GAGED AND ESTIMATED MONTHLY STREAMFLOW DURING 1931-84 FOR SELECTED SITES IN THE RED RIVER OF THE NORTH BASIN IN NORTH DAKOTA AND MINNESOTA

By R. Scott Guenthner, Jay F. Weigel, and Douglas G. Emerson

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TO METRIC UNITS

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 metric unit
acre	0.4047	hectare
acre-foot	1,233	cubic meter
cubic foot per second	0.02832	cubic meter per second
foot	0.3048	meter
foot per mile	0.1894	meter per kilometer
inch	25.4	millimeter
mile	1.609	kilometer
square mile	2.590	square kilometer

Air temperature is given in degrees Fahrenheit (°F), which can be converted to degrees Celsius (°C) by using the following equation: °C = 5/9x(°F-32).

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

GAGED AND ESTIMATED MONTHLY STREAMFLOW DURING 1931-84 FOR SELECTED SITES IN THE RED RIVER OF THE NORTH BASIN IN NORTH DAKOTA AND MINNESOTA

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ABSTRACT

Operation of the Garrison Diversion Unit in North Dakota may have various effects on the quantity and quality of streamflow in the Sheyenne River and the Red River of the North. To model the effects that the Garrison Diverson Unit could have on water quantity, monthly gaged and estimated streamflow data and estimated unregulated streamflow data were compiled to develop a complete monthly streamflow record for January 1931 through December 1984 (data-development period) for 29 sites in the Red River of the North basin.

Gaged streamflow records were available for January 1931 through December 1984 for only 4 sites; no records or records of various length were available for the remaining 25 sites. Drainage-area ratio and Maintenance of Variance Extension Type 1 methods were used to estimate the streamflow for those sites that had no streamflow record or had a streamflow record available for only part of the data-development period.

Unregulated streamflow for the 29 sites was estimated by removing the hydrologic effects of Lake Ashtabula, which is formed behind Baldhill Dam on the Sheyenne River, and surface-water withdrawals. Water-balance procedures were used to remove the hydrologic effects of Lake Ashtabula from the streamflow record for sites downstream of Baldhill Dam.

Mean annual gaged streamflow for the Sheyenne River below Baldhill Dam was 9,175 acre-feet less than mean annual estimated unregulated streamflow for 1950-84, when Baldhill Dam was in operation. Net evaporation losses from Lake Ashtabula account for most of the difference between gaged streamflow and estimated unregulated streamflow.

INTRODUCTION

The Garrison Diversion Unit in North Dakota was authorized by Congressional Act of August 5, 1965, Public Law 89-108. The Garrison Diversion Unit was to provide for: (1) Irrigation of 250,000 acres, (2) municipal and industrial water, (3) fish and wildlife, (4) recreation, and (5) flood control. The Garrison Diversion Unit Reformulation Act of 1986, Public Law 99-294, specified several modifications and amendments to the 1965 Act. One of the amendments authorized and directed the Secretary of the Interior to construct, operate, and maintain a Sheyenne River water supply and release feature capable of delivering 100 cubic feet per second

of water for the cities of Fargo and Grand Forks and the surrounding communities. Water from the Garrison Diversion Unit would be delivered to the upper reaches of the Sheyenne River, which would convey the water to the Red River of the North (pl. 1, in pocket).

Operation of the Garrison Diversion Unit in North Dakota may have various effects on the quantity and quality of streamflow in the Sheyenne River and the Red River of the North. Therefore, a technical team, consisting of members from the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Army Corps of Engineers, North Dakota State Water Commission, and the Garrison Diversion Conservancy District, met to discuss the potential effects of the Garrison Diversion Unit on the hydrology of the Sheyenne River and the Red River of the North. Members of the technical team concluded that a model was needed to simulate different hydrologic conditions that could occur during operation of the Garrison Diversion Unit.

The Project Canals, Reservoirs, and River Systems model developed by the U.S. Bureau of Reclamation was selected by the technical team for the simulations. An early version of the Project Canals, Reservoirs, and River Systems model was used for the James River in North and South Dakota. Modifications were made to the model by the U.S. Bureau of Reclamation so it could be applied to the Sheyenne River and the Red River of the North. The model uses, as input data, the monthly unregulated streamflow for 29 sites in the Red River of the North basin, 12 of which are in the Sheyenne River basin.

Purpose

This report describes the compilation and analysis of the monthly streamflow data needed as input to the Project Canals, Reservoirs, and River Systems model. The specific objectives were: (1) Compile and estimate the streamflow data for 1931-84 (the data-development period) for 29 sites within the Red River of the North basin, 12 of which are in the Sheyenne River basin (pl. 1); and (2) estimate the unregulated streamflow for 1931-84 for the 29 sites. The 29 sites include gaging stations for which some records are available and sites for which no records are available. The 29 sites where streamflow data were needed are listed in the following table.

Gaged streamflow records were available for January 1931 through December 1984 for only 4 sites; no records or records of various length were available for the remaining 25 sites. Unregulated streamflow was determined by adjusting the gaged and estimated streamflow to reflect the absence of water-resource developments.

Description of Study Area

The Red River of the North basin is part of the Hudson Bay drainage system (pl. 1). Parts of South Dakota, North Dakota, and Minnesota in the United States, and parts of Saskatchewan and Manitoba in Canada are drained by the Red River of the North. The North Dakota-Minnesota boundary is formed by the Red River of the North. Drainage area of the Red River of

Site number	Gaging station or site name	Gaging station number
1.	Red River of the North at Fargo, N.Dak.	05054000
2.	Sheyenne River above Harvey, N.Dak.	05054500
3.	Sheyenne River near Warwick, N.Dak.	05056000
4.	Sheyenne River near Cooperstown, N.Dak.	05057000
5.	Baldhill Creek at the mouth	
6.	Sheyenne River below Baldhill Dam, N.Dak.	05058000
7.	Sheyenne River at Valley City, N.Dak.	05058500
8.	Sheyenne River at Lisbon, N.Dak.	05058700
9.	Sheyenne River near Kindred, N.Dak.	05059000
10.	Sheyenne River at West Fargo, N.Dak.	05059500
11.	Maple River at the mouth	
12.	Rush River at the mouth	
13.	Sheyenne River at the mouth	
14.	Buffalo River at the mouth	
15.	Elm River at the mouth	
16.	Wild Rice River at the mouth	
17.	Red River of the North at Halstad, Minn.	05064500
18.	Goose River at the mouth	
19.	Marsh River at the mouth	
20.	Sand Hill River at the mouth	
21.	Red Lake River at the mouth	
22.	Red River of the North at Grand Forks, N.Dak.	05082500
23.	Turtle River at the mouth	
24.	Forest River at the mouth	
25.	Snake River at the mouth	
26.	Park River at the mouth	
27.	Red River of the North at Drayton, N.Dak.	05092000
28.	Pembina River at the mouth	
29.	Red River of the North at Emerson, Man.	05102500

the North at the Emerson, Man., gaging station, which is 0.8 mile downstream from the international boundary, is 40,200 square miles (U.S. Geological Survey, 1986, p. 147). The Red River of the North is formed where the Ottertail and the Bois de Sioux Rivers join at Wahpeton, N.Dak., and Breckenridge, Minn. The river flows northward 394 miles to the United States-Canadian boundary. From the international boundary, the Red River of the North flows north about 155 miles and discharges into Lake Winnipeg. The Red River of the North basin upstream from the international boundary is the only part of the basin included in the study area.

The Red River of the North flows over lacustrine deposits of glacial Lake Agassiz through its entire length in North Dakota. The slope of the river is extremely flat. The river falls only about 200 feet in its 394-mile course from Wahpeton to the international boundary (Miller and Frink, 1984).

The Sheyenne River is one of the major tributaries to the Red River of the North. The Sheyenne River has a drainage area of about 6,910 square

miles (not including the closed Devils Lake basin). From its headwaters near Harvey, N.Dak., the Sheyenne River, which is about 500 miles long, flows eastward about 150 miles, southward about 200 miles, and then northeastward to its confluence with the Red River of the North, north of Fargo, N.Dak. (Souris-Red-Rainy River Basins Commission, 1972, p. D-50).

The Sheyenne River basin lies in three distinct physiographic areas. The drift prairie area extends from the headwaters to the vicinity of Valley City, N.Dak.; a hilly delta area extends from Valley City, N.Dak., to the vicinity of Kindred, N.Dak.; and the glacial Lake Agassiz area extends from the vicinity of Kindred, N.Dak., to the confluence of the Sheyenne River and the Red River of the North. Most of the Sheyenne River valley from the headwaters to Kindred, N.Dak., is incised into glacial till. The valley from Sheyenne, N.Dak., to Kindred, N.Dak., ranges from 100 to 200 feet in depth and 0.2 to 2 miles in width. The Sheyenne River from Kindred, N.Dak., to the confluence of the Sheyenne River and the Red River of the North flows over lacustrine deposits of glacial Lake Agassiz. Average gradient of the river is 1.5 feet per mile in the drift prairie and hilly delta areas and about 1 foot per mile in the glacial Lake Agassiz area.

No flow has been recorded at times in the upper reaches of the Sheyenne River. Flow in the lower reaches of the river is regulated partly by releases from Baldhill Dam, which began regulating streamflow in 1949. Lake Ashtabula, formed by Baldhill Dam, has a capacity of 69,100 acre-feet between the invert of the outlet conduit and the normal pool elevation. Lake Ashtabula is operated for flood control (capacity at maximum pool elevation of 1,273.2 feet is 116,500 acre-feet), municipal water supply, recreation, and stream-pollution abatement through low-flow augmentation.

METHODS USED TO ESTIMATE STREAMFLOW

Several methods are available for streamflow record extension. Two methods were used in this study to extend records for gaging stations with incomplete record for the data-development period of 1931-84 and to estimate streamflow at ungaged sites near gaging stations on the same stream. The drainage-area ratio and the Maintenance of Variance Extension Type 1 (MOVE.1) methods were used in this study, and are described briefly in the following paragraphs. These and other methods that can be used to extend streamflow records for gaging stations with incomplete record and to estimate streamflow at nearby ungaged sites are further explained by Wiche and others (1989).

The drainage-area ratio method can be used to extend the streamflow record for the site of interest or to estimate the streamflow when streamflow record is available for a nearby gaging station. The drainage-area ratio method (Hirsch, 1979) assumes that the ratio of the streamflows at two sites is equal to the ratio of their drainage areas. The equation for the drainage-area ratio method is:

$$\tilde{y}_i = (a_y/a_x)x_i, \qquad (1)$$

where

$\tilde{y}_i$ = the estimated streamflow during month i at the site of interest, in cubic feet per second;
a_y = the drainage area at the site of interest, in square miles;
a_x = the drainage area at the base station, in square miles; and
x_i = the gaged streamflow during month i at the base station, in cubic feet per second.

MOVE.1 can be used to extend streamflow records when streamflow record is available for the site of interest for a period of N_1 years and record is available for the base station for the same N_1 years plus an additional N_2 years. Hirsch (1982) showed that the MOVE.1 method, which is similar to regression methods, preserves the statistical characteristics of the actual record better than traditional regression methods. Use of MOVE.1 results in preservation of sample estimates of the mean and of the variance from the historical record (N_1 years). Additionally, use of MOVE.1 allows selection of different base stations to fill in missing record for the site of interest.

The equation for the MOVE.1 method is:

$$\tilde{y}_i = m(y_1) + [s(y_1)/s(x_1)][x_i - m(x_1)], \qquad (2)$$

where

$\tilde{y}_i$ = estimate of streamflow during month i at the site of interest, in cubic feet per second;
$m(y_1)$ = the mean of N_1 years of gaged streamflow at the site of interest, in cubic feet per second;
$s(y_1)$ = the standard deviation of N_1 years of streamflow at the site of interest, in cubic feet per second;
$s(x_1)$ = the standard deviation of N_1 years of streamflow at the base station, in cubic feet per second;
x_i = the gaged streamflow during month i at the base station, in cubic feet per second; and
$m(x_1)$ = the mean of N_1 years of streamflow at the base station, in cubic feet per second.

Hirsch (1979) showed that log-transformed data are superior to linear data for extension of streamflow records; therefore, streamflow values were log transformed prior to use in equation 2. Streamflow values of zero were treated as missing values.

Alley and Burns (1983) developed a means of selecting monthly extension equations either using flow values only from the same month, or developing the extension equation using all flow values. The selection involves a tradeoff between the ability to preserve monthly differences versus greater sample size. The MOVE.1 equation (Alley and Burns, 1983) has an option that allows for both cyclic (monthly) and noncyclic (annual) extension equations to be considered for each individual prediction. If the cyclic (monthly) option is selected, an extension equation is computed for that month using only streamflow values for the same month; if the noncyclic (annual) option is selected, an extension equation is computed using all concurrent streamflow values for the period of record.

For a particular month, the missing value for the site of interest is estimated using both the cyclic (monthly) equation and the noncyclic (annual) equation, and a standard error of prediction is computed for both estimates. The equation that provides the smallest standard error of prediction is used to estimate the missing value.

GAGED AND ESTIMATED STREAMFLOW

Gaged streamflow records were available for January 1931 through December 1984, the entire data-development period, for only 4 of the 29 sites needed for the model; incomplete records of various length were available for 9 sites; no records were available for 16 sites. Gaged and estimated streamflows for the 29 sites where data were needed for the model are listed in supplement 1. Streamflow estimates for some sites could have been made by both the drainage-area ratio and MOVE.1 methods. However, only the method used to estimate the final data is discussed in the following sections.

When the drainage-area ratio method was used, the gaging station nearest the site of interest generally was selected as the base station, if record was available for the period when streamflow was to be estimated. Locations of the base stations are shown on plate 1. The contributing drainage area (table 1) was used when available. The large difference between the total and the contributing drainage area for gaging stations on the Sheyenne River that are downstream of the Sheyenne River near Warwick, N.Dak., gaging station are due to the noncontributing drainage area of the closed Devils Lake basin.

When the MOVE.1 method was used, the base stations were selected on the basis of similarity of basin characteristics and proximity to the site of interest. For the MOVE.1 method, the equation with the smallest standard error of prediction always was selected to estimate monthly streamflow. In most cases, the equation with the smallest standard error of prediction had the largest correlation coefficient. In some cases, the correlation coefficient is smaller for the equation that was used as compared to the correlation coefficient listed for other equations. Only the correlation coefficients between the site of interest and the base stations are given in the following sections.

Red River of the North at Fargo, North Dakota

Streamflow record for the Red River of the North at Fargo is available for January 1931 through December 1984, the entire data-development period (table 1). Thus, no estimated streamflow data were required for this gaging station.

Sheyenne River above Harvey, North Dakota

Streamflow record for the Sheyenne River above Harvey is available for October 1955 through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through September 1955. The Sheyenne River at West Fargo was used as the base station to

Table 1.--Selected gaging stations operated by the U.S. Geological Survey in the Red River of the North basin

[-- indicates no data]

Gaging station number	Gaging station name	Drainage area (square miles) Total	Drainage area (square miles) Contributing	Period of record through 1984 (complete months)
05054000	Red River of the North at Fargo, N.Dak.	6,800	--	5/01 through 12/84
05054500	Sheyenne River above Harvey, N.Dak.	424	154	10/55 through 12/84
05055000	Sheyenne River near Harvey, N.Dak.	534	174	10/45 through 9/56
05056000	Sheyenne River near Warwick, N.Dak.	2,070	760	10/49 through 12/84
05057000	Sheyenne River near Cooperstown, N.Dak.	6,470	1,270	10/44 through 12/84
05057200	Baldhill Creek near Dazey, N.Dak.	691	351	4/56 through 12/84
05057500	Lake Ashtabula at Baldhill Dam, N.Dak.	--	--	7/49 through 12/84
05058000	Sheyenne River below Baldhill Dam, N.Dak.	7,470	1,910	10/49 through 12/84
05058500	Sheyenne River at Valley City, N.Dak.	7,810	2,110	4/38 through 6/38 8/38 through 9/75
05058700	Sheyenne River at Lisbon, N.Dak.	8,190	2,490	10/56 through 12/84
05059000	Sheyenne River near Kindred, N.Dak.	8,800	3,020	8/49 through 12/84
05059500	Sheyenne River at West Fargo, N.Dak.	8,870	3,090	10/29 through 12/84
05060000	Maple River near Mapleton, N.Dak.	1,450	1,379	4/44 through 9/75
05060500	Rush River at Amenia, N.Dak.	116	--	8/46 through 12/84
05062000	Buffalo River near Dilworth, Minn.	1,040	--	4/31 through 12/84
05062200	Elm River near Kelso, N.Dak.	194	--	10/55 through 9/63 10/80 through 9/81 Seasonal 10/81 through 12/84
05064000	Wild Rice River at Hendrum, Minn.	1,600	--	4/44 through 9/84
05064500	Red River of the North at Halstad, Minn.	21,800	--	Intermittent 4/36 through 9/60 6/61 through 12/84
05066500	Goose River at Hillsboro, N.Dak.	1,203	1,093	Seasonal 4/31 through 3/34 4/34 through 12/84
05067500	Marsh River near Shelly, Minn.	151	--	3/44 through 9/83
05069000	Sand Hill River at Climax, Minn.	426	--	4/43 through 9/84
05079000	Red Lake River at Crookston, Minn.	5,280	--	1/31 through 12/84
05082500	Red River of the North at Grand Forks, N.Dak.	30,100	--	4/1882 through 12/84
05083000	Turtle River at Manvel, N.Dak.	613	556	10/45 through 9/70
05084500	Forest River near Minto, N.Dak.	604	486	Seasonal 4/32 through 9/35 10/35 through 9/44
05085000	Forest River at Minto, N.Dak.	740	620	4/44 through 12/84
05086000	Snake River at Alvarado, Minn.	309	--	10/53 through 9/56
05086500	Snake River near Arygle, Minn.	481	--	4/45 through 9/45
05087500	Middle River at Arygle, Minn.	265	--	4/45 through 9/45 10/50 through 12/84
05090000	Park River at Grafton, N.Dak.	695	--	5/31 through 12/84
05092000	Red River of the North at Drayton, N.Dak.	34,800	--	Seasonal 4/36 through 3/49 4/49 through 12/84
05100000	Pembina River at Neche, N.Dak.	3,410	--	4/19 through 12/84
05101000	Tongue River at Akra, N.Dak.	162	--	4/50 through 6/50 10/51 through 9/82 Seasonal 10/82 through 12/84
05101500	Tongue River at Cavalier, N.Dak.	167	--	10/38 through 10/51
05102500	Red River of the North at Emerson, Man.	40,200	--	5/12 through 12/84

estimate streamflow for January 1931 through July 1938. A drainage-area ratio of 154 square miles/3,090 square miles was used. The Sheyenne River at Valley City was used as the base station to estimate streamflow for August 1938 through September 1945. A drainage-area ratio of 154 square miles/2,110 square miles was used. The Sheyenne River near Harvey was used as the base station to estimate streamflow for October 1945 through September 1955. A drainage-area ratio of 154 square miles/174 square miles was used.

Sheyenne River near Warwick, North Dakota

Streamflow record for the Sheyenne River near Warwick is available for October 1949 through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through September 1949. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for January 1931 through September 1944. A drainage-area ratio of 760 square miles/3,090 square miles was used. The Sheyenne River near Cooperstown was used as the base station to estimate streamflow for October 1944 through September 1949. A drainage-area ratio of 760 square miles/1,270 square miles was used.

Sheyenne River near Cooperstown, North Dakota

Streamflow record for the Sheyenne River near Cooperstown is available for October 1944 through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through September 1944. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for January 1931 through March 1938 and for July 1938. A drainage-area ratio of 1,270 square miles/3,090 square miles was used. The Sheyenne River at Valley City was used as the base station to estimate streamflow for April, May, and June 1938 and for August 1938 through September 1944. A drainage-area ratio of 1,270 square miles/2,110 square miles was used.

Baldhill Creek at the Mouth

Baldhill Creek, a tributary to the Sheyenne River, flows into Lake Ashtabula on the western shore of the lake. Streamflow data have not been collected for Baldhill Creek at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through December 1984. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for January 1931 through March 1938 and for July 1938. A drainage-area ratio of 397 square miles/3,090 square miles was used. The Sheyenne River at Valley City was used as the base station to estimate streamflow for April, May, and June 1938 and for August 1938 through September 1944. A drainage-area ratio of 397 square miles/2,110 square miles was used.

Streamflow for October 1944 through July 1949 was estimated by applying the drainage-area ratio method to the increase in streamflow between the Sheyenne River near Cooperstown and the Sheyenne River at Valley City. The following equation was used:

$$Q_{bm} = [A_{bm}/(A_{vc} - A_{co})](Q_{vc} - Q_{co}), \qquad (3)$$

where

Q_{bm} = estimated streamflow of Baldhill Creek at the mouth, in cubic feet per second;
A_{bm} = contributing drainage area of Baldhill Creek at the mouth (397 square miles);
A_{vc} = contributing drainage area of the Sheyenne River at Valley City (2,110 square miles);
A_{co} = contributing drainage area of the Sheyenne River near Cooperstown (1,270 square miles);
Q_{vc} = gaged streamflow of the Sheyenne River at Valley City, in cubic feet per second; and
Q_{co} = gaged streamflow of the Sheyenne River near Cooperstown, in cubic feet per second.

Because streamflow of the Sheyenne River downstream of Baldhill Dam has been regulated since July 30, 1949, when water storage in Lake Ashtabula began, the method defined by equation 3 was used only through July 1949. Baldhill Creek near Dazey was selected as the base station to estimate streamflow for August 1949 through December 1984.

Streamflow record for Baldhill Creek near Dazey is available for April 1956 through December 1984. Thus, streamflow for Baldhill Creek near Dazey had to be estimated for August 1949 through March 1956 before the streamflow record could be transferred to Baldhill Creek at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow of Baldhill Creek near Dazey for August 1949 through March 1956. The Sheyenne River near Cooperstown was selected as the base station.

Baldhill Creek near Dazey and the Sheyenne River near Cooperstown had 348 months of concurrent nonzero streamflow record. Streamflow was estimated by use of the Alley and Burns (1983) method that allows the cyclic (monthly) and noncyclic (annual) equations to be considered for each monthly estimate. The cyclic equation was used to estimate monthly streamflows for January, for April through June, and for October through December. The noncyclic equation was used to estimate monthly streamflows for February and for July through September. The cyclic and the noncyclic equations were used an equal number of times to estimate streamflows for March. The largest cyclic correlation coefficient was 0.92 for April (table 2). The noncyclic correlation coefficient was 0.83.

The drainage-area ratio method was used to estimate streamflow for Baldhill Creek at the mouth for August 1949 through December 1984. Baldhill Creek near Dazey was used as the base station. A drainage-area ratio of 397 square miles/351 square miles was used.

Sheyenne River below Baldhill Dam, North Dakota

Streamflow record for the Sheyenne River below Baldhill Dam is available for October 1949, shortly after completion of Baldhill Dam, through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through September 1949. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for

Table 2.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between Baldhill Creek near Dazey, North Dakota, and the base station

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River near Cooperstown, N.Dak.	0.77	0.71	0.82	0.92	0.84	0.73	0.60	0.47	0.61	0.75	0.62	0.71	0.83

January 1931 through March 1938 and for July 1938. A drainage-area ratio of 1,910 square miles/3,090 square miles was used. The Sheyenne River at Valley City was used as the base station to estimate streamflow for April through June 1938 and for August 1938 through September 1949. A drainage-area ratio of 1,910 square miles/2,110 square miles was used.

Sheyenne River at Valley City, North Dakota

Streamflow record for the Sheyenne River at Valley City is available for April through June 1938 and for August 1938 through September 1975. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through March 1938, for July 1938, and for October 1975 through December 1984. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for January 1931 through March 1938 and for July 1938. A drainage-area ratio of 2,110 square miles/3,090 square miles was used. The Sheyenne River below Baldhill Dam was used as the base station to estimate streamflow for October 1975 through December 1984. A drainage-area ratio of 2,110 square miles/1,910 square miles was used.

Sheyenne River at Lisbon, North Dakota

Streamflow record for the Sheyenne River at Lisbon is available for October 1956 through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through September 1956. The Sheyenne River at West Fargo was used as the base station to estimate streamflow for January 1931 through March 1938 and for July 1938. A drainage-area ratio of 2,490 square miles/3,090 square miles was used. The Sheyenne River at Valley City was used as the base station to estimate streamflow for April through June 1938 and for August 1938 through September 1956. A drainage-area ratio of 2,490 square miles/2,110 square miles was used.

Sheyenne River near Kindred, North Dakota

Streamflow record for the Sheyenne River near Kindred is available for August 1949 through December 1984. The drainage-area ratio method (eq. 1) was used to estimate streamflow for January 1931 through July 1949. The Sheyenne River at West Fargo was selected as the base station. A drainage-area ratio of 3,020 square miles/3,090 square miles was used.

Sheyenne River at West Fargo, North Dakota

Streamflow record for the Sheyenne River at West Fargo is available for January 1931 through December 1984, the entire data-development period. Thus, no estimated streamflow data were required for this gaging station.

Maple River at the Mouth

Streamflow data have not been collected for the Maple River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Maple River at the mouth for January 1931 through December 1984. The Maple River near Mapleton was selected as the base station. Streamflow record for the Maple River near Mapleton is available for

April 1944 through September 1975. Thus, streamflow for the Maple River near Mapleton had to be estimated for January 1931 through March 1944 and for October 1975 through December 1984 before the streamflow record could be transferred to the Maple River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Maple River near Mapleton for January 1931 through March 1944 and for October 1975 through December 1984. The Sheyenne River at West Fargo and the Goose River at Hillsboro were selected as potential base stations.

