	23.00
5-13	9250.00	2380.00	1310.00	1000.00	340.00	175.00	118.00	40.00	23.00
5-14	8750.00	2500.00	1330.00	1020.00	532.00	177.00	110.00	36.00	23.00
5-15	10800.00	2410.00	1360.00	1040.00	551.00	161.00	97.00	35.00	21.00
5-16	10300.00	2330.00	1380.00	1050.00	565.00	158.00	104.00	36.00	19.00
5-17	9750.00	2210.00	1420.00	1050.00	497.00	173.00	106.00	37.00	17.00
5-18	8750.00	2100.00	1480.00	1050.00	470.00	172.00	110.00	35.00	15.00
5-19	7450.00	2500.00	1550.00	1040.00	485.00	187.00	110.00	32.00	14.00
5-20	6700.00	2620.00	1660.00	1040.00	573.00	183.00	99.00	34.00	14.00
5-21	5690.00	2560.00	1660.00	1040.00	559.00	180.00	84.00	32.00	13.00
5-22	5140.00	2390.00	1620.00	1050.00	555.00	168.00	88.00	33.00	13.00
5-23	4670.00	2400.00	1540.00	1150.00	554.00	208.00	98.00	39.00	12.00
5-24	4270.00	2550.00	1530.00	1150.00	534.00	219.00	93.00	35.00	12.00
5-25	3820.00	2670.00	1400.00	1170.00	534.00	170.00	87.00	30.00	11.00
5-26	3760.00	2500.00	1320.00	1170.00	524.00	148.00	85.00	28.00	14.00
5-27	4570.00	2500.00	1250.00	1070.00	458.00	143.00	104.00	29.00	14.00
5-28	5520.00	2600.00	1330.00	1070.00	454.00	150.00	101.00	36.00	17.00
5-29	6160.00	2710.00	1180.00	1070.00	472.00	149.00	90.00	33.00	17.00
5-30	6870.00	2460.00	1250.00	940.00	484.00	148.00	93.00	34.00	14.00
5-31	7170.00	2180.00	1430.00	989.00	497.00	153.00	93.00	32.00	9.90