The Maple River near Mapleton and the base stations had 353 months of concurrent nonzero streamflow record. The cyclic equation was selected to estimate monthly streamflow about 84 percent of the time for January, February, April through July, and October through December and the noncyclic equation was selected to estimate the remaining 16 percent of the time. The noncyclic equation was selected to estimate monthly streamflow for March, August, and September. The largest cyclic correlation coefficient was 0.89 for April (table 3). The noncyclic correlation coefficient was 0.79 between the Maple River near Mapleton and the Sheyenne River at West Fargo and 0.80 between the Maple River near Mapleton and the Goose River at Hillsboro.

The Sheyenne River at West Fargo was used as the base station to estimate monthly streamflow of the Maple River near Mapleton for 96 months when the cyclic equation was chosen and for 21 months when the noncyclic equation was chosen. The Goose River at Hillsboro was used as the base station to estimate monthly streamflow for 93 months when the cyclic equation was chosen and for 58 months when the noncyclic equation was chosen. Gaged and estimated monthly streamflow for the Maple River near Mapleton is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Maple River at the mouth for January 1931 through December 1984. The Maple River near Mapleton was used as the base station. A drainage-area ratio of 1,489 square miles/1,379 square miles was used.

Rush River at the Mouth

Streamflow data have not been collected for the Rush River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Rush River at the mouth for January 1931 through December 1984. The Rush River at Amenia was selected as the base station. Streamflow record for the Rush River at Amenia is available for August 1946 through December 1984. Thus, the streamflow for the Rush River at Amenia had to be estimated for January 1931 through July 1946 before the streamflow record could be transferred to the Rush River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Rush River at Amenia for January 1931 through July 1946. The Sheyenne River at West Fargo, the Buffalo River near Dilworth, and the Goose River at Hillsboro were selected as potential base stations.

The Rush River at Amenia and the Sheyenne River at West Fargo had 286 months of concurrent nonzero streamflow record, the Rush River at Amenia and the Buffalo River near Dilworth had 288 months of concurrent nonzero

Table 3.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Maple River near Mapleton, North Dakota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	0.66	0.56	0.61	0.89	0.70	0.61	0.84	0.54	0.53	0.69	0.73	0.70	0.79
Goose River at Hillsboro, N.Dak.	.43	.57	.76	.89	.89	.58	.55	.39	.60	.74	.76	.60	.80

streamflow record, and the Rush River at Amenia and the Goose River at Hillsboro had 281 months of concurrent nonzero streamflow record. The largest cyclic correlation coefficients ranged from 0.64 to 0.93 for April, May, and June (table 4). The noncyclic correlation coefficients were 0.72, 0.74, and 0.74.

The Sheyenne River at West Fargo was used as the base station for only 3 months, January, February, and March 1931, when no record was available for either the Buffalo River near Dilworth or the Goose River at Hillsboro. The Buffalo River near Dilworth was used as the base station for 105 months and the Goose River at Hillsboro was used as the base station for 79 months. Gaged and estimated streamflow for the Rush River at Amenia is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Rush River at the mouth for January 1931 through December 1984. The Rush River at Amenia was used as the base station. A drainage-area ratio of 188 square miles/116 square miles was used.

Sheyenne River at the Mouth

Streamflow data have not been collected for the Sheyenne River at the mouth. Streamflow for the Sheyenne River at the mouth, which is at the Sheyenne River confluence with the Red River of the North, includes streamflow for the Sheyenne River at West Fargo (about 24.5 miles upstream), direct inflow, and streamflow for two tributaries, the Maple River and the Rush River. Streamflow record for the Sheyenne River at West Fargo is available for the entire data-development period. For purposes of this study, direct inflow was estimated to be zero.

Streamflow for the Sheyenne River at the mouth was estimated to be the sum of the streamflow of the Sheyenne River at West Fargo, the Maple River at the mouth, and the Rush River at the mouth.

Buffalo River at the Mouth

Streamflow data have not been collected for the Buffalo River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Buffalo River at the mouth for January 1931 through December 1984. The Buffalo River near Dilworth was selected as the base station. Streamflow record for the Buffalo River near Dilworth is complete during the data-development period (1931-84), except for January, February, and March 1931. Thus, streamflow for the Buffalo River near Dilworth had to be estimated for January, February, and March 1931 before the streamflow record could be transferred to the Buffalo River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Buffalo River near Dilworth for January-March 1931. The Sheyenne River at West Fargo was selected as the base station.

The Buffalo River near Dilworth and the Sheyenne River at West Fargo had 621 months of concurrent nonzero streamflow record. The cyclic equation was used to estimate streamflow for the Buffalo River near Dilworth for January and February 1931. The cyclic correlation coefficient

Table 4.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Rush River at Amenia, North Dakota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	(1)	0.36	0.42	0.88	0.71	0.64	0.45	0.42	0.32	0.41	0.36	0.43	0.72
Buffalo River near Dilworth, Minn.	(1)	.72	.44	.80	.67	.67	.63	.38	.55	.42	.52	.50	.74
Goose River at Hillsboro, N.Dak.	(1)	-.58	.53	.93	.86	.69	.46	-.12	.39	.48	.42	.55	.74

[1]Less than five nonzero concurrent monthly streamflows.

was 0.72 for both January and February. The noncyclic equation was used to estimate streamflow for March 1931. The noncyclic correlation coefficient was 0.82. Gaged and estimated streamflow for the Buffalo River near Dilworth is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Buffalo River at the mouth. The Buffalo River near Dilworth was used as the base station. A drainage-area ratio of 1,190 square miles/1,040 square miles was used. Drainage-area data for the Buffalo River at the mouth, as well as drainage-area data for other tributaries to the Red River of the North that originate in Minnesota, were supplied by the U.S. Army Corps of Engineers, St. Paul District (oral commun., 1986).

Elm River at the Mouth

Streamflow data have not been collected for the Elm River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Elm River at the mouth for January 1931 through December 1984. The Elm River near Kelso was selected as the base station. Streamflow record for the Elm River near Kelso is available for October 1955 through September 1963, for October 1980 through September 1981, and seasonally for October 1981 through December 1984. Thus, streamflow for the Elm River near Kelso had to be estimated for months when no data were available before the streamflow record could be transferred to the Elm River at the mouth. MOVE.1 (eq. 2) was used to estimate the streamflow for the Elm River near Kelso for months when no data were available. The Sheyenne River at West Fargo, the Buffalo River near Dilworth, and the Goose River at Hillsboro were selected as potential base stations.

The Elm River near Kelso and the Sheyenne River at West Fargo had 53 months of concurrent nonzero streamflow record, the Elm River near Kelso and the Buffalo River near Dilworth had 48 months of concurrent nonzero streamflow record, and the Elm River near Kelso and the Goose River at Hillsboro had 53 months of concurrent nonzero streamflow record. The cyclic correlation coefficients between the Elm River near Kelso and the Goose River at Hillsboro were 0.97, 0.96, and 0.84 for March, April, and May (table 5). The noncyclic correlation coefficient between the Elm River near Kelso and the Sheyenne River at West Fargo was 0.68 and between the Elm River near Kelso and the Goose River at Hillsboro was 0.85.

The cyclic equation was used to estimate 108 months of streamflow, all during March, April, and May. The Goose River at Hillsboro was used as the base station when the cyclic equation was used. The noncyclic equation was used to estimate the remaining 414 months of streamflow; the Sheyenne River at West Fargo was used as the base station for 46 months and the Goose River at Hillsboro was used as the base station for 368 months. The Buffalo River near Dilworth was not used to estimate any streamflows. Gaged and estimated streamflow for the Elm River near Kelso is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Elm River at the mouth for January 1931 through December 1984. The Elm

Table 5.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Elm River near Kelso, North Dakota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	(1)	(1)	0.62	0.82	0.75	0.51	(1)	(1)	(1)	(1)	(1)	(1)	0.68
Buffalo River near Dilworth, Minn.	(1)	(1)	.67	.67	-.15	.16	(1)	(1)	(1)	(1)	(1)	(1)	.53
Goose River at Hillsboro, N.Dak.	(1)	(1)	.97	.96	.84	.81	(1)	(1)	(1)	(1)	(1)	(1)	.85

[1]Less than five nonzero concurrent monthly streamflows.

River near Kelso was used as the base station. A drainage-area ratio of 505 square miles/194 square miles was used.

Wild Rice River at the Mouth

Streamflow data have not been collected for the Wild Rice River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Wild Rice River at the mouth for January 1931 through December 1984. The Wild Rice River at Hendrum was selected as the base station. Streamflow record for the Wild Rice River at Hendrum is available for April 1944 through September 1984. Thus, streamflow for the Wild Rice River at Hendrum had to be estimated for January 1931 through March 1944 and for October through December 1984 before the streamflow record could be transferred to the Wild Rice River at the mouth. MOVE.1 (eq. 2) was used to estimate the streamflow for the Wild Rice River at Hendrum for January 1931 through March 1944 and for October through December 1984. The Sheyenne River at West Fargo and the Buffalo River near Dilworth were selected as potential base stations.

The Wild Rice River at Hendrum and the Sheyenne River at West Fargo had 491 months of concurrent nonzero streamflow record. The Wild Rice River at Hendrum and the Buffalo River near Dilworth had 486 months of concurrent nonzero streamflow record. The cyclic correlation coefficients between the Wild Rice River at Hendrum and the Sheyenne River at West Fargo ranged from 0.37 in August to 0.70 in April (table 6). Cyclic correlation coefficients between the Wild Rice River at Hendrum and the Buffalo River near Dilworth ranged from 0.60 in February to 0.91 in April. The noncyclic correlation coefficient between the Wild Rice River at Hendrum and the Sheyenne River at West Fargo was 0.73 and between the Wild Rice River at Hendrum and the Buffalo River near Dilworth was 0.84.

The Sheyenne River at West Fargo was used as the base station to estimate 7 months of streamflow and the Buffalo River near Dilworth was used as the base station to estimate 155 months of streamflow. Gaged and estimated streamflow for the Wild Rice River at Hendrum is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Wild Rice River at the mouth for January 1931 through December 1984. The Wild Rice River at Hendrum was used as the base station. A drainage-area ratio of 1,650 square miles/1,600 square miles was used.

Red River of the North at Halstad, Minnesota

Streamflow record for the Red River of the North at Halstad is intermittent for April 1936 through September 1960. Continuous monthly streamflow record is available for June 1961 through December 1984. MOVE.1 (eq. 2) was used to estimate streamflow for months when no data were available. The Red River of the North at Fargo, Grand Forks, and Emerson, which have streamflow records available for the entire data-development period (1931-84), were selected as potential base stations.

The Red River of the North at Halstad and the base stations had 413 months of concurrent nonzero streamflow record. The cyclic equation was

Table 6.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Wild Rice River at Hendrum, Minnesota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	0.61	0.66	0.69	0.70	0.41	0.52	0.53	0.37	0.46	0.53	0.45	0.54	0.73
Buffalo River near Dilworth, Minn.	.62	.60	.79	.91	.88	.78	.75	.77	.70	.76	.82	.77	.84

used to estimate streamflow for January through August, for November, and for December. The noncyclic equation was used to estimate streamflow for September and October. When the cyclic equation was used, the cyclic correlation coefficient was 0.93 or greater between the Red River of the North at Halstad and the base station selected (table 7). When the noncyclic equation was used, the noncyclic correlation coefficient also was 0.93 or greater between the Red River of the North at Halstad and the base station.

The Red River of the North at Fargo was used as the base station to estimate streamflow for 135 months when the cyclic equation was used. The Red River of the North at Grand Forks was used as the base station to estimate streamflow for 78 months when the cyclic equation was used and for 67 months when the noncyclic equation was used. The Red River of the North at Emerson was not used to estimate any streamflows.

Goose River at the Mouth

Streamflow data have not been collected for the Goose River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Goose River at the mouth for January 1931 through December 1984. The Goose River at Hillsboro was selected as the base station. Seasonal streamflow record is available for the Goose River at Hillsboro for April 1931 through March 1934 and continuous streamflow record is available for April 1934 through December 1984. Thus, streamflow for the Goose River at Hillsboro had to be estimated for months prior to April 1934 when no data were available before the streamflow record could be transferred to the Goose River at the mouth. MOVE.1 (eq. 2) was used to estimate the streamflow for the Goose River at Hillsboro for these months. The Sheyenne River at West Fargo was selected as the base station.

The Goose River at Hillsboro and the Sheyenne River at West Fargo had 608 months of concurrent nonzero streamflow record. The cyclic equation was used to estimate streamflow for December, January, and February. The noncyclic equation was used to estimate streamflow for March and for July through November. No estimates were required for the months of April through June because the record for the Goose River at Hillsboro is complete. Cyclic correlation coefficients between the Goose River at Hillsboro and the Sheyenne River at West Fargo were 0.74 for December and January and 0.64 for February. The noncyclic correlation coefficient between the Goose River at Hillsboro and the Sheyenne River at West Fargo was 0.85. Gaged and estimated streamflow for the Goose River at Hillsboro is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Goose River at the mouth for January 1931 through December 1984. The Goose River at Hillsboro was used as the base station. A drainage-area ratio of 1,170 square miles/1,093 square miles was used.

Marsh River at the Mouth

Streamflow data have not been collected for the Marsh River at the mouth. The Marsh River near Shelly gaging station is located about 10

Table 7.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Red River of the North at Halstad, Minnesota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Red River of the North at Fargo, N.Dak.	0.97	0.97	0.94	0.95	0.92	0.94	0.94	0.97	0.86	0.89	0.93	0.96	0.94
Red River of the North at Grand Forks, N.Dak.	.87	.87	.77	.98	.97	.96	.95	.88	.82	.88	.90	.90	.95
Red River of the North at Emerson, Man.	.87	.86	.90	.92	.93	.93	.91	.86	.74	.87	.89	.91	.93

miles upstream from the mouth. Because little contibuting drainage area is added between the gaging station and the mouth of the river, the streamflow for the Marsh River at the mouth is considered to be equivalent to the streamflow of the Marsh River near Shelly.

Streamflow record for the Marsh River near Shelly is available for March 1944 through September 1983. MOVE.1 (eq. 2) was used to estimate streamflow for the Marsh River near Shelly for January 1931 through February 1944 and for October 1983 through December 1984. The Sheyenne River at West Fargo, the Buffalo River near Dilworth, the Goose River at Hillsboro, and the Park River at Grafton were selected as potential base stations.

The Marsh River near Shelly and the Sheyenne River at West Fargo had 369 months of concurrent nonzero streamflow record, the Marsh River near Shelly and the Buffalo River near Dilworth had 363 months of concurrent nonzero streamflow record, the Marsh River near Shelly and the Goose River at Hillsboro had 367 months of concurrent nonzero streamflow record, and the Marsh River near Shelly and the Park River at Grafton had 360 months of concurrent nonzero streamflow record. The cyclic correlation coefficients were relatively poor. The largest coefficients were for March, April, and May (table 8). The largest noncyclic correlation coefficient was 0.64 between the Marsh River near Shelly and the Buffalo River near Dilworth.

The Sheyenne River at West Fargo was used as the base station to estimate 17 months of streamflow, the Buffalo River near Dilworth was used as the base station to estimate 136 months of streamflow, the Goose River at Hillsboro was used as the base station to estimate 13 months of streamflow, and the Park River at Grafton was used as the base station to estimate 7 months of streamflow.

Sand Hill River at the Mouth

Streamflow data have not been collected for the Sand Hill River at the mouth. The Sand Hill River at Climax is located about 4 miles upstream from the mouth. Because only about 4 square miles of drainage area is added in the reach between the Sand Hill River at Climax and the Sand Hill River at the mouth, the streamflow of the Sand Hill River at the mouth is considered to be equivalent to the streamflow of the Sand Hill River at Climax.

Streamflow record for the Sand Hill River at Climax is available for April 1943 through September 1984. MOVE.1 (eq. 2) was used to estimate streamflow for the Sand Hill River at Climax for January 1931 through March 1943 and for October through December 1984. The Sheyenne River at West Fargo, the Buffalo River near Dilworth, the Goose River at Hillsboro, and the Park River at Grafton were selected as potential base stations.

The Sand Hill River at Climax and the Sheyenne River at West Fargo had 493 months of concurrent nonzero streamflow record, the Sand Hill River at Climax and the Buffalo River near Dilworth had 489 months of concurrent nonzero streamflow record, the Sand Hill River at Climax and the Goose

Table 8.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Marsh River near Shelly, Minnesota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	-0.24	-0.54	0.56	0.71	0.53	0.52	0.49	0.26	0.16	0.22	0.15	-0.03	0.58
Buffalo River near Dilworth, Minn.	-.40	-.45	.73	.82	.63	.41	.54	.42	.37	.26	.13	-.08	.64
Goose River at Hillsboro, N.Dak.	-.40	-.46	.75	.79	.51	.38	.33	.41	.18	.13	.35	.12	.59
Park River at Grafton, N.Dak.	-.34	-.26	.43	.58	.40	.12	-.11	.23	.33	.59	.11	-.08	.51

River at Hillsboro had 483 months of concurrent nonzero streamflow record, and the Sand Hill River at Climax and the Park River at Grafton had 469 months of concurrent nonzero streamflow record. The cyclic equation was used to estimate streamflow for all months except March, June, and July, when the noncyclic equation was used. The largest cyclic correlation coefficients generally were between the Sand Hill River at Climax and the Goose River at Hillsboro and the Sand Hill River at Climax and the Buffalo River near Dilworth (table 9). The largest noncyclic correlation coefficient was 0.85 between the Sand Hill River at Climax and the Buffalo River near Dilworth.

The Sheyenne River at West Fargo was used as the base station to estimate 9 months of streamflow, the Buffalo River near Dilworth was used as the base station to estimate 93 months of streamflow, and the Goose River at Hillsboro was used as the base station to estimate 48 months of streamflow. The Park River at Grafton was not used to estimate any streamflows.

Red Lake River at the Mouth

Streamflow data have not been collected for the Red Lake River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Red Lake River at the mouth for January 1931 through December 1984. The Red Lake River at Crookston was used as the base station. Streamflow record of the Red Lake River at Crookston is available for January 1931 through December 1984, the entire data-development period. A drainage-area ratio of 5,750 square miles/5,280 square miles was used.

Red River of the North at Grand Forks, North Dakota

Streamflow record for the Red River of the North at Grand Forks is available for January 1931 through December 1984, the entire data-development period. Thus, no estimated streamflow data were required for this gaging station.

Turtle River at the Mouth

Streamflow data have not been collected for the Turtle River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Turtle River at the mouth for January 1931 through December 1984. The Turtle River at Manvel was selected as the base station. Streamflow record for the Turtle River at Manvel is available for October 1945 through September 1970. Streamflow for the Turtle River at Manvel had to be estimated for January 1931 through September 1945 and for October 1970 through December 1984 before the streamflow record could be transferred to the Turtle River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Turtle River at Manvel for January 1931 through September 1945 and for October 1970 through December 1984. The Goose River at Hillsboro, the Park River at Grafton, and the Pembina River at Neche were selected as potential base stations.

The Turtle River at Manvel and the Goose River at Hillsboro had 288 months of concurrent nonzero streamflow record, the Turtle River at Manvel

Table 9.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Sand Hill River at Climax, Minnesota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Sheyenne River at West Fargo, N.Dak.	0.49	0.46	0.76	0.80	0.70	0.52	0.59	0.51	0.53	0.59	0.54	0.61	0.81
Buffalo River near Dilworth, Minn.	.56	.67	.83	.84	.76	.51	.60	.58	.57	.72	.76	.71	.85
Goose River at Hillsboro, N.Dak.	.53	.51	.81	.87	.82	.67	.45	.57	.60	.74	.64	.81	.82
Park River at Grafton, N.Dak.	.46	.21	.75	.72	.71	.27	.36	.38	.17	.39	.37	.31	.71

and the Park River at Grafton had 269 months of concurrent nonzero streamflow record, and the Turtle River at Manvel and the Pembina River at Neche had 291 months of concurrent nonzero streamflow record. The largest cyclic and noncyclic correlation coefficients were between the Turtle River at Manvel and the Goose River at Hillsboro (table 10). The cyclic equation was used to estimate streamflow for April through August and October through December. The noncyclic equation was used to estimate streamflow for January through March and for September.

The Goose River at Hillsboro was used as the base station to estimate 301 months of streamflow, the Park River at Grafton was used as the base station to estimate 10 months of streamflow, and the Pembina River at Neche was used as the base station to estimate 16 months of streamflow. Streamflow records indicate that no streamflow occurred at the base stations for 21 months during 1933-41. Subsequently, streamflow for the Turtle River at Manvel for these 21 months was estimated to be zero. Gaged and estimated streamflow for the Turtle River at Manvel is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Turtle River at the mouth for January 1931 through December 1984. The Turtle River at Manvel was used as the base station. A drainage-area ratio of 635 square miles/556 square miles was used.

Forest River at the Mouth

Streamflow data have not been collected for the Forest River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Forest River at the mouth for January 1931 through December 1984. The Forest River at Minto was selected as the base station. Streamflow record for the Forest River at Minto is available for April 1944 through December 1984; therefore, streamflow for the Forest River at Minto had to be estimated for months prior to April 1944 before the streamflow record could be transferred to the Forest River at the mouth.

Streamflow record is available for the Forest River near Minto seasonally for April 1932 through September 1935 and continuously for October 1935 through September 1944. The Forest River near Minto was used as the base station and the drainage-area ratio method was used to estimate streamflow for the Forest River at Minto for 20 months during April 1932 through September 1935 and for October 1935 through March 1944. A drainage-area ratio of 620 square miles/486 square miles was used.

The MOVE.1 method (eq. 2) was used to estimate the streamflow for the Forest River at Minto for the remaining 37 months during January 1931 through September 1935. The Goose River at Hillsboro, the Park River at Grafton, and the Pembina River at Neche were selected as potential base stations.

The Forest River at Minto and the Goose River at Hillsboro had 479 months of concurrent nonzero streamflow record, the Forest River at Minto and the Park River at Grafton had 465 months of concurrent nonzero streamflow record, and the Forest River at Minto and the Pembina River at

Table 10.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Turtle River at Manvel, North Dakota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Goose River at Hillsboro, N.Dak.	0.65	0.57	0.88	0.97	0.92	0.81	0.77	0.58	0.77	0.73	0.64	0.79	0.85
Park River at Grafton, N.Dak.	.28	.22	.65	.93	.87	.70	.39	.55	.47	.33	.47	.37	.75
Pembina River at Neche, N.Dak.	.47	.17	.37	.81	.64	.45	.21	.55	.56	.39	.41	.31	.71

Neche had 509 months of concurrent nonzero streamflow record. The largest cyclic correlation coefficients for April through August, when most of the streamflow occurs, were between the Forest River at Minto and the Park River at Grafton (table 11). The largest noncyclic correlation coefficient was 0.79 between the Forest River at Minto and the Goose River at Hillsboro.

The Goose River at Hillsboro was used as the base station to estimate 14 months of streamflow, the Park River at Grafton was used as the base station to estimate 10 months of streamflow, and the Pembina River at Neche was used as the base station to estimate 11 months of streamflow. Streamflow records indicate that no streamflow occurred at the base stations for 2 months during the period when estimates were needed for the Forest River at Minto. Streamflow was estimated to be zero for the Forest River at Minto for these 2 months. Gaged and estimated streamflow of the Forest River at Minto is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Forest River at the mouth. The Forest River at Minto was used as the base station. A drainage-area ratio of 913 square miles/620 square miles was used.

Snake River at the Mouth

Streamflow data have not been collected for the Snake River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Snake River at the mouth for January 1931 through December 1984. The Middle River at Argyle, the Snake River near Argyle, and the Snake River at Alvarado were selected as the base stations. Streamflow record for the Middle River at Argyle is available for April through September 1945 and for October 1950 through December 1984, streamflow record for the Snake River near Argyle is available for April through September 1945, and streamflow record for the Snake River at Alvarado is available for October 1953 through September 1956.

The Middle River at Argyle was used as the base station to estimate streamflow for the Snake River at the mouth for January 1931 through March 1945, for October 1945 through September 1953, and for October 1956 through December 1984. Streamflow for the Middle River at Argyle had to be estimated for January 1931 through March 1945 and for October 1945 through September 1950 before the streamflow record could be transferred to the Snake River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Middle River at Argyle for January 1931 through March 1945 and for October 1945 through September 1950. The Goose River at Hillsboro, the Sand Hill River at Climax, the Park River at Grafton, and the Pembina River at Neche, were selected as potential base stations.

The Middle River at Argyle and the Goose River at Hillsboro had 379 months of concurrent nonzero streamflow record, the Middle River at Argyle and the Sand Hill River at Climax had 375 months of concurrent nonzero streamflow record, the Middle River at Argyle and the Park River at Grafton had 364 months of concurrent nonzero streamflow record, and the Middle River at Argyle and the Pembina River at Neche had 381 months of concurrent nonzero streamflow record. The cyclic correlation coefficients

Table 11.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Forest River at Minto, North Dakota, and the base stations

Base station	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Goose River at Hillsboro, N.Dak.	0.39	0.44	0.86	0.90	0.90	0.64	0.66	0.37	0.54	0.60	0.63	0.68	0.79
Park River at Grafton, N.Dak.	.56	.35	.78	.95	.90	.72	.72	.52	.40	.50	.38	.34	.78
Pembina River at Neche, N.Dak.	.60	.55	.49	.82	.78	.49	.43	.43	.30	.36	.48	.59	.76

were the largest for March, April, and May (table 12). The largest noncyclic correlation coefficients were 0.73 between the Middle River at Argyle and the Goose River at Hillsboro and 0.76 between the Middle River at Argyle and the Sand Hill River at Climax.

The Goose River at Hillsboro was used as the base station to estimate 104 months of streamflow, the Sand Hill River at Climax was used as the base station to estimate 69 months of streamflow, the Park River at Grafton was used as the base station to estimate 26 months of streamflow, and the Pembina River at Neche was used as the base station to estimate 11 months of streamflow. Streamflow of the Middle River at Argyle was estimated to be zero for 21 months during January 1931 through September 1950 because no streamflow occurred at the base stations during those months. Gaged and estimated streamflow for the Middle River at Argyle is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Snake River at the mouth for January 1931 through March 1945, for October 1945 through September 1953, and for October 1956 through December 1984. The Middle River at Argyle was used as the base station. A drainage-area ratio of 950 square miles/265 square miles was used.

Streamflow for the Snake River at the mouth was estimated for April through September 1945 to be the combined streamflow of the Middle River at Argyle and the Snake River near Argyle, adjusted for drainage area. A drainage-area ratio of 950 square miles/746 square miles was used.

Streamflow for the Snake River at the mouth was estimated for October 1953 through September 1956 to be the combined streamflow of the Middle River at Argyle and the Snake River at Alvarado, adjusted for drainage area. A drainage-area ratio of 950 square miles/574 square miles was used.

Park River at the Mouth

Streamflow data have not been collected for the Park River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Park River at the mouth for January 1931 through December 1984. The Park River at Grafton was selected as the base station. Streamflow record for the Park River at Grafton is available for May 1931 through December 1984. Streamflow for the Park River at Grafton had to be estimated for January 1931 through April 1931 before the streamflow record could be transferred to the Park River at the mouth. MOVE.1 (eq. 2) was used to estimate streamflow for the Park River at Grafton for January 1931 through April 1931. The Sheyenne River at West Fargo and the Pembina River at Neche were selected as potential base stations.

The Park River at Grafton and the base stations had 559 months of concurrent nonzero streamflow record. The Sheyenne River at West Fargo was used as the base station and the noncyclic equation (correlation coefficient 0.76) was used to estimate streamflow for January. The Sheyenne River at West Fargo was used as the base station and the cyclic equation (correlation coefficient 0.34) was used to estimate streamflow for February. The Pembina River at Neche was used as the base station and the cyclic equation was used to estimate streamflow for March and April. The cyclic

Table 12.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Middle River at Argyle, Minnesota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Goose River at Hillsboro, N.Dak.	0.47	0.03	0.73	0.83	0.73	0.72	0.40	0.30	0.27	0.54	0.53	0.57	0.73
Sand Hill River at Climax, Minn.	.42	.14	.84	.88	.80	.77	.56	.34	.32	.42	.44	.50	.76
Park River at Grafton, N.Dak.	0	.08	.75	.76	.75	.46	.56	.31	.38	.40	.28	-.10	.68
Pembina River at Neche, N.Dak.	.36	.25	.52	.73	.69	.51	.27	.18	.34	.27	.30	.35	.64

correlation coefficient between the Park River at Grafton and the Pembina River at Neche was 0.69 for March and 0.86 for April. Gaged and estimated streamflow of the Park River at Grafton is listed in supplement 2.

The drainage-area ratio method was used to estimate streamflow for the Park River at the mouth for January 1931 through December 1984. The Park River at Grafton was used as the base station. A drainage-area ratio of 1,010 square miles/695 square miles was used.

Red River of the North at Drayton, North Dakota

Streamflow record of the Red River of the North at Drayton is available seasonally for 26 months during April 1936 through March 1949 and continuously for April 1949 through December 1984. MOVE.1 (eq. 2) was used to estimate streamflow for the remaining 193 months during January 1931 through March 1949. The Red River of the North at Grand Forks and the Red River of the North at Emerson were selected as potential base stations.

The Red River of the North at Drayton and the base stations had 454 months of concurrent nonzero streamflow record. The cyclic and noncyclic correlation coefficients were 0.99 or greater between the Red River of the North at Drayton and the base stations (table 13). The cyclic equation was used to estimate streamflow for January, for February, and for July through December and the noncyclic equation was used to estimate streamflow for April and May. Each type of equation was used about an equal number of months to estimate streamflow for March and June. The Red River of the North at Grand Forks was used as the base station to estimate 180 months of streamflow and the Red River of the North at Emerson was used as the base station to estimate 13 months of streamflow.

Pembina River at the Mouth

Streamflow data have not been collected for the Pembina River at the mouth. The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Pembina River at the mouth for January 1931 through December 1984. The Pembina River at Neche, the Tongue River at Akra, and the Tongue River at Cavalier were selected as the base stations. Streamflow record for the Pembina River at Neche is available for the entire data-development period. Streamflow record for the Tongue River at Akra is available for April 1950 through June 1950, for October 1951 through September 1982, and seasonally for October 1982 through December 1984. Streamflow record for the Tongue River at Cavalier is available for October 1938 through October 1951.

The Pembina River at Neche was used as the base station to estimate streamflow for the Pembina River at the mouth for January 1931 through September 1938 and for 13 months during October 1982 through December 1984. A drainage-area ratio of 3,950 square miles/3,410 square miles was used.

Streamflow for the Pembina River at the mouth was estimated for October 1938 through September 1982 and for 14 months during October 1982 through December 1984 to be the combined streamflow of the Pembina River at Neche and the Tongue River at the mouth. Streamflow data have not been collected

Table 13.--Cyclic (monthly) and noncyclic (annual) correlation coefficients between the Red River of the North at Drayton, North Dakota, and the base stations

Base station	Correlation coefficients												
	Cyclic												Noncyclic
	January	February	March	April	May	June	July	August	September	October	November	December	
Red River of the North at Grand Forks, N.Dak.	1.00	1.00	0.99	0.99	0.99	0.99	0.99	1.00	0.99	1.00	0.99	0.99	0.99
Red River of the North at Emerson, Man.	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99

for the Tongue River at the mouth; therefore, streamflow for the Tongue River at the mouth had to be estimated before the streamflow record could be transferred to the Pembina River at the mouth.

The drainage-area ratio method (eq. 1) was used to estimate streamflow for the Tongue River at the mouth. The Tongue River at Akra and the Tongue River at Cavalier were selected as the base stations. When streamflow record was available for both the Tongue River at Akra and the Tongue River at Cavalier, the Tongue River at Akra was used as the base station. A drainage-area ratio of 479 square miles/162 square miles was used when the Tongue River at Akra was used as the base station, and a ratio of 479 square miles/167 square miles was used when the Tongue River at Cavalier was used as the base station.

Streamflow for the Pembina River at the mouth for October 1938 through September 1982 and for 14 months during October 1982 through December 1984 was estimated to be the combined streamflow of the Pembina River at Neche and the Tongue River at the mouth, adjusted for drainage area. A drainage-area ratio of 3,950 square miles/3,889 square miles was used.

Red River of the North at Emerson, Manitoba

Streamflow record for the Red River of the North at Emerson is available for January 1931 through December 1984, the entire data-development period. Thus, no estimated streamflow data were required at this gaging station.

ESTIMATED UNREGULATED STREAMFLOW

Unregulated streamflow, as used in this report, is the streamflow that would occur if the hydrologic effects of Lake Ashtabula and surface-water withdrawals were eliminated. The hydrologic effects of small ponds and reservoirs constructed during the data-development period were not considered in the computation of unregulated streamflows.

The hydrologic effects of Lake Ashtabula are reflected in the gaged and estimated streamflow record only for sites downstream of Baldhill Dam. The hydrologic effects of Lake Ashtabula are discussed in the section on unregulated streamflow for the Sheyenne River below Baldhill Dam.

Surface-water withdrawals include water for irrigation, industrial, and municipal use. Surface-water withdrawals were obtained from the North Dakota State Water Commission (Craig Odenbach, written commun., 1986) and the Minnesota Department of Natural Resources (Gil Young, written commun., 1987).

The North Dakota State Water Commission has recorded the surface-water withdrawals reported by water users since 1965. Surface-water withdrawals reported for 1976-84 are the most reliable, according to the North Dakota State Water Commission, and were used in this study. Monthly withdrawals prior to 1976 were estimated by applying a linear adjustment to the average

monthly withdrawal for 1976-84. The linear adjustment is directly proportional to an annual increase or decrease in the permitted withdrawals.

The Minnesota Department of Natural Resources has readily accessible data for surface-water withdrawals since 1981. Actual reported withdrawals were used for 1981-84. Monthly withdrawals prior to 1981 were estimated by applying the method described for North Dakota to the average monthly withdrawal for 1981-84. Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin are listed in supplement 3. Estimated unregulated streamflow for 29 sites in the Red River of the North basin is listed in supplement 4.

Red River of the North at Fargo, North Dakota

Unregulated streamflow for the Red River of the North at Fargo was considered to be equal to the gaged streamflow. Removing the hydrologic effects of numerous reservoirs in the Red River of the North basin upstream from Fargo is beyond the scope of this study. The effects of reported surface-water withdrawals on streamflow are small compared to the effects caused by reservoir regulation and, therefore, they were not considered for estimating unregulated streamflow.

Sheyenne River above Harvey, North Dakota

Unregulated streamflow for the Sheyenne River above Harvey was considered to be equal to the gaged and estimated streamflow because no surface-water withdrawals have been recorded between the headwaters of the Sheyenne River and the Sheyenne River above Harvey.

Sheyenne River near Warwick, North Dakota

Unregulated streamflow for the Sheyenne River near Warwick was estimated by adding surface-water withdrawals that occurred between the Sheyenne River above Harvey and the Sheyenne River near Warwick to the gaged and estimated streamflow for the Sheyenne River near Warwick.

Sheyenne River near Cooperstown, North Dakota

The following equation was used to estimate unregulated streamflow for the Sheyenne River near Cooperstown:

$$Q_{u-co} = Q_{co} + (Q_{u-wa} - Q_{wa}) + Q_{sw} \qquad (4)$$

where

Q_{u-co} = unregulated streamflow of the Sheyenne River near Cooperstown, in cubic feet per second;

Q_{co} = gaged and estimated streamflow of the Sheyenne River near Cooperstown, in cubic feet per second;

Q_{u-wa} = unregulated streamflow of the Sheyenne River near Warwick, in cubic feet per second;

Q_{wa} = gaged and estimated streamflow of the Sheyenne River near Warwick, in cubic feet per second; and

Q_{sw} = surface-water withdrawals between the Sheyenne River near Cooperstown and the Sheyenne River near Warwick, in cubic feet per second.

Baldhill Creek at the Mouth

Unregulated streamflow for Baldhill Creek at the mouth was considered to be equal to the gaged and estimated streamflow of Baldhill Creek at the mouth because no surface-water withdrawals have been recorded for Baldhill Creek.

Sheyenne River below Baldhill Dam, North Dakota

The unregulated streamflow for sites on the main stem of the Sheyenne River below Baldhill Dam, as well as for sites on the main stem of the Red River of the North downstream from the Sheyenne River at the mouth, was estimated by removing the effects of Lake Ashtabula and by adding surface-water withdrawals that occurred in upstream reaches and tributary rivers.

Water-balance procedures were used to remove the hydrologic effects of Lake Ashtabula on streamflow for sites on the main stems of the Sheyenne River and the Red River of the North. The following equation was used to compute the hydrologic effects of Lake Ashtabula on monthly streamflow:

$$Q_{1a} = S + EA - PA, \tag{5}$$

where

Q_{1a} = streamflow resulting from removal of the effects of Lake Ashtabula, in acre-feet;
S = change is reservoir storage, in acre-feet;
E = lake evaporation, in feet;
A = reservoir water-surface area, in acres; and
P = precipitation falling on the reservoir water-surface area, in feet.

The change in storage in Lake Ashtabula was obtained from U.S. Geological Survey reports (U.S. Geological Survey, 1959, 1964, 1971, 1971-86, 1973).

Lake evaporation data are not available for Lake Ashtabula; therefore, pan evaporation data were used to estimate lake evaporation. Pan evaporation data from the nearest station where data were available, the U.S. Weather Service station at Fargo (Station Index No. 2859), were used to compute pan evaporation for Lake Ashtabula. Class A pan evaporation data are available intermittently for April through September 1963-80 and temperature data are available for 1931-84 for the U.S. Weather Service station at Fargo (U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service, 1932-85). Monthly mean maximum and monthly mean minimum temperatures at Fargo for 1963-80 were correlated with monthly pan evaporation at Fargo for 1963-80. A correlation coefficient of 0.86 was computed and the following regression equation was obtained:

$$E_p = 0.383(T_{max}) - 0.252(T_{min}) - 8.663, \tag{6}$$

where

E_p = estimated pan evaporation for the month, in inches;
T_{max} = monthy mean maximum temperature at Fargo, in degrees Fahrenheit; and
T_{min} = monthly mean minimum temperature at Fargo, in degrees Fahrenheit.

The standard error of estimate for equation 6 is 0.99 inches, or the standard error of the mean pan evaporation is 14 percent. Pan evaporation for missing monthly values for May through September 1931-84 was computed using equation 6.

Pan evaporation normally is not collected for October through April, when freezing is likely to occur; therefore, pan evaporation was estimated for October through April by use of a method presented by the Soil Conservation Service in the Hydrology Manual for North Dakota (U.S. Department of Agriculture, no date). The percentage of the mean annual pan evaporation that can be expected to occur in any given month is listed in table 14. The monthly percentage was applied to the mean annual pan evaporation of 41 inches for Lake Ashtabula to compute the monthly mean pan evaporation for each month (U.S. Department of Agriculture, no date).

A pan coefficient was used to convert pan evaporation to lake evaporation. The pan coefficient for Lake Ashtabula is 0.75 (U.S. Department of Agriculture, no date). It should be noted that the pan to lake coefficient is intended to convert annual pan evaporation to annual lake evaporation and should be used with caution in lake water-balance studies (Winter, 1981). Determination of lake evaporation by energy budget or mass transfer methods is beyond the scope of this study; therefore, the pan coefficient method is the best method available to estimate lake evaporation. Estimated evaporation from Lake Ashtabula for 1931-84 is listed in table 15.

Reservoir water-surface area for Lake Ashtabula was obtained from area-capacity curves (U.S. Department of the Army, Corps of Engineers, 1983).

Table 14.--Percentage of mean annual evaporation, by month

[From U.S. Department of Agriculture, (no date), p. 8-5]

Month	Percentage of mean annual evaporation
January	0.75
February	.95
March	2.30
April	5.85
May	10.33
June	13.57
July	18.59
August	20.16
September	14.95
October	8.53
November	3.00
December	1.02

Table 15.--Estimated evaporation, in inches, from Lake Ashtabula, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1931	0.23	0.29	0.71	1.81	4.42	5.69	6.28	5.60	5.78	2.64	0.93	0.32
1932	.23	.29	.71	1.81	5.00	5.69	6.47	6.08	4.91	2.64	.93	.32
1933	.23	.29	.71	1.81	4.04	7.04	6.66	6.46	5.39	2.64	.93	.32
1934	.23	.29	.71	1.81	6.83	4.93	6.75	5.79	3.94	2.64	.93	.32
1935	.23	.29	.71	1.81	3.56	4.25	6.10	5.41	4.91	2.64	.93	.32
1936	.23	.29	.71	1.81	5.78	5.59	8.02	6.18	5.78	2.64	.93	.32
1937	.23	.29	.71	1.81	4.14	4.73	5.99	6.47	4.72	2.64	.93	.32
1938	.23	.29	.71	1.81	3.36	5.49	6.56	7.70	5.87	2.64	.93	.32
1939	.23	.29	.71	1.81	6.92	5.21	7.52	7.04	6.24	2.64	.93	.32
1940	.23	.29	.71	1.81	5.27	6.06	7.23	5.03	6.35	2.64	.93	.32
1941	.23	.29	.71	1.81	5.29	5.03	6.56	5.99	4.24	2.64	.93	.32
1942	.23	.29	.71	1.81	3.56	4.16	6.17	5.60	4.04	2.64	.93	.32
1943	.23	.29	.71	1.81	3.93	4.44	6.09	5.99	4.42	2.64	.93	.32
1944	.23	.29	.71	1.81	4.43	5.12	5.51	5.31	3.95	2.64	.93	.32
1945	.23	.29	.71	1.81	3.92	4.63	6.17	5.89	4.23	2.64	.93	.32
1946	.23	.29	.71	1.81	4.03	5.49	5.90	6.17	4.04	2.64	.93	.32
1947	.23	.29	.71	1.81	3.83	4.25	6.47	6.66	4.81	2.64	.93	.32
1948	.23	.29	.71	1.81	5.37	4.92	5.90	6.27	6.26	2.64	.93	.32
1949	.23	.29	.71	1.81	5.86	6.74	7.13	6.75	5.25	2.64	.93	.32
1950	.23	.29	.71	1.81	2.98	6.07	6.08	6.07	5.10	2.64	.93	.32
1951	.23	.29	.71	1.81	5.67	4.91	6.36	4.54	3.85	2.64	.93	.32
1952	.23	.29	.71	1.81	5.66	5.98	5.99	6.08	5.96	2.64	.93	.32
1953	.23	.29	.71	1.81	4.32	4.83	5.79	5.99	5.19	2.64	.93	.32
1954	.23	.29	.71	1.81	4.12	5.12	5.99	5.89	3.57	2.64	.93	.32
1955	.23	.29	.71	1.81	5.39	5.12	5.81	6.28	5.38	2.64	.93	.32
1956	.23	.29	.71	1.81	4.42	5.90	5.12	5.89	4.90	2.64	.93	.32
1957	.23	.29	.71	1.81	4.90	4.82	6.57	5.22	3.95	2.64	.93	.32
1958	.23	.29	.71	1.81	5.86	4.52	5.31	6.17	4.82	2.64	.93	.32
1959	.23	.29	.71	1.81	4.61	5.60	6.47	6.28	4.72	2.64	.93	.32
1960	.23	.29	.71	1.81	6.14	5.39	7.13	6.56	5.77	2.64	.93	.32

Table 15.--Estimated evaporation, in inches, from Lake Ashtabula, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	0.23	0.29	0.71	1.81	5.37	7.13	6.56	7.81	4.42	2.64	0.93	0.32
1962	.23	.29	.71	1.81	3.28	4.73	5.22	6.47	4.81	2.64	.93	.32
1963	.23	.29	.71	1.81	6.88	5.22	6.23	5.79	5.48	3.83	.93	.32
1964	.23	.29	.71	1.81	7.01	5.78	7.49	6.18	4.29	3.23	.93	.32
1965	.23	.29	.71	1.81	4.14	6.11	5.97	5.41	2.07	2.83	.93	.32
1966	.23	.29	.71	1.81	5.75	6.52	6.66	4.51	3.92	2.76	.93	.32
1967	.23	.29	.71	1.81	5.72	5.19	7.00	6.93	5.51	2.64	.93	.32
1968	.23	.29	.71	3.80	4.16	5.87	6.42	5.51	3.89	2.18	.93	.32
1969	.23	.29	.71	1.81	6.04	4.75	6.06	7.58	4.11	2.17	.93	.32
1970	.23	.29	.71	1.81	3.56	6.27	8.07	6.49	4.76	2.64	.93	.32
1971	.23	.29	.71	1.81	4.99	4.55	5.78	6.68	3.69	2.64	.93	.32
1972	.23	.29	.71	1.81	4.17	6.71	5.37	5.22	3.80	2.64	.93	.32
1973	.23	.29	.71	1.81	5.57	6.60	7.94	6.08	3.38	2.64	.93	.32
1974	.23	.29	.71	1.81	2.51	6.83	7.21	4.58	4.89	2.64	.93	.32
1975	.23	.29	.71	1.81	4.52	4.74	6.81	5.57	3.08	2.64	.93	.32
1976	.23	.29	.71	1.81	6.26	6.77	7.10	7.97	5.30	2.64	.93	.32
1977	.23	.29	.71	1.81	5.35	6.29	3.95	3.29	3.95	2.64	.93	.32
1978	.23	.29	.71	1.81	5.66	5.28	5.54	6.29	4.16	2.64	.93	.32
1979	.23	.29	.71	1.81	3.62	5.21	5.51	4.05	4.96	2.64	.93	.32
1980	.23	.29	.71	1.81	7.29	5.06	6.05	4.80	4.52	2.64	.93	.32
1981	.23	.29	.71	1.81	4.61	4.34	5.42	5.51	5.28	2.64	.93	.32
1982	.23	.29	.71	1.81	3.95	5.19	5.90	5.89	4.81	2.64	.93	.32
1983	.23	.29	.71	1.81	4.51	4.93	5.90	6.56	4.23	2.64	.93	.32
1984	.23	.29	.71	1.81	5.17	4.45	6.09	6.57	4.02	2.64	.93	.32

Monthly precipitation falling on the reservoir water-surface area was estimated from precipitation records at Valley City and Cooperstown. Valley City is located about 8 miles southeast of Baldhill Dam and Cooperstown is located about 14 miles northwest of where the Sheyenne River flows into Lake Ashtabula. The precipitation falling on Lake Ashtabula was estimated to be the mean of the precipitation recorded at Valley City and Cooperstown each month for April 1931 through December 1984. Valley City precipitation data were the only data available for January, February, and March 1931. Estimated monthly precipitation falling on Lake Ashtabula for 1931-84 is listed in table 16.

Unregulated streamflow for the Sheyenne River below Baldhill Dam was estimated for two time periods, prior to completion of Baldhill Dam (January 1931 through July 1949) and after completion of Baldhill Dam (August 1949 through December 1984). Unregulated streamflow for January 1931 through July 1949 was estimated by adding surface-water withdrawals for reaches of the Sheyenne River upstream from Baldhill Dam to the gaged and estimated streamflow of the Sheyenne River below Baldhill Dam. The following equation was used:

$$Q_{u-bh} = Q_{bh} + Q_{sw-co} + Q_{sw-wa}, \tag{7}$$

where

Q_{u-bh} = unregulated streamflow of the Sheyenne River below Baldhill Dam, in cubic feet per second;

Q_{bh} = gaged and estimated streamflow of the Sheyenne River below Baldhill Dam, in cubic feet per second;

Q_{sw-co} = surface-water withdrawals between the Sheyenne River near Cooperstown and the Sheyenne River near Warwick, in cubic feet per second; and

Q_{sw-wa} = surface-water withdrawals from the Sheyenne River near Warwick to the headwaters of the Sheyenne River, in cubic feet per second.

Unregulated streamflow of the Sheyenne River below Baldhill Dam for August 1949 through December 1984 was computed by use of equation 7, except streamflow resulting from removal of the effects of Lake Ashtabula also was included. Equation 7 was rewritten as follows:

$$Q_{u-bh} = Q_{bh} + Q_{sw-co} + Q_{sw-wa} + Q_{la}/F, \tag{8}$$

where

Q_{la} = streamflow resulting from removal of the effect of Lake Ashtabula from equation 5, in acre-feet; and

F = factor for converting acre-feet to cubic feet per second.

The conversion factor, F, is 61.488 for months with 31 days, 59.504 for months with 30 days, 57.521 for February during leap years when it has 29 days, and 55.537 for February when it has 28 days.