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
6- 1	7260.00	2340.00	1470.00	1030.00	507.00	153.00	81.00	29.00	8.30
6- 2	7390.00	2460.00	1320.00	980.00	527.00	151.00	68.00	27.00	9.00
6- 3	7430.00	2740.00	1420.00	1050.00	490.00	141.00	81.00	24.00	5.90
6- 4	7300.00	2640.00	1410.00	1070.00	444.00	134.00	86.00	30.00	3.50
6- 5	7070.00	2500.00	1500.00	1090.00	457.00	138.00	105.00	26.00	2.90
6- 6	7010.00	2360.00	1380.00	1060.00	472.00	142.00	96.00	25.00	1.50
6- 7	6990.00	2240.00	1420.00	1080.00	465.00	160.00	106.00	21.00	1.30
6- 8	7110.00	2090.00	1570.00	1010.00	521.00	160.00	89.00	18.00	0.52
6- 9	7240.00	1940.00	1550.00	1010.00	528.00	162.00	84.00	18.00	1.10
6-10	7760.00	2100.00	1590.00	1150.00	566.00	178.00	74.00	16.00	1.50
6-11	8560.00	2300.00	1650.00	1090.00	483.00	199.00	73.00	17.00	0.92
6-12	8960.00	3530.00	1520.00	940.00	445.00	178.00	73.00	20.00	0.63
6-13	8760.00	3420.00	1260.00	900.00	421.00	163.00	74.00	23.00	1.00
6-14	8290.00	3320.00	1140.00	880.00	396.00	182.00	97.00	27.00	5.50
6-15	7710.00	3200.00	1280.00	951.00	392.00	171.00	89.00	29.00	8.60
6-16	7240.00	3070.00	1250.00	963.00	477.00	139.00	81.00	27.00	8.00
6-17	7360.00	2740.00	1210.00	975.00	466.00	110.00	74.00	24.00	8.00
6-18	8060.00	2590.00	1220.00	963.00	466.00	110.00	74.00	22.00	8.00
6-19	8320.00	2500.00	1210.00	997.00	435.00	111.00	72.00	21.00	6.00
6-20	8400.00	2370.00	1450.00	951.00	482.00	124.00	74.00	19.00	5.00
6-21	11600.00	2290.00	1540.00	1070.00	455.00	111.00	73.00	20.00	6.00
6-22	25600.00	2330.00	1470.00	1150.00	398.00	101.00	74.00	19.00	5.50
6-23	27600.00	2140.00	1470.00	1020.00	368.00	109.00	68.00	20.00	4.20
6-24	23500.00	2330.00	1350.00	997.00	393.00	102.00	64.00	20.00	8.30
6-25	19800.00	2740.00	1240.00	898.00	387.00	106.00	64.00	23.00	8.90
6-26	16100.00	2530.00	1220.00	900.00	374.00	106.00	71.00	28.00	6.60
6-27	13800.00	2150.00	1150.00	860.00	356.00	104.00	65.00	27.00	5.40
6-28	12000.00	2710.00	1120.00	867.00	361.00	99.00	58.00	27.00	5.50
6-29	10700.00	2790.00	1140.00	774.00	339.00	92.00	66.00	30.00	4.90
6-30	9650.00	2600.00	1280.00	675.00	331.00	90.00	63.00	27.00	3.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
7- 1	8400.00	2300.00	1220.00	649.00	315.00	90.00	52.00	26.00	2.40
7- 2	7220.00	2200.00	1080.00	654.00	307.00	88.00	51.00	26.00	2.10
7- 3	6360.00	2080.00	1070.00	674.00	297.00	81.00	49.00	20.00	8.00
7- 4	5850.00	1930.00	1150.00	609.00	263.00	81.00	43.00	18.00	8.00
7- 5	5360.00	1720.00	1170.00	666.00	229.00	72.00	38.00	21.00	8.00
7- 6	5590.00	1460.00	1150.00	675.00	203.00	68.00	36.00	22.00	9.00
7- 7	5390.00	1280.00	998.00	609.00	270.00	68.00	35.00	21.00	7.00
7- 8	4940.00	1210.00	843.00	587.00	247.00	63.00	33.00	18.00	7.00
7- 9	4540.00	1180.00	848.00	603.00	315.00	55.00	33.00	17.00	6.00
7-10	4230.00	1410.00	873.00	646.00	320.00	56.00	26.00	16.00	6.00
7-11	4010.00	1390.00	857.00	624.00	320.00	63.00	36.00	20.00	6.00
7-12	3830.00	1500.00	829.00	633.00	280.00	69.00	32.00	20.00	7.00
7-13	3700.00	1630.00	807.00	579.00	244.00	69.00	31.00	19.00	5.80
7-14	3940.00	1550.00	749.00	574.00	238.00	67.00	33.00	16.00	5.50
7-15	4130.00	1440.00	767.00	545.00	232.00	64.00	34.00	16.00	4.70
7-16	4340.00	1240.00	785.00	514.00	220.00	55.00	25.00	17.00	3.40
7-17	4560.00	1050.00	746.00	465.00	213.00	48.00	26.00	16.00	3.40
7-18	4560.00	1010.00	746.00	474.00	198.00	43.00	23.00	16.00	3.00
7-19	4370.00	1010.00	723.00	466.00	205.00	35.00	20.00	13.00	3.50
7-20	4110.00	1010.00	719.00	571.00	227.00	37.00	19.00	12.00	2.90
7-21	3840.00	1100.00	742.00	538.00	208.00	37.00	21.00	11.00	2.70
7-22	3570.00	1190.00	765.00	452.00	176.00	35.00	18.00	10.00	2.10
7-23	3340.00	1140.00	763.00	432.00	185.00	35.00	18.00	8.40	2.00
7-24	3150.00	1030.00	741.00	412.00	171.00	34.00	16.00	7.30	1.80
7-25	2990.00	1000.00	719.00	384.00	156.00	34.00	17.00	6.90	1.60
7-26	2840.00	1000.00	690.00	372.00	138.00	33.00	17.00	7.30	1.60
7-27	2710.00	900.00	757.00	429.00	126.00	30.00	17.00	6.00	1.40
7-28	2500.00	845.00	734.00	358.00	114.00	31.00	16.00	5.00	1.10
7-29	2190.00	859.00	675.00	457.00	115.00	36.00	16.00	5.50	0.80
7-30	1880.00	974.00	673.00	485.00	143.00	37.00	15.00	5.20	0.40
7-31	1830.00	948.00	660.00	488.00	123.00	36.00	12.00	5.20	0.40