Computation of estimated unregulated streamflow for the Sheyenne River below Baldhill Dam, when using equation 8, resulted in negative values for 34 months during August 1949 through December 1984. The computed negative streamflows probably resulted from errors associated with the data used in water-balance procedures. Streamflows for the 34 months that had computed negative values were set to equal the sum of unregulated streamflows of

Table 16.--Estimated monthly precipitation, in inches, falling on Lake Ashtabula, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1931	0.08	1.56	0.03	0.84	2.37	2.34	3.28	2.87	1.25	2.93	1.10	0.03
1932	.18	.45	.90	2.69	2.82	3.21	1.80	1.77	.67	2.55	.78	.11
1933	.89	.48	.50	1.42	2.66	3.50	2.29	.20	.87	.26	1.06	1.35
1934	.14	.02	.47	.45	.24	4.18	1.08	2.46	.89	3.68	.38	.32
1935	.70	.05	1.18	2.76	2.59	2.25	3.26	3.81	.58	.29	.71	.71
1936	.64	1.32	.36	.26	.85	.82	.81	2.09	1.09	.28	.28	.23
1937	.90	2.03	.32	2.41	2.56	4.01	3.44	2.67	1.93	.40	.40	.75
1938	.38	.87	.58	.99	3.11	1.98	3.44	1.94	.40	.22	.64	.21
1939	.28	1.16	.18	.57	1.05	3.85	1.38	1.39	1.50	1.29	.07	.50
1940	.09	.33	1.25	1.07	1.69	2.33	3.84	2.24	.70	2.10	.51	1.14
1941	.96	.42	.74	3.06	3.78	4.55	1.53	3.60	5.27	1.52	.32	.12
1942	.11	.25	3.06	2.13	3.84	3.26	1.73	4.95	2.01	.48	.19	.49
1943	.36	.86	.94	1.91	2.26	3.54	2.55	2.56	.55	.70	.34	.25
1944	.33	.21	.91	.34	2.83	3.35	3.06	8.67	1.28	.02	2.53	.09
1945	.38	.49	.83	1.74	1.42	1.72	2.61	2.64	3.29	.20	.08	1.23
1946	.28	.95	1.01	1.41	2.40	3.61	1.30	1.84	5.96	1.86	.31	.73
1947	.56	.60	.28	1.75	1.22	4.07	1.26	1.94	1.86	2.63	1.78	.30
1948	.41	1.08	.51	1.27	1.04	3.78	4.30	1.49	.58	1.36	.80	.55
1949	.64	.44	.73	.19	3.62	2.13	8.54	.96	.62	3.19	.59	.99
1950	1.17	.11	1.13	1.07	4.87	4.33	1.28	1.06	3.16	.47	.52	.72
1951	.66	.34	.47	.51	.75	2.94	2.06	3.21	1.09	.85	.37	1.03
1952	.52	.38	.42	.26	.59	2.72	4.96	1.83	.46	.03	1.89	.40
1953	.25	.31	.18	1.69	4.62	7.42	1.06	1.16	.68	1.00	.66	.76
1954	.54	.04	.87	1.08	2.43	3.65	2.43	2.65	2.39	.42	.41	.13
1955	.27	.70	.38	.52	3.38	4.05	3.25	1.36	1.50	.30	.76	.34
1956	.98	.31	1.25	.60	2.38	2.88	1.81	2.77	.91	1.75	1.56	.31
1957	.30	.19	.10	1.55	2.89	4.77	5.21	4.33	4.50	3.01	.77	.34
1958	.13	.46	.05	1.47	1.23	4.14	3.49	1.24	.90	.51	1.37	.13
1959	.32	.34	.09	.38	2.97	3.06	2.96	2.55	1.10	3.01	.71	.23
1960	.53	.35	.25	1.07	3.16	2.35	2.07	5.00	1.06	1.24	.47	1.06

Table 16.--Estimated monthly precipitation, in inches, falling on Lake Ashtabula, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	0.04	0.27	0.41	2.24	0.83	1.91	3.57	1.84	3.84	1.29	0.10	0.58
1962	.43	.58	.89	.56	4.10	2.16	7.23	2.31	2.42	.25	.83	.39
1963	.03	.64	.45	2.62	1.54	1.75	4.69	2.04	.78	.17	.17	.89
1964	.17	.13	.99	3.60	1.23	5.88	1.88	6.55	2.14	.15	.27	.55
1965	.24	.12	.34	3.46	3.33	3.35	6.65	3.26	4.58	.92	.40	.78
1966	.12	.31	1.89	1.32	1.11	4.84	4.63	3.38	1.15	1.08	.25	.59
1967	.67	.31	.28	3.64	1.35	2.88	.80	.46	2.53	1.68	.14	.89
1968	.43	.11	1.36	2.64	2.75	6.34	1.85	2.59	3.12	.65	.42	.94
1969	2.08	.70	.60	.68	3.08	4.11	2.10	1.15	4.06	1.46	.08	.86
1970	.26	.35	1.06	2.38	2.67	4.45	1.90	1.03	2.87	1.06	.87	.45
1971	.95	.31	.61	.86	2.67	5.34	1.49	.90	2.87	3.14	.41	.37
1972	.72	.54	.52	1.09	4.37	1.31	1.78	2.50	1.72	.87	.19	.84
1973	.07	.11	1.57	.76	1.35	1.20	1.53	2.24	4.97	1.82	1.04	.54
1974	.39	.57	.45	2.46	3.60	1.35	2.39	3.34	.18	1.08	1.19	.30
1975	.64	.18	1.21	2.93	2.82	5.93	2.08	1.89	1.23	.70	.45	.25
1976	.84	.57	.90	1.52	.54	4.79	.85	.56	.22	.18	.16	.26
1977	.93	1.05	1.88	.38	3.52	2.25	5.03	2.00	5.10	1.59	2.63	1.06
1978	.27	.13	.16	1.25	3.11	2.60	2.05	2.94	2.60	.47	.80	.59
1979	.51	1.45	1.01	2.94	1.94	2.69	2.96	1.61	.38	.99	.58	.27
1980	.85	.38	.56	.03	.63	3.33	1.91	5.76	1.42	1.71	.44	.25
1981	.20	.45	.58	.85	1.36	4.42	3.05	1.76	3.03	2.13	.49	.66
1982	.83	.37	1.31	.39	2.32	2.76	3.63	.89	.86	5.69	.99	.28
1983	.51	.42	1.76	.43	1.27	4.90	2.64	2.93	1.71	1.68	.69	.66
1984	.84	.43	1.16	2.24	.60	3.63	1.67	.77	.82	3.66	.34	.51

Baldhill Creek at the mouth and the Sheyenne River near Cooperstown. The sum of these unregulated streamflows is considered to represent streamflow that probably would have occurred had Baldhill Dam not been constructed.

Main-stem Stations or Sites from the Sheyenne River at Valley City, North Dakota, to the Red River of the North at Emerson, Manitoba

Unregulated streamflow for the: (1) Sheyenne River at Valley City, (2) Sheyenne River at Lisbon, (3) Sheyenne River near Kindred, (4) Sheyenne River at West Fargo, (5) Sheyenne River at the mouth, (6) Red River of the North at Halstad, (7) Red River of the North at Grand Forks, (8) Red River of the North at Drayton, and (9) Red River of the North at Emerson was computed by use of the following equation:

$$Q_{u\text{-}sta} = Q_{sta} + (Q_{u\text{-}stau} - Q_{stau}) + Q_{sw} + (Q_{ut} - Q_t), \qquad (9)$$

where

$Q_{u\text{-}sta}$ = unregulated streamflow for the station of interest, in cubic feet per second;

Q_{sta} = gaged and estimated streamflow for the station of interest, in cubic feet per second;

$Q_{u\text{-}stau}$ = unregulated streamflow for the station immediately upstream of the station of interest, in cubic feet per second;

Q_{stau} = gaged and estimated streamflow for the station immediately upstream of the station of interest, in cubic feet per second;

Q_{sw} = surface-water withdrawals occurring between the station of interest and the station immediately upstream, in cubic feet per second;

Q_{ut} = unregulated streamflow for tributary inflow between the station of interest and the station immediately upstream, in cubic feet per second; and

Q_t = gaged and estimated streamflow for tributary inflow between the station of interest and the station immediately upstream, in cubic feet per second.

Errors associated with water-balance procedures resulted in negative streamflow values for 10 months for the Sheyenne River at Valley City, 18 months for the Sheyenne River at Lisbon, 7 months for the Sheyenne River near Kindred, and 9 months for the Sheyenne River at West Fargo. Streamflow for these four stations was set at zero for months that had computed negative values.

Tributaries to the Sheyenne River, Downstream from Baldhill Dam, and the Red River of the North

Estimated unregulated streamflow for rivers that are tributary to the Sheyenne River and the Red River of the North was computed by adding surface-water withdrawals to the gaged and estimated streamflow. The following equation was used. The Maple River is used as an example in the equation.

$$Q_{u\text{-}ma} = Q_{ma} + Q_{sw\text{-}ma}, \qquad (10)$$

where

Q_{u-ma} = unregulated streamflow for the Maple River at the mouth, in cubic feet per second;

Q_{ma} = gaged and estimated streamflow for the Maple River at the mouth, in cubic feet per second; and

Q_{sw-ma} = surface-water withdrawals from the Maple River, in cubic feet per second.

Equation 10 was used to compute estimated unregulated streamflow for the following tributaries at the indicated sites: (1) Maple River at the mouth, (2) Rush River at the mouth, (3) Buffalo River at the mouth, (4) Elm River at the mouth, (5) Wild Rice River at the mouth, (6) Goose River at the mouth, (7) Marsh River at the mouth, (8) Sand Hill River at the mouth, (9) Red Lake River at the mouth, (10) Turtle River at the mouth, (11) Forest River at the mouth, (12) Snake River at the mouth, (13) Park River at the mouth, and (14) Pembina River at the mouth.

COMPARISON OF GAGED AND ESTIMATED STREAMFLOW AND ESTIMATED UNREGULATED STREAMFLOW

Gaged and estimated streamflow for all sites for 1931-49 was almost equal to estimated unregulated streamflow. The differences reflect surface-water withdrawals. Generally, surface-water withdrawals were small relative to streamflow for 1931-49. Gaged and estimated streamflow for sites upstream from Lake Ashtabula and for tributaries of the Sheyenne River and the Red River of the North for 1950-84 was about equal to estimated unregulated streamflow. The difference between gaged streamflow and estimated unregulated streamflow for the Sheyenne River below Baldhill Dam for 1950-84 is representative of the difference for all of the sites on the main stem of the Sheyenne River and the main stem of the Red River of the North downstream from Lake Ashtabula.

Mean annual gaged streamflow for the Sheyenne River below Baldhill Dam for 1950-84 was 9,175 acre-feet less than the mean annual estimated unregulated streamflow. The annual gaged streamflow and the annual estimated unregulated streamflow for the Sheyenne River below Baldhill Dam for 1950-84 are shown in figure 1. Annual gaged streamflow ranged from 43,596 acre-feet less than annual estimated unregulated streamflow to 2,537 acre-feet more than annual estimated unregulated streamflow. The greatest difference between annual gaged streamflow and annual estimated unregulated streamflow (43,596 acre-feet) occurred in 1952. Prior to April 1952, the storage in Lake Ashtabula was held to less than 20,000 acre-feet. In April 1952, the storage in Lake Ashtabula increased from 18,600 acre-feet to 52,250 acre-feet (a change of 33,650 acre-feet). The change in Lake Ashtabula storage accounts for the majority of the difference in annual gaged streamflow and annual estimated unregulated streamflow in 1952.

The difference between mean annual gaged streamflow and mean annual estimated unregulated streamflow can be accounted for by: (1) Net evaporation losses from Lake Ashtabula, (2) errors associated with measurement of stage (storage) of Lake Ashtabula, and (3) errors associated with measurement of upstream surface-water withdrawals. Net evaporation losses from

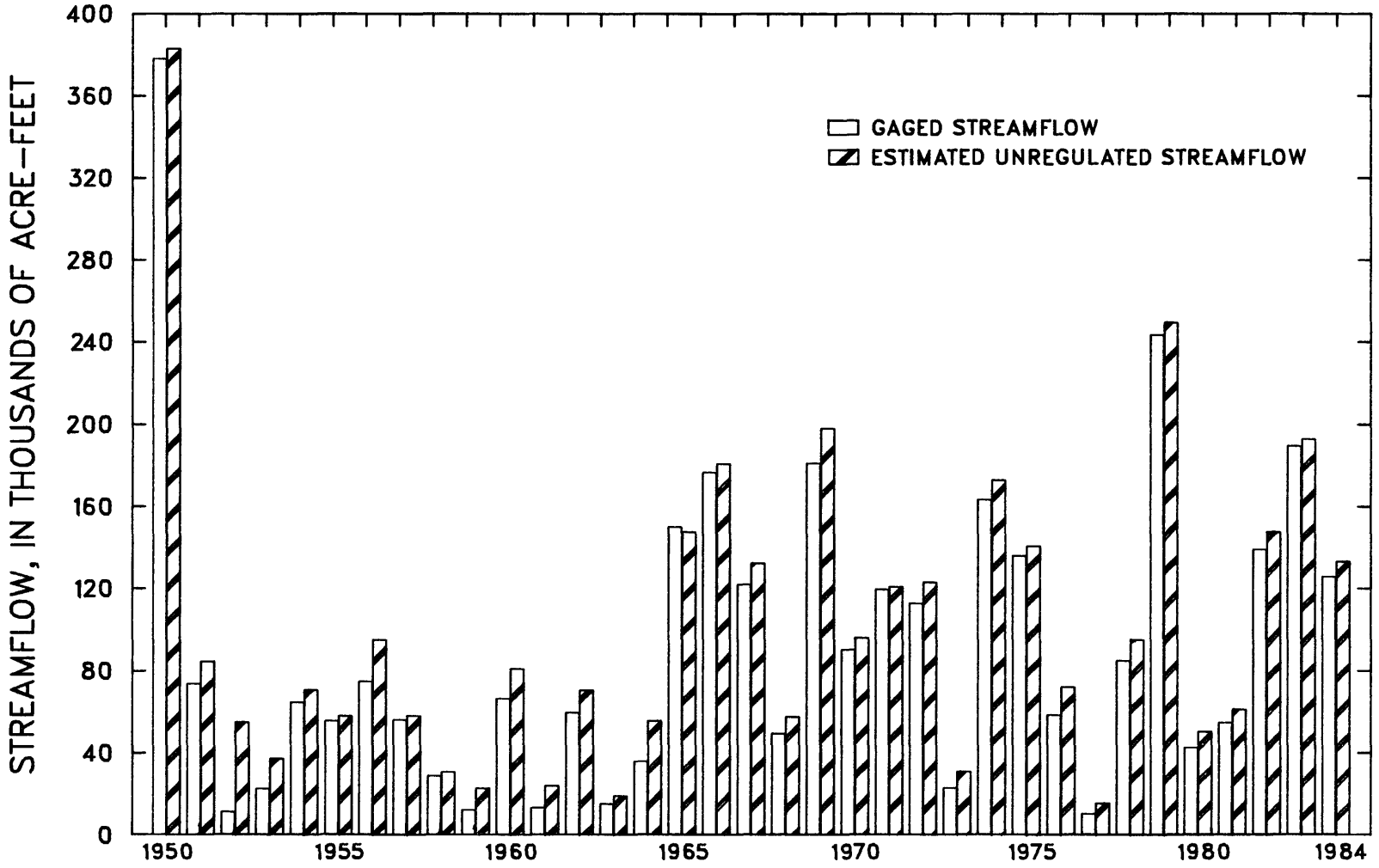

Figure 1.--Annual gaged streamflow and annual estimated unregulated streamflow for the Sheyenne River below Baldhill Dam, North Dakota, 1950-84.

Lake Ashtabula account for the majority of the difference between gaged streamflow and estimated unregulated streamflow. Reported monthly surface-water withdrawals above Lake Ashtabula were small relative to monthly streamflow and accounted for a small percentage of the difference between gaged and estimated unregulated streamflow.

Mean gaged streamflow is greater than mean estimated unregulated streamflow in September through February when water stored during spring runoff is being released from Lake Ashtabula. Mean gaged streamflow is less than mean estimated unregulated streamflow in March, April, and May when spring runoff is being stored in Lake Ashabula. Mean gaged streamflow is about equal to mean estimated unregulated streamflow in June, July, and August. Mean monthly gaged streamflow and mean monthly estimated unregulated streamflow for the Sheyenne River below Baldhill Dam for 1950-84 are shown in figure 2.

SUMMARY

Operation of the Garrison Diversion Unit in North Dakota may have various effects on the quantity and quality of streamflow in the Sheyenne River and the Red River of the North. To model the effects that the Garrison Diverson Unit could have on water quantity, the U.S. Bureau of Reclamation Project Canals, Reservoirs, and River Systems model was selected to simulate the different hydrologic conditions that could occur during operation of the Garrison Diversion Unit. The model uses, as input data, the monthly unregulated streamflow for 29 sites in the Red River of the North basin, 12 of which are in the Sheyenne River basin.

Streamflow data were compiled and estimated, when streamflow data were not available, to develop a complete monthly streamflow record for 1931-84 (data-development period) for 29 sites in the Red River of the North basin. Gaged streamflow records were available for January 1931 through December 1984 for only 4 sites; no records or records of various length were available for the remaining 25 sites. The drainage-area ratio method and the Maintenance of Variance Extension Type 1 (MOVE.1) method were used to estimate streamflows for months for which data were not available.

Streamflow record for the Red River of the North at Fargo is available for the entire data-development period, 1931-84.

The drainage-area ratio method was used to estimate streamflows for months for which data were not available for the Sheyenne River above Harvey, the Sheyenne River near Warwick, and the Sheyenne River near Cooperstown.

The drainage-area ratio method was used to estimate streamflow for Baldhill Creek at the mouth. The Sheyenne River at West Fargo, the Sheyenne River at Valley City, the Sheyenne River near Cooperstown, and Baldhill Creek near Dazey were used as base stations for various periods of data-development. MOVE.1 was used to complete the streamflow record for Baldhill Creek near Dazey.

The drainage-area ratio method was used to estimate streamflows for months for which data were not available for the Sheyenne River below

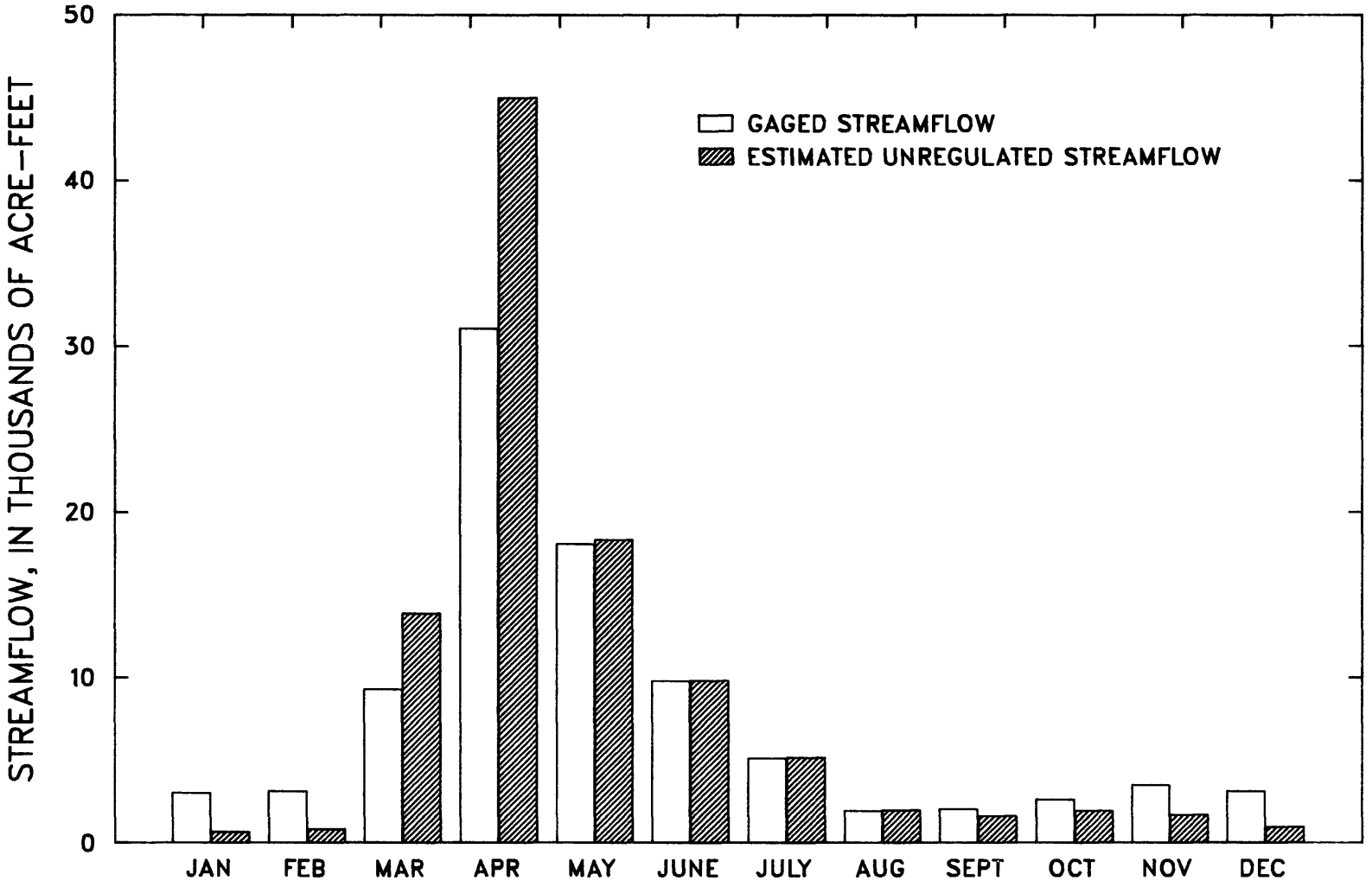

Figure 2.--Mean monthly gaged streamflow and mean monthly estimated unregulated streamflow for the Sheyenne River below Baldhill Dam, North Dakota, 1950-84.

Baldhill Dam, the Sheyenne River at Valley City, the Sheyenne River at Lisbon, and the Sheyenne River near Kindred. Streamflow record for the Sheyenne River at West Fargo is available for the entire data-development period, 1931-84.

The drainage-area ratio method was used to estimate streamflows for the Maple River at the mouth and the Rush River at the mouth. The Maple River near Mapleton and the Rush River at Amenia were selected as base stations to estimate the streamflow for each respective river at the mouth. MOVE.1 was used to complete the streamflow records for the Maple River near Mapleton and the Rush River at Amenia.

Streamflow for the Sheyenne River at the mouth was estimated to be the sum of the streamflow of the Sheyenne River at West Fargo, the Maple River at the mouth, and the Rush River at the mouth.

The drainage-area ratio method was used to estimate streamflows for the Buffalo River at the mouth, the Elm River at the mouth, and the Wild Rice River at the mouth. The Buffalo River near Dilworth, the Elm River near Kelso, and the Wild Rice River at Hendrum were selected as the base stations for each respective river. MOVE.1 was used to complete the streamflow record for each of the base stations.

MOVE.1 was used to estimate streamflow for the Red River of the North at Halstad for months when streamflow data were not available. The Red River of the North at Fargo and the Red River of the North at Grand Forks were selected as the base stations.

The drainage-area ratio method was used to estimate streamflow for the Goose River at the mouth. The Goose River at Hillsboro was selected as the base station. MOVE.1 was used to complete the streamflow record for the Goose River at Hillsboro.

Streamflows for the Marsh River at the mouth and the Sand Hill River at the mouth were estimated to be equivalent to the streamflows for the Marsh River near Shelly and the Sand Hill River at Climax. MOVE.1 was used to complete the streamflow records for the Marsh River near Shelly and the Sand Hill River at Climax.

The drainage-area ratio method was used to estimate streamflow for the Red Lake River at the mouth. The Red Lake River at Crookston was used as the base station. Streamflow record for the Red Lake River at Crookston is available for the entire data-development period, 1931-84.

Streamflow record for the Red River of the North at Grand Forks is available for the entire data-development period, 1931-84.

The drainage-area ratio method was used to estimate streamflows for the Turtle River at the mouth and the Forest River at the mouth. The Turtle River at Manvel and the Forest River at Minto were selected as the base stations for each respective river. MOVE.1 was used to complete the streamflow record for the Turtle River at Manvel and the Forest River at Minto.

The drainage-area ratio method was used to estimate streamflow for the Snake River at the mouth. The Middle River at Argyle, the Snake River near Argyle, and the Snake River at Alvarado were selected as the base stations. MOVE.1 was used to complete the streamflow record for the Middle River at Argyle for months when streamflow data were not available at the base stations.

The drainage-area ratio method was used to estimate streamflow for the Park River at the mouth. The Park River at Grafton was selected as the base station. MOVE.1 was used to complete the streamflow for the Park River at Grafton for months when streamflow data were not available.

MOVE.1 was used to estimate streamflow for months when data were not available for the Red River of the North at Drayton. The Red River of the North at Grand Forks and the Red River of the North at Emerson were selected as the base stations.

The drainage-area ratio method was used to estimate streamflow for the Pembina River at the mouth. The Pembina River at Neche was used as the base station to estimate streamflow for January 1931 through September 1938 and for 13 months during October 1982 through December 1984. Streamflow for October 1938 through September 1982 and for 14 months during October 1982 through December 1984 was estimated to be the combined streamflow of the Pembina River at Neche and the Tongue River at the mouth (the Tongue River is tributary to the Pembina River), adjusted by use of the drainage-area ratio method. Streamflow record is available for the Pembina River at Neche for 1931-84, but no streamflow record is available for the Tongue River at the mouth. The drainage-area ratio method was used to estimate streamflow for the Tongue River at the mouth. The Tongue River at Akra and the Tongue River at Cavalier were selected as the base stations.

Streamflow record for the Red River of the North at Emerson is available for the entire data-development period, 1931-84.

Unregulated streamflow for 29 sites in the Red River of the North basin was estimated by removing the hydrologic effects of Lake Ashtabula and surface-water withdrawals such as irrigation, industrial, and municipal use. The hydrologic effects of Lake Ashtabula are reflected in the streamflow record only for gaging stations downstream of Baldhill Dam.

Estimated unregulated streamflow of the Red River of the North at Fargo is considered to be equal to the gaged streamflow.

Estimated unregulated streamflow for the Sheyenne River above Harvey is considered to be equal to the gaged and estimated streamflow for the Sheyenne River above Harvey because no surface-water withdrawals were reported between the headwaters of the Sheyenne River and the Sheyenne River above Harvey. Unregulated streamflows for the Sheyenne River near Warwick and the Sheyenne River near Cooperstown were estimated by adding reported surface-water withdrawals above each respective site to the gaged and estimated streamflow.

Estimated unregulated streamflow for Baldhill Creek at the mouth is considered to be equal to the gaged and estimated streamflow for Baldhill Creek at the mouth.

Unregulated streamflow for sites on the main stem of the Sheyenne River below Baldhill Dam and on the main stem of the Red River of the North was estimated by removing the hydrologic effects of Lake Ashtabula and by adding all surface-water withdrawals that were reported upstream from each site. Water-balance procedures were used to remove the hydrologic effects of Lake Ashtabula. The procedure used included: Change in reservoir storage, lake evaporation, reservoir water-surface area, and precipitation falling on the reservoir water-surface area.

Unregulated streamflow for all tributaries was estimated by adding the surface-water withdrawals that occurred upstream from the mouth of the tributary to the gaged and estimated streamflow for each respective tributary.

Gaged and estimated streamflow and estimated unregulated streamflow for 1931-49 were about equal for all sites. Gaged and estimated streamflow and estimated unregulated streamflow for 1950-84 were about equal for sites upstream from Lake Ashtabula and for tributaries of the Sheyenne River and the Red River of the North. The difference between gaged streamflow and estimated unregulated streamflow for 1950-84 for the Sheyenne River below Baldhill Dam is representative of the difference for all of the sites on the main stem of the Sheyenne River and the main stem of the Red River of the North downstream from Lake Ashtabula.

Mean annual gaged streamflow for the Sheyenne River below Baldhill Dam was 9,175 acre-feet less than the mean annual estimated unregulated streamflow for 1950-84, when Baldhill Dam was in operation. Net evaporation losses from Lake Ashtabula account for the majority of the difference between gaged streamflow and estimated unregulated streamflow. Reported monthly surface-water withdrawals above Lake Ashtabula were small relative to monthly streamflow and accounted for a small percentage of the difference between gaged and estimated unregulated streamflow.

REFERENCES CITED

Alley, W.M., and Burns, A.W., 1983, Mixed-station extension of monthly streamflow records: Journal of Hydraulic Engineering, v. 109, no. 10, p. 1272-1284.

Hirsch, R.M., 1979, An evaluation of some record reconstruction techniques: Water Resources Research, v. 15, no. 6, p. 1781-1790.

----1982, A comparison of four streamflow record extension techniques: Water Resources Research, v. 18, no. 4, p. 1081-1088.

Miller, J.E. and Frink, D.L., 1984, Changes in flood response of the Red River of the North basin, North Dakota-Minnesota: U.S. Geological Survey Water-Supply Paper 2243, 103 p.

Souris-Red-Rainy River Basins Commission, 1972, Souris-Red-Rainy River basins comprehensive study: v. 3, Appendix D, p. D1-D157.

U.S. Department of Agriculture, [no date], Hydrology manual for North Dakota: Soil Conservation Service, Bismarck, N.Dak, 230 p.

U.S. Department of the Army, Corps of Engineers, 1983, Red River of the North drainage basin water supply and flood control: Baldhill Dam and Lake Ashtabula Sheyenne River Reservoir Regulation Manual, St. Paul District, Corps of Engineers, St. Paul, Minn., 41 p.

U.S. Department of Commerce, National Oceanic and Atmoshperic Administration, Environmental Data Service, 1932-85, Climatological Data, North Dakota: v. 40-93, no. 13, Annual Summaries, 1931-84.

U.S. Geological Survey, 1959, Compilation of records of surface waters of the United States through September 1950; Part 5, Hudson Bay and Upper Mississippi River basin: U.S. Geological Survey Water-Supply Paper 1308, 708 p.

----1964, Compilation of records of surface water of the United States, October 1950 to September 1960; Part 5, Hudson Bay and Upper Mississippi River basin: U.S. Geological Survey Water-Supply Paper 1728, 576 p.

----1971, Surface-water supply of the United States, 1961-65; Part 5, Hudson Bay basin, volume 1, Hudson Bay and Upper Mississippi basin: U.S. Geological Survey Water-Supply Paper 1913, 407 p.

----1971-86, Water resources data for North Dakota, water years 1970-85: U.S. Geological Survey Water-Data Reports.

----1973, Surface-water supply of the United States, 1966-70; Part 5, Hudson Bay basin, volume 1, Hudson Bay and Upper Mississippi basin: U.S. Geological Survey Water-Supply Paper 2113, 425 p.

Wiche, G.J., Benson, R.D., and Emerson, D.G., 1989, Streamflow at selected gaging stations on the James River in North Dakota and South Dakota, 1953-82, *with a section on* Climatology: U.S. Geological Survey Water-Resources Investigations Report 89-4039, 99 p.

Winter, T.C., 1981, Uncertainties in estimating the water balance of lakes: Water Resources Bulletin, v. 17, no. 1, p. 82-115.

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Fargo, N.Dak.												
1931	21.10	39.30	128.00	190.00	168.00	132.00	64.80	20.80	15.60	26.60	28.00	21.60
1932	36.10	47.30	135.00	232.00	55.60	33.20	7.73	0	8.78	14.10	6.74	1.93
1933	0	.18	129.00	207.00	73.60	51.10	15.30	1.59	.08	4.72	2.49	13.30
1934	14.00	20.50	43.00	102.00	8.12	3.31	0	0	0	0	.59	.57
1935	0	11.70	386.00	152.00	113.00	86.70	184.00	32.50	8.45	4.88	1.91	.59
1936	13.90	5.81	161.00	428.00	86.70	2.87	0	0	0	0	0	4.23
1937	4.40	.97	26.80	445.00	253.00	183.00	107.00	55.70	139.00	89.00	59.00	0
1938	5.34	14.90	236.00	164.00	426.00	330.00	98.90	18.50	57.70	29.00	19.10	21.80
1939	93.90	98.10	739.00	706.00	213.00	130.00	85.40	12.00	0	9.85	17.40	14.00
1940	1.08	8.57	40.10	447.00	384.00	185.00	15.10	3.20	0	5.71	35.00	37.70
1941	42.70	87.00	252.00	644.00	324.00	485.00	130.00	25.30	81.50	93.10	125.00	98.20
1942	112.00	110.00	190.00	326.00	1,299.00	1,665.00	989.00	470.00	608.00	530.00	432.00	314.00
1943	319.00	272.00	464.00	6,164.00	1,860.00	2,803.00	1,765.00	771.00	428.00	401.00	371.00	290.00
1944	202.00	163.00	255.00	868.00	1,196.00	2,128.00	2,013.00	689.00	770.00	745.00	730.00	510.00
1945	431.00	389.00	2,814.00	1,671.00	999.00	1,107.00	375.00	155.00	134.00	218.00	248.00	219.00
1946	187.00	113.00	1,550.00	1,348.00	640.00	420.00	706.00	599.00	504.00	578.00	535.00	490.00
1947	414.00	339.00	513.00	3,537.00	1,881.00	1,612.00	1,149.00	247.00	202.00	217.00	205.00	183.00
1948	140.00	103.00	216.00	1,806.00	1,619.00	625.00	274.00	218.00	172.00	141.00	104.00	63.30
1949	65.30	86.30	181.00	718.00	251.00	225.00	872.00	230.00	88.40	78.70	80.50	95.60
1950	88.30	134.00	527.00	3,669.00	3,320.00	1,768.00	1,521.00	768.00	214.00	145.00	96.70	117.00
1951	153.00	153.00	256.00	3,233.00	1,712.00	1,114.00	633.00	388.00	341.00	349.00	338.00	511.00
1952	529.00	535.00	533.00	7,257.00	2,149.00	1,609.00	1,270.00	426.00	445.00	324.00	249.00	186.00
1953	138.00	183.00	686.00	692.00	1,253.00	3,281.00	1,539.00	899.00	569.00	374.00	477.00	412.00
1954	357.00	344.00	631.00	863.00	944.00	1,190.00	721.00	234.00	240.00	154.00	143.00	171.00
1955	222.00	187.00	277.00	863.00	375.00	322.00	705.00	456.00	455.00	402.00	299.00	174.00
1956	238.00	220.00	251.00	1,410.00	834.00	831.00	288.00	266.00	114.00	62.30	44.00	59.00
1957	87.20	104.00	459.00	902.00	962.00	1,112.00	899.00	574.00	627.00	451.00	468.00	419.00
1958	323.00	307.00	574.00	849.00	379.00	164.00	794.00	227.00	174.00	148.00	153.00	161.00
1959	245.00	243.00	364.00	408.00	428.00	687.00	617.00	216.00	165.00	144.00	124.00	206.00
1960	208.00	228.00	309.00	1,493.00	955.00	835.00	529.00	179.00	108.00	79.40	130.00	127.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Fargo, N.Dak.--Continued							
1961	141.00	169.00	422.00	322.00	428.00	425.00	177.00	81.50	52.60	102.00	104.00	72.00
1962	76.10	85.40	203.00	2,617.00	3,352.00	5,122.00	5,692.00	2,691.00	845.00	515.00	425.00	303.00
1963	289.00	189.00	420.00	778.00	630.00	2,396.00	529.00	191.00	149.00	211.00	173.00	150.00
1964	139.00	170.00	194.00	1,182.00	1,142.00	735.00	385.00	93.90	118.00	237.00	207.00	210.00
1965	194.00	185.00	207.00	3,740.00	1,648.00	2,787.00	1,515.00	536.00	508.00	825.00	567.00	512.00
1966	491.00	490.00	3,756.00	2,269.00	2,312.00	1,810.00	794.00	900.00	410.00	468.00	476.00	460.00
1967	428.00	384.00	903.00	2,248.00	1,556.00	2,081.00	1,218.00	259.00	85.60	172.00	161.00	166.00
1968	135.00	135.00	374.00	503.00	675.00	640.00	435.00	223.00	157.00	291.00	288.00	248.00
1969	232.00	318.00	481.00	9,924.00	3,574.00	1,483.00	630.00	209.00	49.20	86.00	120.00	112.00
1970	154.00	174.00	250.00	1,027.00	839.00	1,207.00	511.00	110.00	14.10	61.30	162.00	124.00
1971	138.00	125.00	566.00	663.00	377.00	369.00	706.00	141.00	246.00	263.00	607.00	569.00
1972	554.00	408.00	2,469.00	2,255.00	2,020.00	1,787.00	940.00	695.00	434.00	438.00	360.00	394.00
1973	384.00	441.00	978.00	541.00	338.00	283.00	155.00	116.00	120.00	389.00	570.00	557.00
1974	481.00	519.00	732.00	1,313.00	1,060.00	1,108.00	708.00	355.00	225.00	296.00	259.00	185.00
1975	188.00	268.00	389.00	3,201.00	1,463.00	2,430.00	5,378.00	708.00	434.00	358.00	350.00	216.00
1976	230.00	290.00	1,002.00	1,040.00	341.00	167.00	91.30	35.00	12.30	3.77	12.00	11.70
1977	14.80	19.00	85.20	194.00	77.10	91.10	74.80	18.50	178.00	333.00	311.00	382.00
1978	406.00	328.00	1,293.00	6,926.00	1,756.00	1,239.00	1,553.00	364.00	114.00	155.00	109.00	100.00
1979	97.90	93.00	266.00	6,768.00	2,576.00	1,938.00	1,461.00	1,012.00	635.00	413.00	358.00	308.00
1980	378.00	386.00	676.00	1,796.00	587.00	581.00	161.00	125.00	31.50	55.40	99.80	98.20
1981	85.80	140.00	245.00	254.00	346.00	231.00	222.00	272.00	44.50	131.00	185.00	190.00
1982	225.00	242.00	725.00	2,407.00	927.00	815.00	622.00	314.00	190.00	479.00	362.00	333.00
1983	295.00	301.00	702.00	632.00	395.00	227.00	578.00	304.00	362.00	311.00	284.00	233.00
1984	252.00	350.00	1,618.00	3,347.00	1,171.00	2,110.00	1,026.00	381.00	177.00	521.00	502.00	335.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1955) and gaged (October 1955 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River above Harvey, N.Dak.												
1931	0.64	2.55	6.08	11.40	4.22	5.83	1.55	1.08	0.91	1.03	1.97	1.72
1932	1.27	1.04	11.20	27.50	7.18	6.38	2.97	1.52	1.05	1.06	1.72	1.05
1933	.80	.78	20.70	20.00	8.82	3.40	1.96	.88	.60	.59	.86	.67
1934	.50	.68	3.24	10.00	2.80	1.26	.73	.48	.45	.85	.81	.49
1935	.45	.76	5.93	8.87	5.28	4.64	5.38	6.83	1.70	1.32	.90	.97
1936	.80	.73	2.65	15.40	9.97	2.74	1.13	.37	.42	.49	.62	.37
1937	.39	.27	1.82	9.72	5.08	5.13	1.83	1.11	1.06	.67	.82	.56
1938	.60	.64	4.67	3.31	1.94	.62	.96	.63	.01	.02	.02	.01
1939	.02	.02	4.94	8.32	1.54	1.07	.12	0	0	0	0	0
1940	0	0	0	12.60	4.52	.62	.02	.13	.01	0	0	0
1941	0	0	4.96	69.60	8.54	9.63	4.36	1.31	3.24	3.79	2.84	1.58
1942	.29	.38	1.95	53.80	17.40	11.90	4.07	3.61	3.33	1.82	1.74	.79
1943	.70	1.46	34.30	66.00	13.60	29.70	9.56	2.90	.58	.27	1.37	.88
1944	.28	.33	1.14	7.96	5.41	11.80	4.57	5.44	7.30	2.42	6.06	3.03
1945	.97	1.21	49.00	15.50	9.48	7.95	2.40	1.04	1.24	0	.26	.35
1946	.09	0	20.50	6.34	1.02	.17	1.99	.01	0	0	.04	.03
1947	0	0	21.20	13.80	3.42	6.30	6.03	.32	.15	.51	.60	.55
1948	.10	0	.14	186.00	25.90	2.87	1.05	.21	0	0	0	0
1949	0	0	.26	146.00	6.82	6.05	1.02	0	0	0	0	0
1950	0	0	3.03	287.00	178.00	27.20	4.37	.24	.11	.72	1.32	1.29
1951	1.57	.71	1.91	111.00	19.90	35.00	3.98	.90	2.50	1.00	1.08	1.36
1952	0	0	5.22	101.00	9.38	2.82	5.80	.03	0	0	0	0
1953	0	0	6.12	6.76	11.10	7.66	2.75	0	0	0	0	.07
1954	.04	7.90	4.57	7.47	2.84	76.30	23.90	4.80	5.06	2.95	2.35	1.57
1955	.19	0	16.00	28.70	9.65	12.20	2.02	.07	0	1.41	1.05	.26
1956	.11	0	11.00	69.30	19.10	19.20	3.49	.91	1.58	1.32	2.77	.38
1957	.15	0	5.39	4.25	4.27	2.39	1.58	1.05	2.11	2.56	2.46	1.10
1958	.64	3.57	7.15	4.97	2.38	2.07	6.94	.10	.44	1.07	1.50	.10
1959	0	0	6.50	2.99	2.58	1.13	.41	0	.19	5.95	.98	.90
1960	.32	0	30.60	5.76	6.69	3.40	.18	.92	.74	.55	.71	.17

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1955) and gaged (October 1955 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River above Harvey, N.Dak.--Continued												
1961	0.04	0.19	1.80	3.09	1.64	0.30	0.07	0.03	0.56	0.47	0.81	0.09
1962	0	0	14.20	3.21	6.54	5.56	5.78	.76	.68	1.10	1.53	.80
1963	.05	0	2.87	3.79	4.37	6.73	1.58	.98	.31	.85	.98	.22
1964	.01	.03	.08	10.00	3.42	8.30	2.55	.95	1.76	1.40	1.61	.10
1965	0	0	3.38	26.70	5.49	1.82	4.02	.99	2.55	2.25	1.53	1.69
1966	0	0	61.40	4.89	3.43	3.01	9.32	1.07	.46	1.06	1.73	.16
1967	0	0	36.20	28.90	28.70	2.49	.56	0	.17	1.31	1.58	.52
1968	.01	.05	10.30	4.07	5.75	1.65	1.11	2.01	2.02	1.54	1.94	.44
1969	0	0	0	101.00	15.20	2.52	3.04	1.33	.92	1.25	1.32	1.24
1970	.34	.20	.63	19.80	14.80	7.41	3.81	1.64	1.39	1.80	2.15	.79
1971	.16	.20	6.14	90.50	14.30	54.00	9.01	1.84	1.34	4.18	2.49	.91
1972	0	0	61.20	25.80	13.90	3.09	1.09	.81	.71	1.57	2.32	.74
1973	2.32	5.86	6.15	5.11	2.25	1.81	.78	.72	1.09	2.53	1.39	.17
1974	0	.90	15.60	22.40	54.40	17.50	.76	.37	.94	1.38	1.92	1.05
1975	.18	.43	13.20	72.50	50.20	14.60	18.70	1.04	1.75	2.10	1.92	.74
1976	.42	2.04	71.10	49.80	8.64	1.78	.42	.07	.06	.99	.26	.13
1977	0	0	3.73	2.66	1.59	.87	1.02	.80	4.79	2.89	1.32	.31
1978	.25	.34	34.80	15.90	7.76	3.71	2.94	.33	.60	1.21	1.26	1.02
1979	.30	.37	.69	74.30	41.70	9.32	13.60	4.67	1.08	1.31	1.83	1.43
1980	.94	.50	9.27	19.10	3.55	2.15	1.29	6.64	3.90	5.22	5.92	2.55
1981	0	12.90	36.90	13.90	7.02	17.10	5.22	1.61	3.57	2.06	1.86	1.43
1982	.15	19.10	123.00	98.70	25.80	17.60	43.40	5.35	.73	11.80	10.40	6.27
1983	4.10	26.80	111.00	54.70	28.60	8.43	3.48	1.60	1.66	1.45	2.48	.88
1984	3.19	6.68	44.80	93.40	62.10	18.10	3.34	3.24	4.29	4.37	3.36	.66

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1949) and gaged (October 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Warwick, N.Dak.												
1931	3.15	12.60	30.00	56.00	20.80	28.70	7.67	5.33	4.50	5.09	9.73	8.48
1932	6.27	5.11	55.00	135.00	35.40	31.50	14.60	7.47	5.18	5.21	8.48	5.16
1933	3.93	3.86	102.00	98.80	43.50	16.80	9.68	4.35	2.95	2.92	4.23	3.29
1934	2.46	3.34	16.00	49.40	13.80	6.19	3.61	2.37	2.20	4.20	3.98	2.41
1935	2.24	3.76	29.20	43.70	26.00	22.90	26.50	33.70	8.40	6.51	4.45	4.79
1936	3.96	3.61	13.00	75.90	49.10	13.50	5.58	1.83	2.06	2.43	3.05	1.84
1937	1.91	1.34	8.99	47.90	25.10	25.30	9.02	5.45	5.23	3.32	4.05	2.78
1938	2.95	3.17	23.00	16.30	9.58	3.04	4.74	3.11	.05	.08	.08	.06
1939	.09	.12	24.40	41.10	7.60	5.26	.59	.01	0	.02	0	0
1940	0	0	0	62.00	22.30	3.06	.12	.62	.02	.02	0	.01
1941	0	0	24.50	343.00	42.10	47.60	21.50	6.48	16.00	18.70	14.00	7.78
1942	1.45	1.88	9.62	265.00	86.10	58.70	20.10	17.80	16.40	9.01	8.61	3.89
1943	3.44	7.20	169.00	326.00	67.40	147.00	47.20	14.30	2.88	1.31	6.77	4.32
1944	1.39	1.63	5.62	39.30	26.70	58.00	22.60	26.80	36.00	12.00	29.90	15.00
1945	4.79	5.98	242.00	76.60	46.80	39.30	11.80	5.13	6.10	5.60	7.66	5.06
1946	5.65	2.22	221.00	178.00	31.70	14.40	37.00	20.30	7.78	13.90	10.90	5.75
1947	4.63	2.67	91.00	249.00	39.90	38.50	17.50	8.68	3.22	11.20	9.34	7.24
1948	6.34	3.24	4.05	1,065.00	370.00	41.50	28.00	15.90	1.65	3.75	9.34	6.82
1949	3.36	2.78	13.30	683.00	83.80	44.30	33.30	14.70	1.71	7.90	8.87	4.05
1950	1.50	1.50	12.30	1,421.00	854.00	98.80	30.00	8.23	6.08	12.00	11.10	8.23
1951	10.60	6.68	21.70	440.00	90.50	70.10	21.50	2.68	11.60	7.77	8.87	6.74
1952	2.03	3.24	6.23	284.00	43.40	6.13	44.90	3.55	1.37	1.16	7.97	2.61
1953	2.35	2.57	13.30	38.50	60.30	61.20	64.40	3.06	2.07	1.55	2.83	3.45
1954	3.61	34.80	79.00	64.10	30.90	326.00	170.00	48.30	38.30	33.50	18.50	9.06
1955	3.14	2.43	40.40	333.00	65.40	77.50	23.60	4.48	2.11	2.62	2.37	2.07
1956	1.51	1.88	2.19	631.00	100.00	189.00	19.00	3.93	9.56	6.05	23.80	6.84
1957	2.62	1.30	43.30	51.30	36.40	21.10	24.50	25.80	63.00	31.10	18.10	10.10
1958	9.23	8.21	38.70	62.10	20.90	16.00	61.50	4.84	1.42	3.05	5.23	4.63
1959	3.20	2.49	48.60	35.20	23.90	8.92	2.57	1.11	.80	8.11	11.00	4.18
1960	2.81	1.82	21.70	392.00	97.40	63.40	12.60	4.46	1.04	1.53	1.28	.76

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1949) and gaged (October 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Warwick, N.Dak.--Continued												
1961	0.72	0.96	23.20	31.50	13.70	1.75	1.45	0.09	0.71	1.56	2.38	2.10
1962	1.56	1.30	23.10	123.00	59.40	84.40	22.70	15.80	6.60	6.10	6.30	4.62
1963	2.14	1.52	17.10	32.00	22.40	23.00	6.95	3.57	1.71	1.17	1.86	1.05
1964	1.07	1.26	1.46	88.60	32.80	58.20	24.00	5.39	11.70	16.30	8.65	5.90
1965	2.04	3.06	12.30	271.00	38.70	17.00	123.00	57.20	24.20	43.00	12.90	9.60
1966	3.27	2.20	650.00	136.00	88.80	28.40	51.10	18.40	6.66	9.65	6.52	4.13
1967	3.64	4.74	197.00	212.00	140.00	29.50	10.40	1.43	1.57	3.26	3.84	2.53
1968	2.25	2.54	91.30	26.90	31.40	13.10	5.65	5.87	12.60	6.81	4.83	3.83
1969	2.58	2.17	2.37	1022.00	85.00	26.70	24.20	24.00	5.85	3.01	4.66	4.86
1970	3.64	3.57	14.60	179.00	108.00	58.70	13.40	27.60	4.80	3.84	8.10	4.27
1971	3.18	2.10	4.61	675.00	66.60	164.00	79.60	6.85	18.30	32.40	24.20	9.09
1972	4.11	3.09	326.00	151.00	78.10	34.30	2.88	1.96	1.92	3.77	8.83	3.42
1973	2.39	1.88	72.90	25.50	20.10	6.66	1.56	1.88	3.25	8.02	4.85	4.24
1974	2.25	2.48	15.30	464.00	489.00	89.10	9.75	.90	.89	3.73	11.80	5.70
1975	5.95	5.75	51.60	561.00	369.00	67.50	45.40	6.38	8.07	7.12	10.80	5.98
1976	5.21	11.00	297.00	280.00	64.50	18.50	3.58	1.23	1.55	1.97	2.19	2.68
1977	3.32	3.43	15.40	15.80	12.50	2.24	1.07	1.18	1.70	3.29	3.89	4.66
1978	4.37	2.38	30.50	348.00	21.50	15.30	13.90	12.20	2.51	2.74	8.97	4.39
1979	7.09	4.76	5.79	701.00	289.00	56.20	117.00	52.00	8.30	8.11	12.70	7.22
1980	4.66	4.41	26.30	176.00	21.70	36.00	5.57	21.60	42.00	41.70	50.30	19.60
1981	12.30	154.00	165.00	71.60	53.70	135.00	40.50	19.70	28.00	25.10	20.60	15.10
1982	5.85	3.91	154.00	609.00	134.00	92.10	159.00	42.20	11.00	73.20	33.90	29.60
1983	26.30	55.90	793.00	309.00	105.00	45.20	21.40	5.46	8.40	26.70	18.80	6.97
1984	4.30	26.60	248.00	267.00	190.00	44.30	4.24	2.48	1.93	8.53	8.64	5.91

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1944) and gaged (October 1944 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Cooperstown, N.Dak.												
1931	5.26	21.00	50.10	93.60	34.70	8.00	12.80	8.91	7.51	8.50	16.30	14.20
1932	10.50	8.54	92.00	226.00	59.10	52.60	24.40	12.50	8.66	8.71	14.20	8.62
1933	6.57	6.45	171.00	165.00	72.70	28.00	16.20	7.27	4.93	4.89	7.06	5.50
1934	4.11	5.58	26.70	82.50	23.10	10.30	6.04	3.96	3.67	7.02	6.65	4.03
1935	3.74	6.28	48.90	73.10	43.50	38.20	44.30	56.30	14.00	10.90	7.43	8.01
1936	6.61	6.04	21.80	127.00	82.10	22.60	9.32	3.06	3.44	4.06	5.09	3.07
1937	3.19	2.25	15.00	80.10	41.90	42.30	15.10	9.12	8.75	5.54	6.78	4.64
1938	4.93	5.30	38.50	27.30	16.00	5.07	7.92	5.20	.08	.13	.13	.10
1939	.15	.20	40.80	68.60	12.70	8.79	.99	.02	.01	.03	0	0
1940	0	0	0	104.00	37.30	5.12	.19	1.04	.04	.03	0	.01
1941	0	0	40.90	574.00	70.40	79.50	36.00	10.80	26.70	31.20	23.40	13.00
1942	2.43	3.14	16.10	444.00	144.00	98.10	33.50	29.80	27.50	15.00	14.40	6.50
1943	5.76	12.00	283.00	544.00	113.00	245.00	78.90	23.90	4.82	2.19	11.30	7.22
1944	2.32	2.73	9.39	65.60	44.60	96.90	37.70	44.80	60.20	20.00	50.00	25.00
1945	8.00	10.00	404.00	128.00	78.20	65.60	19.80	8.57	10.20	9.35	12.80	8.46
1946	9.44	3.71	370.00	297.00	52.90	24.10	61.90	34.00	13.00	23.30	18.20	9.61
1947	7.74	4.46	152.00	416.00	66.70	64.40	29.30	14.50	5.38	18.70	15.60	12.10
1948	10.60	5.41	6.77	1,780.00	619.00	69.30	46.80	26.60	2.76	6.26	15.60	11.40
1949	5.61	4.64	22.20	1,142.00	140.00	74.10	55.70	24.60	2.85	23.80	23.70	16.80
1950	12.90	8.61	53.70	2,293.00	1,953.00	273.00	80.40	24.60	25.40	29.00	23.90	23.20
1951	20.80	17.90	83.60	650.00	173.00	91.40	35.00	11.20	31.80	18.10	16.40	15.70
1952	11.60	10.60	44.30	447.00	80.00	32.00	85.60	12.10	6.26	3.64	11.30	7.47
1953	6.23	7.71	18.30	62.80	73.30	123.00	132.00	8.74	2.38	4.19	9.25	8.77
1954	7.68	48.20	122.00	117.00	51.30	313.00	213.00	65.50	47.30	46.00	34.50	17.80
1955	8.58	7.84	27.60	439.00	96.50	171.00	45.90	6.45	.86	3.49	6.60	5.53
1956	4.66	4.00	4.81	678.00	243.00	280.00	51.30	12.90	18.30	13.20	37.80	15.00
1957	9.87	7.43	75.40	109.00	75.10	45.30	47.30	36.70	155.00	86.70	61.80	31.50
1958	17.80	15.80	48.10	127.00	45.90	38.00	108.00	12.80	2.35	3.48	9.91	6.41
1959	3.30	1.48	36.90	130.00	42.10	24.30	10.40	.85	0	8.50	8.35	6.57
1960	5.08	3.74	52.80	616.00	101.00	121.00	31.80	8.20	4.24	2.85	8.96	5.89