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

Date	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
	High	10	20	30	50	70	80	90	Low
8- 1	1540.00	948.00	694.00	492.00	108.00	35.00	12.00	6.70	0.20
8- 2	1520.00	922.00	702.00	498.00	106.00	35.00	13.00	5.20	0.10
8- 3	1700.00	1070.00	667.00	502.00	112.00	34.00	12.00	5.00	0.10
8- 4	1830.00	1260.00	664.00	505.00	103.00	33.00	12.00	4.40	0.00
8- 5	1830.00	1260.00	641.00	457.00	104.00	34.00	17.00	5.20	0.00
8- 6	1680.00	1140.00	629.00	427.00	105.00	35.00	17.00	4.50	0.00
8- 7	1500.00	1050.00	610.00	404.00	113.00	32.00	18.00	4.50	0.00
8- 8	1430.00	1000.00	593.00	393.00	110.00	27.00	19.00	4.50	0.00
8- 9	1580.00	914.00	581.00	465.00	103.00	32.00	17.00	7.70	0.00
8-10	2200.00	773.00	621.00	438.00	95.00	35.00	18.00	6.90	0.00
8-11	2480.00	869.00	590.00	430.00	91.00	36.00	15.00	6.30	0.00
8-12	2440.00	849.00	558.00	430.00	84.00	36.00	13.00	5.30	0.00
8-13	2320.00	821.00	530.00	404.00	84.00	32.00	12.00	4.70	0.00
8-14	2130.00	810.00	510.00	366.00	76.00	31.00	12.00	4.00	0.00
8-15	1930.00	786.00	488.00	376.00	70.00	30.00	11.00	4.00	0.00
8-16	1870.00	768.00	470.00	359.00	62.00	29.00	12.00	4.30	0.00
8-17	1870.00	749.00	447.00	368.00	70.00	29.00	11.00	4.50	0.00
8-18	1870.00	895.00	456.00	388.00	77.00	27.00	13.00	5.00	0.00
8-19	1870.00	896.00	456.00	379.00	86.00	26.00	14.00	5.00	0.00
8-20	2030.00	740.00	439.00	351.00	97.00	23.00	12.00	5.00	0.00
8-21	1820.00	724.00	410.00	330.00	81.00	23.00	12.00	6.00	0.00
8-22	1760.00	597.00	388.00	332.00	72.00	24.00	12.00	5.00	0.00
8-23	1690.00	571.00	371.00	299.00	63.00	24.00	12.00	3.60	0.00
8-24	1590.00	545.00	363.00	293.00	62.00	28.00	12.00	3.40	0.00
8-25	1450.00	587.00	330.00	287.00	54.00	26.00	11.00	4.00	0.00
8-26	1270.00	597.00	372.00	273.00	51.00	24.00	12.00	4.00	0.00
8-27	1080.00	510.00	428.00	256.00	50.00	21.00	11.00	4.00	0.00
8-28	913.00	612.00	408.00	242.00	83.00	19.00	12.00	4.00	0.00
8-29	869.00	614.00	386.00	229.00	81.00	18.00	12.00	4.00	0.00
8-30	1060.00	576.00	387.00	228.00	73.00	23.00	12.00	4.20	0.00
8-31	1100.00	592.00	354.00	207.00	66.00	20.00	11.00	3.00	0.00

Table 16.--Discharge data for duration hydrograph for James River near Scotland, S. Dak. (station no. 06478500), for 49-year period October 1936 to September 1985--Continued

	Discharge, in cubic feet per second								
		Exceedance probability, in percent							
Date	High	10	20	30	50	70	80	90	Low
9- 1	1010.00	544.00	346.00	181.00	60.00	20.00	11.00	3.00	0.00
9- 2	902.00	494.00	331.00	175.00	51.00	16.00	10.00	2.00	0.10
9- 3	1020.00	479.00	330.00	162.00	50.00	16.00	10.00	2.00	0.50
9- 4	1140.00	479.00	340.00	153.00	45.00	17.00	9.90	2.10	1.00
9- 5	1070.00	443.00	315.00	134.00	40.00	15.00	9.40	2.10	0.00
9- 6	992.00	412.00	302.00	118.00	39.00	14.50	9.00	1.60	0.00
9- 7	945.00	372.00	287.00	124.00	36.00	14.00	8.00	1.40	0.00
9- 8	922.00	322.00	260.00	126.00	46.00	14.00	8.00	2.30	0.00
9- 9	915.00	344.00	269.00	122.00	38.00	16.00	8.20	2.70	0.00
9-10	898.00	330.00	260.00	119.00	45.00	16.00	8.00	3.10	0.00
9-11	880.00	326.00	236.00	110.00	40.00	16.00	8.00	3.20	0.00
9-12	865.00	342.00	222.00	110.00	36.00	14.00	8.00	3.40	0.00
9-13	868.00	327.00	210.00	114.00	35.00	14.00	8.00	0.20	0.00
9-14	865.00	282.00	195.00	107.00	50.00	12.00	7.30	0.10	0.00
9-15	848.00	279.00	173.00	111.00	55.00	14.00	8.10	3.60	0.00
9-16	842.00	269.00	154.00	111.00	45.00	16.00	7.90	3.60	0.00
9-17	842.00	268.00	151.00	112.00	47.00	17.00	8.00	3.50	0.00
9-18	830.00	256.00	154.00	96.00	42.00	18.00	7.00	3.40	0.00
9-19	812.00	252.00	156.00	114.00	40.00	19.00	7.00	4.70	0.00
9-20	800.00	234.00	166.00	116.00	40.00	18.00	7.00	3.80	0.00
9-21	785.00	245.00	191.00	115.00	42.00	18.00	8.00	3.20	0.00
9-22	1460.00	249.00	190.00	110.00	52.00	18.00	9.00	4.70	0.00
9-23	1520.00	237.00	182.00	101.00	49.00	17.00	9.00	4.40	0.00
9-24	1350.00	203.00	169.00	102.00	48.00	12.00	8.50	4.10	0.00
9-25	1050.00	196.00	145.00	93.00	47.00	16.00	7.00	3.80	0.00
9-26	800.00	200.00	138.00	92.00	43.00	17.00	7.00	3.80	0.00
9-27	740.00	199.00	138.00	84.00	40.00	18.00	7.00	3.50	0.00
9-28	730.00	183.00	137.00	74.00	38.00	16.00	7.00	3.50	0.00
9-29	810.00	171.00	132.00	77.00	36.00	16.00	7.00	4.30	0.00
9-30	1540.00	164.00	130.00	81.00	34.00	15.00	6.00	4.20	0.00

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