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1944) and gaged (October 1944 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Cooperstown, N.Dak.--Continued												
1961	3.63	0.61	51.30	79.00	37.30	6.66	3.84	0.68	0.70	3.77	3.35	4.70
1962	4.09	2.36	24.70	361.00	108.00	189.00	49.10	26.40	11.90	9.02	19.50	11.50
1963	4.00	0	32.80	94.60	39.00	30.00	28.10	2.67	2.67	.83	3.64	3.43
1964	1.94	1.22	2.14	162.00	62.40	237.00	101.00	27.70	40.90	43.90	25.30	10.70
1965	9.12	7.49	10.00	926.00	146.00	99.60	91.10	153.00	55.00	95.80	41.80	21.90
1966	14.00	7.65	1,022.00	385.00	236.00	155.00	188.00	108.00	27.80	28.40	18.10	16.60
1967	11.20	11.80	237.00	891.00	314.00	95.30	39.00	8.02	5.21	13.00	14.70	9.82
1968	8.75	7.53	169.00	126.00	78.90	81.30	23.90	14.60	24.60	15.50	17.70	14.70
1969	8.77	8.43	7.84	1,867.00	264.00	97.60	88.20	38.90	32.20	27.40	26.70	22.50
1970	15.60	11.70	32.30	521.00	265.00	185.00	39.00	39.30	19.20	16.30	22.70	15.00
1971	9.53	8.86	43.80	992.00	170.00	219.00	159.00	25.90	32.50	51.50	52.40	23.90
1972	10.10	7.06	462.00	479.00	267.00	131.00	21.40	15.50	7.79	14.60	21.20	17.60
1973	11.80	8.80	143.00	73.50	48.10	31.10	6.37	1.85	17.30	42.10	17.80	13.30
1974	7.75	5.84	10.30	1,111.00	660.00	435.00	41.90	16.70	5.29	14.80	35.00	15.50
1975	12.30	14.00	104.00	715.00	670.00	168.00	95.30	17.90	11.00	21.60	21.30	15.70
1976	11.70	12.10	196.00	596.00	116.00	39.00	16.70	3.05	.87	1.38	2.83	3.14
1977	3.10	3.48	21.90	59.20	39.10	11.20	9.30	.78	3.32	11.30	12.20	9.15
1978	8.52	5.03	91.30	708.00	93.80	50.60	21.50	21.50	30.80	4.58	9.15	8.18
1979	6.81	6.50	6.06	1,322.00	949.00	128.00	187.00	69.20	21.50	11.70	23.70	15.50
1980	11.20	10.50	43.30	284.00	57.40	53.40	15.10	8.06	50.60	48.10	61.10	23.80
1981	15.50	74.70	304.00	128.00	73.70	149.00	87.30	29.70	26.10	40.60	32.60	21.10
1982	8.84	4.61	105.00	876.00	214.00	166.00	195.00	61.50	17.00	114.00	65.00	61.00
1983	28.90	26.90	1,094.00	542.00	176.00	161.00	121.00	115.00	97.50	49.30	46.40	37.10
1984	25.50	16.60	354.00	771.00	328.00	115.00	40.90	8.95	.97	17.20	18.50	12.10

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for Baldhill Creek at the mouth												
1931	1.64	6.58	15.67	29.29	10.87	15.03	4.01	2.79	2.35	2.66	5.09	4.43
1932	3.28	2.67	28.78	70.79	18.50	16.45	7.64	3.91	2.71	2.72	4.43	2.70
1933	2.06	2.02	53.45	51.65	22.74	8.76	5.06	2.27	1.54	1.53	2.21	1.72
1934	1.28	1.75	8.36	25.82	7.22	3.24	1.89	1.24	1.15	2.20	2.08	1.26
1935	1.17	1.97	15.29	22.87	13.62	11.96	13.88	17.60	4.39	3.40	2.33	2.51
1936	2.07	1.89	6.82	39.70	25.70	7.07	2.92	.96	1.08	1.27	1.59	.96
1937	1.00	.70	4.70	25.05	13.10	13.23	4.72	2.85	2.74	1.73	2.12	1.45
1938	1.54	1.66	22.80	8.52	5.00	1.59	2.48	1.63	.02	.04	.04	.03
1939	.05	.06	12.70	21.40	3.97	2.75	.31	0	0	.01	0	0
1940	0	0	0	32.40	11.70	1.60	.06	.32	.01	.01	0	0
1941	0	0	12.80	179.00	22.00	24.80	11.20	3.38	8.35	9.76	7.32	4.06
1942	.76	.98	5.02	139.00	45.00	30.70	10.50	9.31	8.58	4.70	4.50	2.03
1943	1.80	3.76	88.40	170.00	35.20	76.60	24.60	7.47	1.50	.68	3.54	2.26
1944	.73	.85	2.93	20.50	13.90	30.30	11.80	14.00	18.80	.61	2.22	2.83
1945	1.13	1.13	20.80	18.90	6.14	6.52	3.17	8.14	.90	0	.85	.61
1946	.31	.64	19.80	39.70	8.13	6.05	0	5.95	3.45	5.77	3.07	.89
1947	3.57	1.96	37.30	101.00	9.64	14.60	2.93	0	0	2.46	0	1.32
1948	0	0	11.90	140.00	161.00	13.70	3.64	6.57	3.66	0	4.96	0
1949	.30	1.21	27.60	52.90	22.70	13.70	20.90	3.14	.33	4.43	4.12	2.38
1950	1.09	1.04	13.10	610.00	204.00	30.50	10.90	3.14	3.25	5.00	4.15	3.61
1951	2.66	2.25	20.60	100.00	17.40	9.84	4.55	1.37	4.12	3.77	3.02	2.18
1952	.89	1.29	10.70	58.60	7.97	3.33	11.70	1.49	.75	1.42	2.21	.84
1953	.27	.93	2.30	3.53	7.29	13.40	18.40	1.05	.27	1.55	1.85	1.03
1954	.41	6.37	30.40	8.60	5.08	35.10	30.40	8.80	6.24	6.61	5.65	2.57
1955	.51	.94	3.54	57.10	9.65	18.80	6.05	.77	.09	1.39	1.40	.57
1956	.16	.46	.57	133.00	13.70	12.00	3.68	1.98	2.08	1.66	5.16	1.98
1957	.77	0	8.88	10.90	10.10	6.02	9.77	6.54	66.20	33.70	23.20	8.39
1958	2.15	2.47	5.25	14.30	8.08	9.73	13.30	2.43	1.45	1.99	2.47	.17
1959	0	0	8.90	7.88	7.74	6.57	3.75	1.70	1.41	2.94	.43	.69
1960	.02	0	36.40	96.00	8.28	8.11	2.09	2.61	2.39	1.98	1.89	.23

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for Baldhill Creek at the mouth--Continued												
1961	0.16	0.04	11.10	8.45	6.10	1.03	0.98	1.02	2.19	1.88	1.59	0.64
1962	.11	.11	29.00	52.90	16.20	20.40	16.10	2.86	3.23	3.13	4.87	2.38
1963	.10	0	2.74	11.30	6.39	4.43	2.00	1.13	1.13	1.10	1.41	.83
1964	.25	.23	0.67	15.40	6.79	19.90	13.30	5.18	5.12	5.00	3.23	1.10
1965	.49	.46	2.51	280.00	22.10	10.00	13.30	7.69	8.98	10.90	6.37	3.46
1966	.27	.10	185.00	32.50	29.70	25.80	22.30	6.75	3.25	4.06	3.78	2.19
1967	1.38	.93	109.00	113.00	46.10	20.00	8.26	4.03	1.64	3.63	2.47	1.67
1968	.63	.62	22.60	16.10	19.60	35.70	12.60	5.52	4.57	4.65	5.54	3.70
1969	.31	.69	2.41	516.00	32.20	23.30	13.20	1.98	3.96	5.53	6.23	4.74
1970	2.02	2.26	14.40	49.40	29.90	57.20	12.30	6.93	7.76	6.41	7.71	2.96
1971	.36	1.02	36.20	99.10	15.30	25.00	10.30	1.93	3.12	5.70	7.98	3.38
1972	1.56	.21	74.90	90.30	38.10	15.40	2.91	3.12	2.19	3.11	3.18	2.15
1973	.92	1.92	26.50	8.17	6.71	3.22	.70	1.07	3.36	4.13	3.34	1.93
1974	.44	.83	2.71	264.00	42.30	18.70	2.52	2.16	1.63	2.87	4.34	3.43
1975	1.75	.76	10.70	167.00	43.50	23.60	40.40	3.07	3.19	3.65	3.89	2.14
1976	1.15	4.14	86.90	38.10	8.58	2.73	1.32	.10	.15	1.41	2.26	.81
1977	.09	.46	6.49	7.70	3.52	1.76	1.84	.96	3.72	3.98	5.56	3.77
1978	.83	.20	67.60	94.70	13.60	3.79	.93	.92	.84	2.00	1.92	.86
1979	.16	.11	1.47	740.00	92.70	10.80	3.14	2.21	1.04	1.49	2.24	2.13
1980	1.05	.50	17.40	33.40	3.04	2.08	.27	2.24	1.27	1.98	1.89	1.16
1981	.90	2.62	3.29	2.76	1.93	2.52	.50	.64	.57	2.42	2.64	1.26
1982	.54	1.82	76.30	84.80	11.80	7.33	5.16	1.07	.69	14.80	5.23	6.11
1983	2.74	6.08	198.00	43.00	14.30	19.80	19.70	4.03	4.40	4.05	4.61	2.06
1984	2.16	4.84	162.00	68.30	26.80	6.10	.72	.09	.11	1.91	2.87	1.99

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1949) and gaged (October 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River below Baldhill Dam, N.Dak.												
1931	7.91	31.60	75.40	141.00	52.30	72.30	19.30	13.40	11.30	12.80	24.50	21.30
1932	15.80	12.90	138.00	341.00	89.00	79.10	36.80	18.80	13.00	13.10	21.30	13.00
1933	9.90	9.70	257.00	248.00	109.00	42.20	24.30	10.90	7.42	7.36	10.60	8.28
1934	6.18	8.41	40.20	124.00	34.70	15.60	9.09	5.96	5.53	10.60	10.00	6.06
1935	5.62	9.46	73.60	110.00	65.50	57.50	66.80	84.70	21.10	16.40	11.20	12.00
1936	9.90	9.09	32.80	191.00	124.00	34.00	14.00	4.61	5.17	6.11	7.66	4.62
1937	4.80	3.38	22.60	121.00	63.00	63.70	22.70	13.70	13.20	8.34	10.20	6.98
1938	7.42	7.97	57.90	41.00	24.10	7.63	11.90	7.82	.12	.22	.21	.16
1939	.25	.33	61.30	103.00	19.10	13.20	1.49	.02	.01	.05	0	0
1940	0	0	0	156.00	56.10	7.69	.29	1.56	.06	.05	0	.02
1941	0	0	61.60	863.00	106.00	119.00	54.10	16.30	40.20	51.90	38.90	21.60
1942	4.03	5.22	24.20	667.00	216.00	148.00	50.40	44.80	41.30	25.00	23.90	10.80
1943	9.56	20.00	425.00	818.00	169.00	368.00	119.00	35.90	7.24	3.64	18.80	12.00
1944	3.86	4.53	14.10	98.70	67.10	146.00	56.70	67.40	90.50	21.30	54.70	31.00
1945	10.40	12.40	406.00	152.00	82.60	71.90	24.00	23.40	11.00	8.51	14.60	9.75
1946	10.10	5.06	373.00	345.00	63.50	33.40	41.80	42.20	18.40	35.50	24.70	11.50
1947	15.30	8.61	209.00	570.00	78.80	86.20	32.10	11.60	1.44	23.90	15.40	14.90
1948	8.19	4.98	29.00	1,880.00	869.00	88.90	49.30	36.70	9.50	.79	26.10	10.80
1949	6.25	7.20	73.00	1,135.00	170.00	93.20	90.50	2.74	1.11	2.50	25.00	18.30
1950	10.60	10.20	50.00	1,730.00	2,960.00	1,154.00	246.00	68.20	3.50	13.10	26.50	27.30
1951	25.70	23.60	39.60	547.00	320.00	89.80	46.90	23.70	28.90	50.00	15.00	14.90
1952	24.60	29.00	14.70	2.63	13.60	14.30	13.00	21.60	16.60	13.60	10.80	14.80
1953	24.10	23.70	8.26	2.07	12.70	77.40	124.00	8.68	13.40	19.30	19.90	41.30
1954	60.30	56.30	80.70	132.00	36.40	166.00	215.00	30.90	49.50	39.40	102.00	103.00
1955	84.30	32.00	7.81	248.00	64.00	238.00	224.00	12.60	0.81	1.92	5.27	7.64
1956	3.64	7.66	63.30	374.00	355.00	275.00	51.90	12.90	3.89	7.75	33.90	53.60
1957	57.40	68.40	44.80	17.90	36.90	63.30	39.70	34.10	272.00	98.80	120.00	82.30
1958	80.10	68.10	67.60	41.30	17.90	5.88	75.80	14.30	15.90	18.00	33.40	43.10
1959	42.10	34.90	26.50	8.95	6.86	7.90	7.28	8.53	9.40	10.10	17.30	28.00
1960	24.20	22.30	16.80	669.00	77.20	153.00	26.30	14.30	14.40	13.40	36.40	46.90

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1949) and gaged (October 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River below Baldhill Dam, N.Dak.--Continued												
1961	45.20	38.80	18.90	10.90	13.50	13.60	14.10	13.70	12.40	14.30	14.50	15.00
1962	15.00	14.80	67.90	300.00	137.00	219.00	89.00	26.10	14.70	16.30	40.80	50.90
1963	48.80	46.00	30.90	10.10	12.30	12.00	7.93	8.35	8.66	8.94	25.30	36.50
1964	25.40	17.80	11.40	10.10	9.50	212.00	136.00	13.50	30.20	26.70	51.30	50.30
1965	55.70	50.60	147.00	1,224.00	216.00	94.10	188.00	126.00	67.50	110.00	105.00	111.00
1966	104.00	65.60	1,067.00	623.00	278.00	184.00	172.00	209.00	63.80	17.50	49.80	77.80
1967	72.10	151.00	165.00	972.00	474.00	49.10	31.60	18.90	17.10	14.50	27.10	42.70
1968	43.50	46.80	42.20	143.00	130.00	225.00	28.30	17.10	18.30	23.10	54.20	51.90
1969	69.10	200.00	166.00	1,936.00	313.00	91.30	127.00	13.70	14.10	18.30	37.40	48.60
1970	53.20	87.60	146.00	420.00	330.00	333.00	32.50	15.20	13.20	11.30	21.50	40.40
1971	40.50	104.00	215.00	686.00	158.00	223.00	183.00	25.20	24.50	46.40	128.00	156.00
1972	125.00	48.10	193.00	795.00	335.00	219.00	18.20	16.80	18.60	13.40	44.10	49.00
1973	55.20	62.70	61.50	31.50	15.50	15.20	9.83	17.80	14.70	20.00	43.40	37.50
1974	70.40	180.00	219.00	921.00	684.00	508.00	17.00	16.30	13.40	10.90	32.20	52.10
1975	55.50	56.40	68.30	668.00	830.00	227.00	119.00	56.30	18.60	29.20	52.00	69.50
1976	78.10	68.30	64.30	493.00	107.00	18.00	17.70	24.10	36.10	32.20	23.30	16.70
1977	14.60	9.20	9.94	9.27	9.07	8.53	8.63	6.72	8.09	11.00	32.70	45.20
1978	63.00	104.00	144.00	703.00	129.00	41.80	19.20	20.30	39.10	66.60	51.30	36.20
1979	30.80	56.40	173.00	1,796.00	1,346.00	157.00	146.00	52.70	27.80	93.80	156.00	4.32
1980	10.40	10.90	83.10	153.00	9.32	19.40	17.40	10.10	152.00	127.00	94.90	23.50
1981	9.10	9.61	98.20	137.00	70.20	136.00	84.60	25.70	43.00	153.00	135.00	8.61
1982	7.93	32.30	174.00	892.00	233.00	177.00	227.00	56.90	14.20	145.00	238.00	114.00
1983	120.00	76.40	1,236.00	659.00	203.00	219.00	117.00	41.30	77.00	106.00	140.00	134.00
1984	78.30	64.00	257.00	912.00	351.00	114.00	33.50	37.10	41.00	103.00	48.50	51.10

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January through March 1938, July 1938, and October 1975 through December 1984) and gaged (April through June 1938, and August 1938 through September 1975) streamflow, in cubic feet per second, for the Sheyenne River at Valley City, N.Dak.												
1931	8.73	34.90	83.20	156.00	57.70	79.80	21.30	14.80	12.50	14.10	27.00	23.50
1932	17.40	14.20	153.00	376.00	98.20	87.30	40.60	20.70	14.40	14.50	23.50	14.30
1933	10.90	10.70	284.00	274.00	121.00	46.50	26.90	12.10	8.18	8.12	11.70	9.14
1934	6.82	9.28	44.40	137.00	38.30	17.20	10.00	6.58	6.10	11.70	11.00	6.69
1935	6.21	10.40	81.20	121.00	72.30	63.50	73.70	93.40	23.30	18.10	12.30	13.30
1936	11.00	10.00	36.20	211.00	136.00	37.50	15.50	5.09	5.71	6.74	8.46	5.10
1937	5.30	3.73	25.00	133.00	69.60	70.30	25.00	15.10	14.50	9.21	11.30	7.71
1938	8.18	8.80	63.90	45.30	26.60	8.43	13.20	8.64	.13	.22	.21	.16
1939	.25	.33	67.70	114.00	21.10	14.60	1.65	.03	.01	.05	0	0
1940	0	0	0	172.00	62.00	8.50	.32	1.72	.06	.05	0	.02
1941	0	0	68.00	953.00	117.00	132.00	59.80	18.00	44.40	51.90	38.90	21.60
1942	4.03	5.22	26.70	737.00	239.00	163.00	55.70	49.50	45.60	25.00	23.90	10.80
1943	9.56	20.00	470.00	904.00	187.00	407.00	131.00	39.70	8.00	3.64	18.80	12.00
1944	3.86	4.53	15.60	109.00	74.10	161.00	62.60	74.50	100.00	21.30	54.70	31.00
1945	10.40	12.40	448.00	168.00	91.20	79.40	26.50	25.80	12.10	8.51	14.60	9.75
1946	10.10	5.06	412.00	381.00	70.10	36.90	46.20	46.60	20.30	35.50	24.70	11.50
1947	15.30	8.61	231.00	630.00	87.10	95.20	35.50	12.80	1.59	23.90	15.40	14.90
1948	8.19	4.98	32.00	2,077.00	960.00	98.20	54.50	40.50	10.50	0.79	26.10	10.80
1949	6.25	7.20	80.70	1,254.00	188.00	103.00	100.00	3.03	1.23	3.02	27.50	21.90
1950	11.00	9.16	77.10	1,746.00	2,975.00	1,231.00	254.00	66.40	2.29	13.20	30.70	26.60
1951	25.90	24.00	73.20	556.00	325.00	95.30	47.20	22.30	27.50	51.30	14.50	14.70
1952	23.40	28.80	49.20	32.40	19.30	22.00	21.10	24.20	21.10	15.10	11.90	13.70
1953	23.10	36.30	18.20	3.19	22.20	112.00	133.00	9.22	12.30	19.30	20.10	38.80
1954	58.60	62.60	78.10	138.00	40.60	175.00	234.00	33.60	50.80	41.70	99.90	98.50
1955	84.30	33.40	23.30	253.00	69.30	256.00	230.00	17.10	2.29	1.29	2.19	6.27
1956	2.66	7.17	67.00	357.00	366.00	287.00	54.10	14.50	2.61	7.19	38.00	52.50
1957	54.70	63.40	45.40	17.00	33.90	64.80	46.50	43.50	289.00	103.00	125.00	83.80
1958	77.80	73.10	66.10	50.10	20.90	8.49	76.30	13.20	14.50	17.00	28.40	39.80
1959	38.90	33.70	29.00	9.97	9.77	29.90	14.10	9.84	9.93	12.40	16.10	26.40
1960	21.40	20.10	75.30	696.00	82.00	160.00	26.00	20.70	15.80	12.60	27.80	45.10

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January through March 1938, July 1938, and October 1975 through December 1984) and gaged (April through June 1938, and August 1938 through September 1975) streamflow, in cubic feet per second, for the Sheyenne River at Valley City, N.Dak.--Continued												
1961	43.30	36.50	31.10	13.70	13.10	14.30	15.20	11.70	15.90	15.90	13.70	13.50
1962	13.80	13.80	123.00	316.00	148.00	245.00	172.00	36.30	20.60	18.70	40.20	50.70
1963	50.20	48.70	37.20	13.40	13.20	18.80	10.20	7.94	11.00	6.65	22.70	34.00
1964	23.50	15.80	10.00	25.50	11.90	200.00	138.00	16.40	28.10	29.40	50.70	50.50
1965	53.90	48.10	150.00	1,411.00	226.00	109.00	208.00	145.00	78.30	116.00	104.00	104.00
1966	102.00	76.30	1,229.00	708.00	307.00	205.00	168.00	215.00	67.30	16.80	43.90	75.90
1967	68.10	154.00	207.00	1,012.00	512.00	56.80	27.70	17.50	17.80	16.40	24.30	41.90
1968	40.50	42.10	65.50	158.00	145.00	266.00	31.70	17.40	19.00	20.70	59.90	51.60
1969	63.10	208.00	186.00	2,091.00	334.00	97.50	156.00	16.90	18.10	13.60	38.50	47.50
1970	53.50	85.00	143.00	473.00	319.00	359.00	33.30	14.20	11.30	13.90	24.00	39.40
1971	37.30	120.00	263.00	691.00	168.00	234.00	192.00	25.90	25.20	49.30	132.00	155.00
1972	119.00	45.20	269.00	876.00	320.00	191.00	25.10	20.50	22.60	19.20	45.70	50.20
1973	55.30	64.00	103.00	36.90	16.90	14.70	10.50	18.90	19.10	18.00	31.00	34.50
1974	63.40	199.00	245.00	1,008.00	727.00	508.00	18.30	18.10	13.00	12.70	36.50	54.20
1975	54.50	58.60	72.60	759.00	915.00	255.00	167.00	57.90	20.30	29.20	52.00	69.50
1976	78.10	68.30	70.40	540.00	117.00	19.70	21.20	26.40	39.50	32.20	23.30	16.70
1977	14.60	9.20	10.90	10.20	9.93	9.34	10.30	7.36	8.86	11.00	32.70	45.20
1978	63.00	104.00	158.00	770.00	141.00	45.80	23.00	22.20	42.80	66.60	51.30	36.20
1979	30.80	56.40	189.00	1,967.00	1,474.00	172.00	175.00	57.70	30.40	93.80	156.00	4.32
1980	10.40	10.90	91.00	168.00	10.20	21.20	20.90	11.10	166.00	127.00	94.90	23.50
1981	9.10	9.61	108.00	150.00	76.90	149.00	101.00	28.10	47.10	153.00	135.00	8.61
1982	7.93	32.30	191.00	977.00	255.00	194.00	169.00	44.90	15.00	145.00	238.00	114.00
1983	120.00	76.40	1,353.00	722.00	222.00	240.00	140.00	45.20	84.30	106.00	140.00	134.00
1984	78.30	64.00	281.00	999.00	384.00	125.00	40.20	40.60	44.90	103.00	48.50	51.10

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1956) and gaged (October 1956 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at Lisbon, N.Dak.												
1931	10.30	41.30	98.30	183.70	68.20	94.30	25.10	17.50	14.70	16.70	31.90	27.80
1932	20.50	16.80	180.00	444.00	116.00	103.00	47.90	24.50	17.00	17.10	27.80	16.90
1933	12.90	12.60	335.00	324.00	143.00	55.00	31.70	14.30	9.67	9.59	13.90	10.80
1934	8.06	11.00	52.50	162.00	45.30	20.30	11.80	7.77	7.21	13.80	13.00	7.91
1935	7.33	12.30	95.90	143.00	85.40	75.00	87.00	110.00	27.60	21.30	14.60	15.70
1936	13.00	11.80	42.80	249.00	161.00	44.30	18.30	6.01	6.74	7.96	9.99	6.03
1937	6.26	4.41	29.50	157.00	82.20	83.00	29.60	17.90	17.20	10.90	13.30	9.11
1938	9.67	10.40	75.50	53.50	31.40	31.70	8.14	10.20	.15	.26	.25	.19
1939	.30	.39	79.90	135.00	24.90	17.20	1.95	.03	.01	.06	0	0
1940	0	0	0	203.00	73.20	10.00	.38	2.03	.07	.06	0	.02
1941	0	0	80.20	1,125.00	138.00	156.00	70.60	21.20	52.40	61.20	45.90	25.50
1942	4.76	6.16	31.50	870.00	282.00	192.00	65.70	58.40	53.80	29.50	28.20	12.70
1943	11.30	23.60	555.00	1,067.00	221.00	480.00	155.00	46.80	9.44	4.30	22.20	14.20
1944	4.56	5.35	18.40	129.00	87.40	190.00	73.90	87.90	118.00	25.10	64.60	36.60
1945	12.30	14.60	529.00	198.00	108.00	93.70	31.30	30.40	14.30	10.00	17.20	11.50
1946	11.90	5.97	486.00	450.00	82.70	43.50	54.50	55.00	24.00	41.90	29.10	13.60
1947	18.10	10.20	273.00	743.00	103.00	112.00	41.90	15.10	1.88	28.20	18.20	17.60
1948	9.67	5.88	37.80	2,451.00	1,133.00	116.00	64.30	47.80	12.40	.93	30.80	12.70
1949	7.38	8.50	95.20	1,480.00	222.00	122.00	118.00	3.58	1.45	3.56	32.50	25.80
1950	13.00	10.80	91.00	2,060.00	3,511.00	1,453.00	300.00	78.40	2.70	15.60	36.20	31.40
1951	30.60	28.30	86.40	656.00	384.00	112.00	55.70	26.30	32.50	60.50	17.10	17.30
1952	27.60	34.00	58.10	38.20	22.80	26.00	24.90	28.60	24.90	17.80	14.00	16.20
1953	27.30	42.80	21.50	3.76	26.20	132.00	157.00	10.90	14.50	22.80	23.70	45.80
1954	69.20	73.90	92.20	163.00	47.90	207.00	276.00	39.70	59.90	49.20	118.00	116.00
1955	99.50	39.40	27.50	299.00	81.80	302.00	271.00	20.20	2.70	1.52	2.58	7.40
1956	3.14	8.46	79.10	421.00	432.00	339.00	63.80	17.10	3.08	7.66	34.50	49.10
1957	50.60	49.80	68.20	43.10	39.90	65.20	51.50	49.30	323.00	109.00	134.00	80.90
1958	70.70	95.60	116.00	98.80	38.40	27.60	72.30	17.20	12.90	21.10	31.50	36.50
1959	36.00	33.50	48.40	33.20	17.50	40.10	27.70	10.70	5.25	16.00	12.70	26.00
1960	19.50	21.90	175.00	838.00	100.00	172.00	35.70	21.00	13.90	15.30	26.10	46.10

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1956) and gaged (October 1956 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at Lisbon, N.Dak.--Continued												
1961	43.00	39.40	108.00	29.00	22.10	14.80	8.60	6.54	18.70	21.10	18.50	13.00
1962	13.20	14.80	247.00	469.00	211.00	277.00	657.00	91.60	39.90	31.30	54.60	58.20
1963	49.50	52.00	68.10	63.80	34.90	41.50	17.40	13.10	12.20	11.70	25.90	36.60
1964	25.80	26.20	19.80	78.90	30.40	159.00	203.00	22.90	33.70	26.50	53.90	50.80
1965	46.90	42.10	126.00	1,634.00	307.00	163.00	211.00	185.00	66.80	121.00	97.90	106.00
1966	104.00	76.80	1,304.00	991.00	359.00	218.00	149.00	220.00	71.90	35.70	44.50	73.50
1967	67.60	130.00	345.00	959.00	634.00	104.00	33.50	17.70	16.10	18.30	29.10	42.60
1968	37.40	41.30	128.00	168.00	163.00	329.00	47.70	17.50	21.80	22.40	53.90	50.10
1969	41.70	202.00	220.00	2,548.00	443.00	140.00	213.00	21.50	25.90	22.10	47.50	58.50
1970	65.50	101.00	231.00	523.00	402.00	447.00	68.20	17.70	17.20	16.50	29.70	42.20
1971	39.60	79.10	356.00	732.00	222.00	244.00	229.00	30.40	22.40	56.60	107.00	159.00
1972	138.00	78.60	363.00	928.00	289.00	235.00	39.80	24.90	19.20	23.90	42.30	48.50
1973	53.50	70.40	165.00	62.20	27.20	21.70	6.07	11.60	25.00	22.40	32.80	34.70
1974	63.70	178.00	284.00	1,006.00	686.00	555.00	20.10	16.60	10.10	14.50	38.70	53.20
1975	54.80	56.20	81.60	737.00	970.00	513.00	700.00	95.30	27.10	38.10	62.70	92.70
1976	93.70	107.00	169.00	602.00	172.00	51.60	21.30	10.70	29.90	43.60	30.50	19.80
1977	19.70	17.00	51.90	36.90	67.70	19.70	18.50	7.44	24.60	23.90	40.60	48.30
1978	55.30	98.80	427.00	806.00	181.00	79.20	42.20	22.20	61.50	57.70	54.60	24.50
1979	31.10	56.50	225.00	1,788.00	1,989.00	207.00	152.00	74.30	37.90	73.70	180.00	22.70
1980	15.90	15.90	209.00	247.00	18.90	34.80	28.40	15.80	159.00	126.00	114.00	39.30
1981	15.80	29.10	83.60	153.00	65.20	113.00	127.00	29.10	26.40	141.00	168.00	18.20
1982	14.00	15.60	190.00	1,244.00	297.00	171.00	185.00	72.70	13.70	135.00	195.00	123.00
1983	127.00	76.40	1,214.00	788.00	209.00	268.00	218.00	20.90	88.60	107.00	137.00	136.00
1984	109.00	76.00	416.00	1,092.00	382.00	110.00	35.00	16.40	32.50	95.50	56.50	53.20

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through July 1949) and gaged (August 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Kindred, N.Dak.												
1931	12.50	50.00	119.00	223.00	82.70	114.00	30.50	21.20	17.90	20.20	38.70	33.70
1932	24.90	20.30	219.00	538.00	141.00	125.00	58.10	29.70	20.60	20.70	33.70	20.50
1933	15.60	15.30	407.00	393.00	173.00	66.70	38.50	17.30	11.70	11.60	16.80	13.10
1934	9.77	13.30	63.60	196.00	54.90	24.60	14.40	9.42	8.75	16.70	15.80	9.59
1935	8.89	15.00	116.00	174.00	104.00	91.00	106.00	134.00	33.40	25.90	17.70	19.10
1936	15.70	14.40	51.90	302.00	195.00	53.80	22.20	7.29	8.18	9.66	12.10	7.31
1937	7.59	5.35	35.80	191.00	99.70	101.00	35.90	21.70	20.80	13.20	16.10	11.00
1938	11.70	12.60	91.60	113.00	69.20	38.50	18.90	40.20	16.40	11.60	14.90	11.70
1939	11.10	9.87	103.00	253.00	60.30	54.30	26.10	11.00	8.85	12.10	16.80	14.90
1940	6.23	5.57	6.61	205.00	118.00	43.10	14.50	10.80	8.46	10.60	15.40	12.60
1941	12.30	12.30	31.60	1,014.00	225.00	214.00	110.00	47.10	51.80	72.00	63.90	50.10
1942	23.70	22.10	45.30	649.00	397.00	291.00	108.00	75.40	107.00	62.80	55.40	35.70
1943	32.40	35.70	263.00	1,618.00	363.00	752.00	266.00	129.00	61.50	40.00	58.00	41.00
1944	26.80	31.10	38.10	217.00	255.00	245.00	178.00	161.00	181.00	77.00	90.40	59.30
1945	43.50	45.90	540.00	446.00	184.00	156.00	77.10	61.80	36.80	36.30	36.90	25.90
1946	28.10	24.70	325.00	672.00	148.00	112.00	86.60	72.50	41.00	74.80	56.90	40.80
1947	37.10	39.50	69.90	1,247.00	234.00	226.00	111.00	56.50	31.50	33.30	63.30	46.40
1948	31.60	29.30	38.70	1,417.00	1,591.00	266.00	147.00	101.00	53.30	33.70	51.30	38.00
1949	27.30	21.80	116.00	1,131.00	507.00	190.00	136.00	93.40	32.00	34.80	39.70	44.20
1950	29.70	28.90	201.00	1,575.00	3,053.00	1,938.00	401.00	174.00	57.40	51.00	64.10	47.60
1951	50.00	50.00	87.30	683.00	530.00	184.00	127.00	59.00	71.20	61.50	86.70	47.40
1952	45.50	59.00	62.10	787.00	117.00	73.40	75.90	38.90	41.20	42.80	43.50	35.50
1953	34.70	45.60	128.00	99.30	139.00	289.00	268.00	59.90	33.00	40.60	47.70	52.90
1954	67.10	111.00	133.00	223.00	101.00	113.00	337.00	73.40	69.40	67.40	109.00	108.00
1955	80.80	49.30	71.00	351.00	107.00	272.00	292.00	111.00	26.10	29.90	22.70	17.60
1956	19.70	21.70	35.10	255.00	612.00	299.00	98.30	49.30	26.00	24.60	47.60	59.20
1957	55.60	57.70	113.00	117.00	88.40	98.80	93.90	74.10	325.00	129.00	171.00	116.00
1958	96.50	89.00	209.00	177.00	84.70	73.70	105.00	43.70	30.50	38.30	42.80	38.80
1959	41.10	33.80	66.00	97.40	53.70	59.30	62.10	33.10	25.10	36.00	30.60	41.90
1960	38.00	36.10	69.00	1,060.00	182.00	213.00	84.70	36.50	41.30	34.70	47.10	58.50

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through July 1949) and gaged (August 1949 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River near Kindred, N.Dak.--Continued												
1961	61.90	61.30	144.00	78.90	73.00	48.40	30.00	25.20	30.50	41.90	33.10	24.90
1962	25.20	31.00	146.00	728.00	306.00	395.00	1,065.00	274.00	112.00	88.70	95.50	102.00
1963	66.00	58.00	121.00	209.00	117.00	134.00	56.70	45.60	38.10	37.10	46.20	45.70
1964	30.50	43.20	51.20	166.00	86.80	125.00	276.00	49.50	55.50	53.30	76.90	58.70
1965	60.60	62.00	76.90	1,508.00	475.00	270.00	202.00	261.00	99.30	186.00	127.00	138.00
1966	113.00	101.00	1,121.00	1,328.00	464.00	301.00	192.00	274.00	104.00	66.10	49.90	87.60
1967	91.50	87.50	420.00	916.00	744.00	224.00	81.20	38.40	34.70	38.30	38.10	48.00
1968	53.90	50.00	161.00	247.00	236.00	340.00	99.90	43.40	41.50	46.00	70.70	60.80
1969	63.00	179.00	263.00	2,464.00	965.00	233.00	306.00	75.40	57.00	55.70	61.40	67.90
1970	62.30	87.70	218.00	592.00	422.00	520.00	166.00	51.50	41.50	41.30	55.90	48.30
1971	57.40	62.50	394.00	663.00	425.00	305.00	316.00	64.30	66.90	99.10	136.00	165.00
1972	165.00	109.00	447.00	963.00	468.00	365.00	121.00	75.00	54.40	62.60	69.60	55.90
1973	58.90	94.30	309.00	156.00	72.50	58.00	32.30	30.70	44.60	50.90	50.40	50.10
1974	49.90	124.00	310.00	938.00	845.00	680.00	73.30	54.20	34.80	42.40	58.10	57.50
1975	71.90	67.30	97.40	762.00	1,191.00	634.00	1,466.00	191.00	114.00	102.00	115.00	115.00
1976	116.00	221.00	315.00	625.00	282.00	97.60	60.00	35.00	36.90	38.40	45.20	41.20
1977	38.00	41.60	110.00	104.00	102.00	56.90	39.90	22.50	40.90	57.60	60.00	58.60
1978	52.90	101.00	416.00	880.00	275.00	144.00	94.90	42.10	124.00	81.50	86.80	49.40
1979	44.60	51.20	149.00	1,817.00	2,306.00	356.00	218.00	153.00	81.30	78.80	232.00	65.80
1980	42.60	42.70	193.00	381.00	61.50	88.30	59.80	44.90	143.00	132.00	141.00	69.00
1981	36.90	49.40	120.00	211.00	105.00	133.00	178.00	57.70	35.70	160.00	194.00	38.60
1982	27.20	31.50	145.00	1,255.00	371.00	240.00	190.00	111.00	32.90	135.00	182.00	164.00
1983	139.00	86.00	1,165.00	931.00	287.00	267.00	312.00	45.20	104.00	102.00	149.00	153.00
1984	138.00	96.30	398.00	1,203.00	456.00	208.00	84.70	29.50	54.90	115.00	85.80	64.80

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at West Fargo, N.Dak.												
1931	12.80	51.20	122.00	228.00	84.60	117.00	31.20	21.70	18.30	20.70	39.60	34.50
1932	25.50	20.80	224.00	551.00	144.00	128.00	59.50	30.40	21.10	21.20	34.50	21.00
1933	16.00	15.70	416.00	402.00	177.00	68.20	39.40	17.70	12.00	11.90	17.20	13.40
1934	10.00	13.60	65.10	201.00	56.20	25.20	14.70	9.64	8.95	17.10	16.20	9.81
1935	9.10	15.30	119.00	178.00	106.00	93.10	108.00	137.00	34.20	26.50	18.10	19.50
1936	16.10	14.70	53.10	309.00	200.00	55.00	22.70	7.46	8.37	9.88	12.40	7.48
1937	7.77	5.47	36.60	195.00	102.00	103.00	36.70	22.20	21.30	13.50	16.50	11.30
1938	12.00	12.90	93.70	116.00	70.80	39.40	19.30	41.10	16.80	11.90	15.20	12.00
1939	11.40	10.10	105.00	259.00	61.70	55.60	26.70	11.30	9.06	12.40	17.20	15.20
1940	6.37	5.70	6.76	210.00	121.00	44.10	14.80	11.00	8.66	10.80	15.80	12.90
1941	12.60	12.60	32.30	1,038.00	230.00	219.00	113.00	48.20	53.00	73.70	65.40	51.30
1942	24.20	22.60	46.40	664.00	406.00	298.00	110.00	77.20	109.00	64.30	56.70	36.50
1943	33.20	36.50	269.00	1,656.00	371.00	769.00	272.00	132.00	62.90	40.90	59.30	42.00
1944	27.40	31.80	39.00	222.00	261.00	251.00	182.00	165.00	185.00	78.80	92.50	60.70
1945	44.50	47.00	553.00	456.00	188.00	160.00	78.90	63.20	37.70	37.10	37.80	26.50
1946	28.80	25.30	333.00	688.00	151.00	115.00	88.60	74.20	42.00	76.50	58.20	41.70
1947	38.00	40.40	71.50	1,276.00	239.00	231.00	114.00	57.80	32.20	34.10	64.80	47.50
1948	32.30	30.00	39.60	1,450.00	1,628.00	272.00	150.00	103.00	54.50	34.50	52.50	38.90
1949	27.90	22.30	119.00	1,157.00	519.00	194.00	139.00	85.60	27.30	33.30	42.30	45.10
1950	29.40	27.50	131.00	1,542.00	2,654.00	1,785.00	444.00	189.00	61.90	52.60	65.10	54.40
1951	50.00	50.00	67.70	709.00	553.00	192.00	133.00	61.80	68.80	62.80	92.30	55.20
1952	45.50	57.90	68.00	971.00	125.00	74.80	224.00	43.50	40.10	43.60	47.00	35.20
1953	33.50	43.00	129.00	108.00	158.00	475.00	286.00	65.60	34.20	42.60	54.70	58.80
1954	72.90	112.00	144.00	240.00	117.00	100.00	342.00	81.40	71.30	64.30	98.80	92.90
1955	81.00	50.60	58.10	376.00	110.00	282.00	295.00	134.00	31.70	38.00	24.60	19.40
1956	18.90	18.30	34.00	272.00	617.00	305.00	124.00	53.50	28.70	27.10	43.40	55.80
1957	40.00	42.10	120.00	143.00	96.70	115.00	104.00	80.50	290.00	137.00	171.00	131.00
1958	111.00	95.40	201.00	195.00	97.60	78.40	131.00	58.70	39.10	38.40	44.70	41.20
1959	41.90	36.00	73.80	121.00	54.00	92.90	77.80	33.30	33.50	35.60	27.90	42.70
1960	40.20	43.40	58.40	1,072.00	191.00	207.00	85.30	35.70	46.20	32.80	46.50	59.80

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at West Fargo, N.Dak.--Continued							
1961	69.10	63.40	148.00	95.00	83.30	47.60	32.50	23.70	30.20	44.70	32.80	25.30
1962	24.40	35.30	65.40	773.00	318.00	419.00	1,097.00	274.00	103.00	80.20	90.60	97.00
1963	68.40	60.90	108.00	232.00	124.00	126.00	60.40	46.80	37.90	35.80	45.80	46.30
1964	31.70	49.50	55.60	198.00	97.50	107.00	281.00	56.30	57.90	51.50	78.60	59.30
1965	64.80	66.60	75.30	1,409.00	584.00	282.00	181.00	277.00	101.00	194.00	142.00	142.00
1966	118.00	100.00	887.00	1,485.00	523.00	330.00	217.00	277.00	108.00	76.60	51.40	90.40
1967	95.60	94.70	344.00	992.00	797.00	273.00	101.00	53.30	45.10	35.50	42.00	52.60
1968	55.60	57.80	163.00	274.00	221.00	343.00	115.00	46.90	47.30	49.80	71.00	65.20
1969	67.20	175.00	285.00	1,789.00	1,124.00	282.00	324.00	90.50	60.70	63.90	62.50	62.30
1970	69.40	86.60	197.00	632.00	505.00	598.00	205.00	58.30	40.60	39.50	56.30	49.80
1971	55.60	62.60	358.00	631.00	521.00	313.00	330.00	68.20	68.70	86.10	131.00	168.00
1972	152.00	109.00	410.00	1,017.00	513.00	443.00	114.00	83.20	54.80	57.30	60.60	55.90
1973	59.10	93.90	268.00	155.00	74.60	61.40	34.40	32.30	48.10	57.20	51.80	59.50
1974	41.70	123.00	313.00	944.00	861.00	747.00	104.00	63.50	43.10	40.10	57.60	55.60
1975	69.30	75.40	115.00	735.00	1,175.00	589.00	1,358.00	214.00	108.00	103.00	115.00	111.00
1976	108.00	211.00	330.00	658.00	331.00	108.00	61.40	29.70	7.43	27.60	18.90	9.15
1977	8.40	16.40	83.70	111.00	118.00	40.20	41.40	22.10	36.70	60.20	58.60	59.70
1978	46.40	92.00	425.00	1,102.00	315.00	144.00	104.00	47.50	122.00	79.50	81.90	46.70
1979	43.30	50.30	120.00	1,591.00	2,066.00	403.00	209.00	164.00	83.30	72.60	241.00	68.20
1980	45.40	50.10	147.00	438.00	65.90	90.10	64.80	43.80	139.00	135.00	146.00	74.10
1981	38.00	46.00	112.00	230.00	112.00	141.00	187.00	61.80	35.50	162.00	189.00	39.50
1982	24.20	31.20	135.00	1,267.00	388.00	251.00	191.00	117.00	37.10	158.00	234.00	186.00
1983	147.00	91.20	1,067.00	1,085.00	300.00	312.00	420.00	60.10	96.50	125.00	196.00	141.00
1984	141.00	113.00	275.00	1,385.00	550.00	263.00	94.20	29.10	47.40	106.00	93.80	77.20

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Maple River at the mouth												
1931	0.01	0.27	11.77	62.09	5.57	11.66	0.75	1.17	0.27	0.43	1.55	1.13
1932	.08	6.19	335.81	213.79	32.18	13.71	2.84	.23	.31	.76	2.61	.44
1933	.02	.12	180.32	104.09	20.84	4.44	1.20	.16	.06	.06	.75	.18
1934	0	.09	2.90	51.40	3.47	2.63	.15	1.28	2.56	1.00	1.55	.53
1935	.15	.06	79.15	36.17	24.40	7.76	9.86	.86	.32	.43	2.25	.38
1936	.02	.04	.86	173.84	18.14	3.02	.38	.08	.08	.14	1.08	.32
1937	.08	.04	.41	49.13	10.55	9.30	1.04	3.51	1.80	.14	1.08	.32
1938	.01	.02	38.01	22.57	7.90	1.66	.27	1.05	.14	.06	.59	.15
1939	.01	.04	114.46	75.04	2.06	3.08	.54	.05	.03	.02	.75	.24
1940	.02	.01	.02	146.85	12.42	2.03	.15	4.47	.01	.05	.64	.17
1941	.01	.08	25.91	421.11	18.03	35.96	10.80	1.10	2.32	8.66	8.77	2.43
1942	.06	.02	9.21	227.83	81.85	62.41	10.25	3.33	2.51	1.32	3.28	1.26
1943	.16	.10	261.30	117.69	38.12	86.81	67.70	1.92	.38	.32	2.28	1.66
1944	.09	.06	1.82	63.81	60.79	25.05	13.93	13.93	10.74	5.46	15.66	5.23
1945	.36	0	100.63	93.29	27.21	17.82	3.89	3.64	.51	1.43	2.54	.85
1946	.11	.03	125.25	75.37	9.52	10.12	4.76	.04	.14	6.44	5.92	1.38
1947	.14	0	109.06	1,021.46	64.03	381.16	19.33	1.10	4.36	2.57	7.00	6.06
1948	2.79	.35	6.83	559.32	55.39	21.06	14.90	9.87	1.67	.75	6.69	1.89
1949	.04	0	9.67	225.67	16.63	8.71	7.84	.25	0	.51	2.95	1.08
1950	.04	0	92.97	1,000.94	669.46	82.82	70.40	6.98	2.66	4.63	3.83	1.47
1951	.77	.22	7.96	252.67	17.38	12.53	12.31	6.50	11.66	4.98	6.59	6.82
1952	1.57	.39	.26	978.27	27.75	7.20	52.58	.59	.01	0	1.89	2.15
1953	1.53	1.59	26.99	22.68	95.56	774.19	68.46	55.18	1.92	.86	6.37	5.58
1954	2.68	3.85	41.46	40.06	15.22	7.04	13.93	2.76	3.40	.85	3.64	3.29
1955	1.60	.27	.19	127.41	6.80	14.47	68.24	10.23	.30	.67	2.15	.68
1956	.02	0	0	123.09	29.48	14.68	3.13	.53	.26	.02	8.01	2.04
1957	.54	.16	7.67	29.26	14.58	58.63	14.90	16.41	27.53	11.12	20.95	7.91
1958	2.54	.64	34.34	80.77	18.25	16.95	45.78	3.34	5.52	2.05	2.66	.33
1959	0	0	11.01	15.01	9.02	122.01	22.68	1.19	0	.83	1.99	1.19
1960	.89	.43	75.91	388.72	17.06	6.28	2.17	0	0	0	0	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Maple River at the mouth--Continued												
1961	0.00	0.00	32.50	19.44	18.68	1.85	0.00	0.00	4.30	24.62	3.65	2.21
1962	.48	.18	.98	748.28	229.99	183.56	821.70	288.30	71.05	32.93	30.67	13.17
1963	.82	0	16.74	172.76	35.85	37.68	13.61	7.20	6.08	3.40	5.53	1.14
1964	.11	.11	6.34	119.85	42.22	53.12	18.46	9.34	4.32	4.32	7.22	1.49
1965	1.30	.60	.32	1,240.65	99.88	45.78	69.75	62.84	43.30	41.46	22.89	11.77
1966	3.31	1.18	1,122.96	493.45	161.97	46.75	24.40	22.78	9.34	6.83	6.50	2.03
1967	.89	.92	84.98	409.23	182.48	31.10	7.07	1.32	.70	3.21	5.67	2.66
1968	.29	.18	50.32	66.41	33.26	125.25	44.49	12.74	6.66	5.78	7.46	3.25
1969	.05	0	0	1,844.24	163.04	38.44	402.75	38.33	23.75	16.95	14.36	7.67
1970	4.08	2.30	44.59	563.64	462.14	516.13	35.52	7.61	29.59	9.72	13.28	2.28
1971	.53	0	222.43	140.37	29.69	41.89	59.06	6.26	29.91	53.02	39.09	12.09
1972	3.85	2.09	516.13	293.70	404.91	116.61	45.03	56.26	31.21	7.74	15.55	7.23
1973	4.64	5.24	434.07	86.27	25.59	8.74	1.12	2.08	13.71	9.89	8.24	4.11
1974	.25	.05	.36	602.51	185.72	53.12	14.58	17.28	7.71	2.71	16.95	4.89
1975	1.25	0	1.01	1,409.10	354.16	373.60	2,564.45	54.31	29.37	1.43	8.27	3.70
1976	5.82	1.39	287.22	206.24	27.64	10.13	3.03	.04	.02	.37	.87	.57
1977	.24	.06	2.06	21.38	13.17	4.84	1.34	.12	1.77	6.07	14.04	3.25
1978	.44	.53	375.76	728.84	79.47	16.95	9.11	1.17	5.24	1.49	3.68	2.03
1979	.36	.53	2.92	1,128.36	336.89	107.33	39.09	15.55	3.00	6.18	10.02	4.20
1980	.42	1.30	61.65	194.36	13.28	7.32	3.40	1.32	2.05	1.11	5.84	4.92
1981	.24	1.34	9.88	62.84	10.54	16.30	30.99	8.04	2.55	6.99	10.91	1.48
1982	.06	1.14	92.00	631.66	67.05	45.89	32.39	1.43	.35	89.84	18.14	12.74
1983	14.90	2.30	531.25	207.32	60.47	67.81	167.36	30.99	48.70	37.90	20.41	16.95
1984	13.07	2.01	509.65	337.97	83.47	49.89	7.42	.04	1.44	8.43	8.09	5.33

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Rush River at the mouth												
1931	0.00	0.18	10.50	4.33	0.89	0.42	0.11	0.05	0.02	0.05	0.07	0.05
1932	.03	2.29	65.40	41.30	5.14	1.59	.05	.02	.02	.05	.02	0
1933	0	0	15.50	17.90	3.32	.65	.03	.02	.02	.07	.07	.05
1934	.03	.07	5.15	5.38	.55	.24	.07	.08	.19	.11	.02	.02
1935	.03	.07	24.80	5.20	3.91	16.70	.49	.08	.02	.08	.02	0
1936	0	0	1.20	32.60	2.90	.24	.03	0	0	.02	.02	0
1937	.02	0	.73	2.45	1.69	1.15	.08	.28	.07	.03	.02	0
1938	0	.02	15.20	1.00	1.26	2.77	.11	.02	.02	.02	.02	.02
1939	.02	0	31.80	6.13	.32	1.05	.02	0	0	.02	.02	.02
1940	0	0	.15	26.60	1.99	.13	.02	.36	.02	.03	.05	.02
1941	.03	.03	11.70	91.70	2.88	11.00	.07	.07	.11	.19	.13	.10
1942	0	0	5.83	44.60	13.00	4.85	.39	.29	6.55	1.60	1.09	.10
1943	.03	.02	55.30	20.70	6.06	18.00	10.10	3.35	.50	.24	.37	.05
1944	.02	.03	1.98	10.90	3.34	3.00	30.00	5.33	1.28	5.04	7.16	.28
1945	.15	.08	31.70	6.63	3.61	2.30	.31	.15	.75	.70	.24	.10
1946	.05	.03	54.40	8.51	3.24	1.07	11.60	0	0	.49	1.38	.28
1947	0	0	49.80	282.00	12.70	62.90	2.48	0	0	.06	.16	.21
1948	.16	0	0	224.00	8.91	2.43	.83	.18	0	0	.29	.05
1949	0	0	24.60	65.80	4.18	1.77	3.21	.16	0	0	.06	0
1950	0	0	40.00	331.00	132.00	27.70	4.21	.04	0	.24	.24	0
1951	0	0	48.30	45.70	3.57	4.96	1.02	0	.42	.02	1.18	.45
1952	0	0	0	123.00	2.72	.13	1.83	.01	0	0	0	0
1953	0	0	8.59	3.61	9.17	79.30	13.10	1.47	0	0	0	0
1954	0	.26	9.68	14.70	3.39	2.85	.06	0	0	0	0	0
1955	0	0	9.93	18.60	.19	2.24	0	2.80	0	0	0	0
1956	0	0	0	41.80	4.52	14.30	.11	0	0	0	0	0
1957	0	0	6.11	2.79	3.52	26.90	10.80	4.28	2.80	1.46	4.46	.10
1958	0	1.91	3.06	5.51	3.03	5.01	15.80	0	0	0	0	0
1959	0	0	26.40	2.33	1.99	7.29	.31	0	0	0	0	0
1960	0	0	44.60	79.40	4.20	1.54	18.60	.01	0	0	0	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Rush River at the mouth--Continued												
1961	0.00	0.00	12.20	4.76	3.48	0.24	0.00	0.00	0.00	6.87	0.21	0.00
1962	0	0	18.30	151.00	27.20	13.10	62.60	4.47	2.43	.83	4.26	2.01
1963	0	0	3.89	16.50	5.54	6.27	.04	0	0	0	0	0
1964	0	0	0	35.30	7.91	16.50	.70	.05	.16	.19	1.07	.16
1965	0	0	0	177.00	24.60	7.28	9.69	.16	.96	6.81	1.91	.57
1966	0	0	95.50	78.10	22.90	7.46	3.95	3.50	.31	.02	.02	0
1967	0	0	30.80	81.50	15.90	4.44	1.90	0	0	0	0	0
1968	0	0	16.50	15.80	10.90	50.10	2.95	0	0	.15	.76	.28
1969	0	0	0	386.00	13.60	8.82	36.80	1.10	.55	1.20	2.72	.52
1970	.05	.01	52.30	183.00	39.40	50.70	2.48	.06	.76	.39	1.77	.19
1971	0	0	33.20	29.80	11.30	4.26	.78	0	0	.96	3.48	.57
1972	.02	0	33.90	62.60	22.50	3.00	1.80	.52	.03	.39	1.59	.07
1973	0	0	54.80	4.89	2.25	.32	0	.07	12.80	4.26	2.69	.37
1974	0	0	0	222.00	41.70	17.70	6.19	.73	.02	0	2.35	.13
1975	0	0	.18	464.00	71.00	65.20	64.00	.14	0	.12	.50	.06
1976	0	3.58	57.40	22.20	2.37	.04	0	0	0	0	0	0
1977	0	0	3.81	4.86	3.81	.63	0	0	0	2.16	.14	0
1978	0	0	133.00	70.50	11.90	7.80	.63	.11	.14	0	0	0
1979	0	0	0	619.00	32.40	14.50	1.90	.11	0	.01	.23	.29
1980	0	0	18.00	25.90	1.41	.49	0	.79	.88	0	.19	.08
1981	0	.60	2.80	1.82	4.76	5.49	.26	0	0	0	0	0
1982	0	0	5.75	229.00	28.70	2.69	0	0	0	18.50	5.67	1.65
1983	0	.58	58.00	29.70	11.10	58.80	17.20	.03	0	0	0	0
1984	0	0	220.00	85.10	7.76	35.00	1.88	0	0	0	0	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at the mouth												
1931	12.81	51.65	144.27	294.42	91.06	129.08	32.06	22.92	18.59	21.18	41.22	35.68
1932	25.61	29.28	625.21	806.09	181.32	143.30	62.39	30.65	21.43	22.01	37.13	21.44
1933	16.02	15.82	611.82	523.99	201.16	73.29	40.63	17.88	12.08	12.03	18.02	13.63
1934	10.03	13.76	73.15	257.78	60.22	28.07	14.92	11.00	11.70	18.21	17.77	10.36
1935	9.28	15.43	222.95	219.37	134.31	117.56	118.35	137.94	34.54	27.01	20.37	19.88
1936	16.12	14.74	55.16	515.44	221.04	58.26	23.11	7.54	8.45	10.04	13.50	7.80
1937	7.87	5.51	37.74	246.58	114.24	113.45	37.82	25.99	23.17	13.67	17.60	11.62
1938	12.01	12.94	146.91	139.57	79.96	43.83	19.68	42.17	16.96	11.98	15.81	12.17
1939	11.43	10.14	251.26	340.17	64.08	59.73	27.26	11.35	9.09	12.44	17.97	15.46
1940	6.39	5.71	6.93	383.45	135.41	46.26	14.97	15.83	8.69	10.88	16.49	13.09
1941	12.64	12.71	69.91	1,550.81	250.91	265.96	123.87	49.37	55.43	82.55	74.30	53.83
1942	24.26	22.62	61.44	936.43	500.85	365.26	120.64	80.82	118.06	67.22	61.07	37.86
1943	33.39	36.62	585.60	1,794.39	415.18	873.81	349.80	137.27	63.78	41.46	61.95	43.71
1944	27.51	31.89	42.80	296.71	325.13	279.05	225.93	184.26	197.02	89.30	115.32	66.21
1945	45.01	47.08	685.33	555.92	218.82	180.12	83.10	66.99	38.96	39.23	40.58	27.45
1946	28.96	25.36	512.65	771.88	163.76	126.19	104.96	74.24	42.14	83.43	65.50	43.36
1947	38.14	40.40	230.36	2,579.46	315.73	675.06	135.81	58.90	36.56	36.73	71.96	53.77
1948	35.25	30.35	46.43	2,233.32	1,692.30	295.49	165.73	113.05	56.17	35.25	59.48	40.84
1949	27.94	22.30	153.27	1,448.47	539.81	204.48	150.05	86.01	27.30	33.81	45.31	46.18
1950	29.44	27.50	263.97	2,873.94	3,455.46	1,895.52	518.61	196.02	64.56	57.47	69.17	55.87
1951	50.77	50.22	123.96	1,007.37	573.95	209.49	146.33	68.30	80.88	67.80	100.07	62.47
1952	47.07	58.29	68.26	2,072.27	155.47	82.13	278.41	44.10	40.11	43.60	48.89	37.35
1953	35.03	44.59	164.58	134.29	262.73	1,328.49	367.56	122.25	36.12	43.46	61.07	64.38
1954	75.58	116.11	195.14	294.76	135.61	109.89	355.99	84.16	74.70	65.15	102.44	96.19
1955	82.60	50.87	68.22	522.01	116.99	298.71	363.24	147.03	32.00	38.67	26.75	20.08
1956	18.92	18.30	34.00	436.89	651.00	333.98	127.24	54.03	28.96	27.12	51.41	57.84
1957	40.54	42.26	133.78	175.05	114.80	200.53	129.70	101.19	320.33	149.58	196.41	139.01
1958	113.54	97.95	238.40	281.28	118.88	100.36	192.58	62.04	44.62	40.45	47.36	41.53
1959	41.90	36.00	111.21	138.34	65.01	222.20	100.79	34.49	33.50	36.43	29.89	43.89
1960	41.09	43.83	178.91	1,540.12	212.26	214.82	106.07	35.71	46.20	32.80	46.50	59.80

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sheyenne River at the mouth--Continued												
1961	69.10	63.40	192.70	119.20	105.46	49.69	32.50	23.70	34.50	76.19	36.66	27.51
1962	24.88	35.48	84.68	1,672.28	575.19	615.66	1,981.30	566.77	176.48	113.96	125.53	112.18
1963	69.22	60.90	128.63	421.26	165.39	169.95	74.05	54.00	43.98	39.20	51.33	47.44
1964	31.81	49.61	61.94	353.15	147.63	176.62	300.16	65.69	62.38	56.01	86.89	60.95
1965	66.10	67.20	75.62	2,826.65	708.48	335.06	260.44	340.00	145.26	242.27	166.80	154.34
1966	121.31	101.18	2,105.46	2,056.55	707.87	384.21	245.35	303.28	117.65	83.45	57.92	92.43
1967	96.49	95.62	459.78	1,482.73	995.38	308.54	109.97	54.62	45.80	38.71	47.67	55.26
1968	55.89	57.98	229.82	356.21	265.16	518.35	162.44	59.64	53.96	55.73	79.22	68.73
1969	67.25	175.00	285.00	4,019.24	1,300.64	329.26	763.55	129.93	85.00	82.05	79.58	70.49
1970	73.53	88.91	293.89	1,378.64	1,006.54	1,164.83	243.00	65.97	70.95	49.61	71.35	52.27
1971	56.13	62.60	613.63	801.17	561.99	359.15	389.84	74.46	98.61	140.08	173.57	180.66
1972	155.87	111.09	960.03	1,373.30	940.41	562.61	160.83	139.98	86.04	65.43	77.74	63.20
1973	63.74	99.14	756.87	246.16	102.44	70.46	35.52	34.45	74.61	71.35	62.73	63.98
1974	41.95	123.05	313.36	1,768.51	1,088.42	817.82	124.77	81.51	50.83	42.81	76.90	60.62
1975	70.55	75.40	116.19	2,608.10	1,600.16	1,027.80	3,986.45	268.45	137.37	104.55	123.77	114.76
1976	113.82	215.97	674.62	886.44	361.01	118.17	64.43	29.74	7.45	27.97	19.77	9.72
1977	8.64	16.46	89.57	137.24	134.98	45.67	42.74	22.22	38.47	68.43	72.78	62.95
1978	46.84	92.53	933.76	1,901.34	406.37	168.75	113.74	48.78	127.38	80.99	85.58	48.73
1979	43.66	50.83	122.92	3,338.36	2,435.29	524.83	249.99	179.66	86.30	78.79	251.25	72.69
1980	45.82	51.40	226.65	658.26	80.59	97.91	68.20	45.91	141.93	136.11	152.03	79.10
1981	38.24	47.94	124.68	294.66	127.30	162.79	218.25	69.84	38.05	168.99	199.91	40.98
1982	24.26	32.34	232.75	2,127.66	483.75	299.58	223.39	118.43	37.45	266.34	257.81	200.39
1983	161.90	94.08	1,656.25	1,322.02	371.57	438.61	604.56	91.12	145.20	162.90	216.41	157.95
1984	154.07	115.01	1,004.65	1,808.07	641.23	347.89	103.50	29.14	48.84	114.43	101.89	82.53

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Buffalo River at the mouth												
1931	5.77	19.00	81.00	38.30	31.10	29.90	19.90	14.50	7.07	15.20	20.60	16.00
1932	12.40	13.20	62.00	141.00	58.80	36.20	7.62	3.26	6.56	14.50	11.10	6.73
1933	5.29	5.03	104.00	136.00	69.70	27.60	10.30	8.32	8.90	17.50	20.10	17.20
1934	12.60	17.20	44.10	161.00	32.60	17.30	4.68	1.66	6.56	22.20	12.10	11.00
1935	10.50	17.20	142.00	87.90	69.00	49.10	46.00	18.20	9.91	19.20	11.40	7.20
1936	3.40	1.14	74.40	662.00	112.00	20.10	2.55	0	.90	7.31	10.00	6.87
1937	6.87	5.72	3.43	157.00	120.00	53.70	16.10	19.70	16.90	13.00	12.20	5.43
1938	4.97	6.25	121.00	58.60	283.00	97.70	19.60	8.01	8.27	8.58	12.90	9.12
1939	6.64	4.77	247.00	309.00	36.80	21.50	8.97	1.99	2.00	6.27	12.00	9.34
1940	1.00	.87	2.59	262.00	73.30	20.60	7.16	12.70	6.61	10.30	17.00	10.80
1941	10.80	11.30	70.50	402.00	53.40	70.40	14.10	8.47	21.90	29.20	27.30	12.80
1942	2.56	1.78	33.30	99.70	339.00	239.00	41.00	35.90	175.00	85.60	66.40	24.30
1943	12.20	9.30	84.90	1,325.00	268.00	497.00	283.00	125.00	47.80	32.60	42.00	17.70
1944	9.90	11.20	26.80	245.00	263.00	301.00	541.00	812.00	592.00	153.00	148.00	73.00
1945	24.70	18.20	985.00	667.00	281.00	153.00	35.60	25.40	58.00	56.20	35.50	23.60
1946	15.00	10.90	505.00	263.00	116.00	99.40	308.00	60.80	36.80	87.40	75.50	47.40
1947	34.40	24.60	146.00	1,206.00	307.00	314.00	77.50	21.10	22.90	31.00	29.40	25.90
1948	19.50	18.50	50.80	707.00	113.00	71.10	39.70	27.00	16.70	15.60	20.10	16.00
1949	12.50	11.30	20.80	246.00	124.00	42.10	116.00	63.00	19.50	28.50	33.10	24.60
1950	10.90	7.07	231.00	1,804.00	975.00	192.00	60.80	18.40	14.50	22.50	19.80	17.80
1951	15.40	15.80	22.00	915.00	165.00	198.00	59.00	37.60	44.30	65.40	50.90	44.20
1952	31.20	30.60	33.00	1,469.00	137.00	37.40	581.00	265.00	105.00	41.00	45.90	26.40
1953	18.00	19.90	231.00	338.00	286.00	1,094.00	152.00	236.00	61.20	34.00	35.60	29.90
1954	25.30	36.50	113.00	410.00	301.00	164.00	52.10	23.20	29.50	44.60	37.30	21.30
1955	14.90	15.20	16.60	421.00	102.00	114.00	533.00	498.00	64.00	51.40	35.00	23.90
1956	19.20	23.00	28.60	1,183.00	253.00	112.00	29.70	27.10	16.10	22.50	44.50	20.60
1957	15.90	16.20	214.00	396.00	166.00	240.00	227.00	74.60	384.00	213.00	183.00	58.80
1958	36.20	30.40	69.50	133.00	89.00	160.00	747.00	61.60	91.30	58.50	97.30	44.60
1959	19.30	15.60	134.00	243.00	196.00	445.00	444.00	100.00	62.00	59.50	46.30	40.00
1960	39.20	30.80	71.30	958.00	407.00	144.00	118.00	48.10	50.60	31.40	35.40	23.70

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Buffalo River at the mouth--Continued												
1961	20.00	18.90	164.00	187.00	283.00	59.40	22.20	10.30	18.50	30.00	25.30	17.30
1962	11.30	13.00	17.20	771.00	1,037.00	2,446.00	644.00	175.00	74.90	64.20	77.90	40.50
1963	11.00	7.13	108.00	265.00	181.00	563.00	34.10	80.80	117.00	43.70	39.00	23.60
1964	19.20	20.70	50.90	977.00	399.00	136.00	49.80	21.10	33.20	39.80	39.60	16.70
1965	18.10	18.80	19.50	1,593.00	354.00	299.00	88.80	46.10	63.80	127.00	83.80	74.70
1966	41.80	33.30	1,497.00	731.00	465.00	120.00	94.40	213.00	56.20	66.20	49.50	38.80
1967	41.50	45.70	223.00	974.00	322.00	375.00	96.20	23.50	18.30	23.20	22.70	21.70
1968	12.00	11.80	106.00	193.00	148.00	124.00	86.40	25.60	37.30	65.30	61.00	31.40
1969	19.80	17.20	20.50	2,177.00	224.00	73.00	113.00	36.30	19.70	40.30	46.50	28.90
1970	21.90	21.10	49.00	503.00	296.00	280.00	58.80	10.40	10.80	23.20	39.50	21.20
1971	14.30	15.80	95.70	292.00	96.60	67.90	133.00	24.30	140.00	213.00	349.00	111.00
1972	39.90	34.80	817.00	713.00	481.00	154.00	51.30	53.30	33.80	32.30	48.70	28.60
1973	18.00	18.00	140.00	112.00	76.40	41.40	26.20	26.90	151.00	211.00	94.40	64.50
1974	34.90	37.30	59.50	886.00	522.00	213.00	78.90	62.90	34.00	37.80	53.30	31.40
1975	23.10	21.70	30.90	1,088.00	451.00	921.00	3,220.00	90.30	35.90	54.90	67.20	38.00
1976	28.90	32.60	222.00	351.00	76.10	27.20	11.60	1.99	2.91	9.63	14.30	9.68
1977	10.10	10.70	47.40	102.00	40.30	42.30	32.80	6.27	42.00	111.00	77.70	76.50
1978	58.60	35.10	445.00	2,270.00	214.00	70.10	41.50	15.30	10.90	14.60	22.10	20.70
1979	16.40	14.90	20.50	1,528.00	370.00	140.00	215.00	61.40	19.30	21.40	68.80	38.60
1980	24.70	27.20	77.50	569.00	66.80	38.80	14.80	11.90	34.10	39.40	42.30	27.80
1981	20.00	33.20	70.50	95.40	174.00	53.50	46.20	70.40	42.90	90.80	82.70	38.00
1982	15.20	16.50	272.00	818.00	174.00	63.50	89.10	30.90	20.30	151.00	67.30	51.40
1983	29.10	30.40	232.00	167.00	119.00	86.70	923.00	121.00	68.40	88.80	81.20	52.60
1984	33.00	69.90	707.00	612.00	144.00	645.00	63.20	15.20	12.40	173.00	80.60	47.50

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Elm River at the mouth												
1931	0.00	0.10	1.30	0.62	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	1.41	171.00	58.60	1.56	.60	0	0	0	0	.03	0
1933	0	0	48.10	10.90	.44	.16	.05	0	0	0	0	0
1934	0	0	.21	.96	.03	.03	0	0	.03	0	0	0
1935	0	0	8.28	.91	.70	21.50	.55	0	0	0	0	0
1936	0	0	0	36.40	.29	.03	0	0	0	0	0	0
1937	0	0	0	.21	.23	.36	.03	.05	.03	0	0	0
1938	0	0	1.77	.03	.13	0	0	.05	0	0	0	0
1939	0	0	17.90	1.25	0	.31	0	0	0	0	0	0
1940	0	0	0	24.20	.31	0	0	.10	0	0	0	0
1941	0	0	.81	290.00	.29	11.50	.18	0	.03	.16	.10	.03
1942	0	0	.08	68.20	23.20	3.25	.16	.05	.03	0	0	0
1943	0	0	101.00	14.60	2.53	24.10	1.61	.03	0	0	0	0
1944	0	0	0	4.01	.44	1.56	.13	4.89	.60	.03	.68	.13
1945	0	0	17.70	1.48	.57	1.04	.16	0	0	.03	0	0
1946	0	0	95.90	2.45	.42	.31	.31	0	0	0	0	0
1947	0	0	28.00	166.00	3.59	8.38	.34	.03	0	0	.03	0
1948	0	0	0	4,032.00	103.00	1.85	.89	.36	0	0	.05	0
1949	0	0	0	289.00	3.49	67.80	1.22	.57	0	.05	.18	.10
1950	.03	.03	3.10	5,665.00	9,849.00	50.00	10.30	.55	.21	.16	.23	.21
1951	.16	.13	15.30	86.90	1.56	.75	.05	0	.08	.03	.08	.03
1952	.08	.03	.23	113.00	.16	0	47.20	.31	0	0	.03	.03
1953	.03	.03	1.12	.42	1.74	50.70	29.60	.03	.03	0	.03	.05
1954	.03	.94	5.39	3.49	.65	5.41	.10	0	0	0	0	0
1955	0	0	0	47.10	.16	11.60	.13	.03	0	0	0	0
1956	0	0	0	26.60	5.41	5.39	0	0	0	0	0	0
1957	0	0	.70	.31	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	1.85	.49	0	0	0	0	0	0	0	0
1960	0	0	13.40	122.00	.39	.03	0	0	0	0	0	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Elm River at the mouth--Continued												
1961	0.00	0.00	4.87	0.55	0.14	0.00	0.00	0.00	0.00	0.73	0.00	0.00
1962	0	0	0	238.00	29.70	23.30	97.90	3.72	13.50	2.89	1.54	1.30
1963	.07	0	4.48	23.00	2.39	1.28	0	0	0	0	0	0
1964	.03	.10	0	22.30	.60	190.00	2.94	.13	.26	2.39	.21	.05
1965	.05	.03	0	3,144.90	150.00	14.60	13.80	1.87	4.27	7.86	2.55	1.09
1966	.44	.18	3,902.00	241.00	136.00	22.50	38.80	47.90	1.22	.36	.42	.08
1967	.10	.08	187.00	1,016.00	387.00	27.30	1.04	.03	0	.03	.05	.05
1968	.08	.03	27.00	2.50	2.84	355.00	8.85	1.30	.60	.23	.52	.23
1969	.08	.05	.03	2,961.10	79.30	18.80	16.10	.81	3.33	2.55	.86	.78
1970	.42	.44	.21	1,623.00	245.00	176.00	4.79	.29	.31	.05	.65	.23
1971	.05	.10	10.80	260.00	13.60	14.40	11.70	.18	.08	3.05	6.79	.94
1972	.21	.10	455.00	652.00	142.00	26.90	.49	.18	.03	0	.18	.08
1973	.05	.16	175.00	2.34	.60	.55	.05	.03	.08	.36	.29	.10
1974	0	.05	0	1,306.00	202.00	89.20	4.61	5.36	.16	0	.13	.21
1975	.18	.16	.96	959.00	150.00	23.10	10.50	.03	.03	0	.10	.05
1976	.05	.10	123.00	54.10	1.02	.18	0	0	0	.03	0	0
1977	0	0	0	.26	.13	.10	.08	0	.03	.08	.60	.18
1978	.08	.03	217.00	1,051.00	21.30	3.93	.39	0	.13	0	0	0
1979	.03	.03	0	10,193.00	419.00	15.30	6.22	.83	.05	.08	.18	.29
1980	.10	.10	4.89	47.10	.13	.03	0	0	.03	0	0	0
1981	0	.02	.02	.03	0	0	0	0	0	.10	.23	.47
1982	.10	.08	12.30	625.00	37.70	6.12	7.37	0	0	12.00	1.48	1.67
1983	.31	.26	341.00	178.00	23.50	289.00	53.40	10.40	6.22	2.37	2.24	.86
1984	.29	.21	383.00	142.00	21.60	245.00	1.38	0	.08	.13	.08	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Wild Rice River at the mouth												
1931	3.51	21.20	121.00	61.50	50.90	51.70	31.40	15.80	5.25	13.90	13.80	8.88
1932	10.70	11.60	83.40	225.00	103.00	63.30	12.30	1.96	4.76	13.10	4.65	1.28
1933	3.62	3.40	160.00	217.00	124.00	47.30	16.50	6.46	7.04	16.70	13.30	10.50
1934	10.90	16.70	53.40	257.00	53.60	28.90	7.64	.82	4.76	22.50	5.47	3.86
1935	8.66	16.70	239.00	141.00	122.00	87.50	71.00	20.40	8.06	18.80	4.93	1.48
1936	2.06	.52	105.00	20.10	210.00	34.00	1.43	1.51	.38	5.48	3.90	1.33
1937	5.05	4.01	2.09	250.00	226.00	96.20	25.50	22.30	16.00	11.40	5.56	.79
1938	3.35	4.49	196.00	93.80	581.00	182.00	30.80	6.16	6.41	6.71	6.12	2.52
1939	4.85	3.18	485.00	492.00	61.30	36.50	14.40	1.04	1.05	4.51	5.37	2.65
1940	.43	.36	1.45	417.00	131.00	34.80	11.60	11.10	4.83	8.47	9.92	3.71
1941	9.00	9.50	98.20	639.00	92.40	128.00	22.40	6.60	22.10	31.90	22.70	5.39
1942	1.44	.91	37.80	159.00	709.00	470.00	63.40	44.00	313.00	126.00	107.00	22.50
1943	10.60	7.43	124.00	34.60	547.00	1,020.00	417.00	203.00	59.90	36.80	48.10	11.10
1944	8.05	9.39	28.60	312.00	518.00	682.00	1,157.00	990.00	786.00	308.00	235.00	143.00
1945	78.40	65.40	1,111.00	1,496.00	692.00	252.00	103.00	96.80	154.00	232.00	145.00	73.80
1946	36.30	23.60	768.00	908.00	439.00	273.00	207.00	31.10	36.90	198.00	117.00	72.50
1947	56.20	48.20	183.00	1,845.00	684.00	758.00	101.00	14.00	6.18	13.70	9.99	6.85
1948	4.22	3.51	3.34	863.00	162.00	39.90	19.00	4.05	.19	.45	3.42	1.78
1949	.82	.41	.47	234.00	102.00	210.00	441.00	284.00	57.10	42.50	45.40	32.40
1950	13.80	13.00	87.20	1,792.00	1,685.00	498.00	266.00	7.73	4.70	6.38	4.90	3.67
1951	3.12	2.90	8.41	824.00	203.00	74.00	9.10	8.00	17.10	17.10	26.00	157.00
1952	102.00	85.70	83.30	1,278.00	305.00	9.44	282.00	152.00	59.90	32.70	44.00	50.00
1953	38.10	37.70	204.00	516.00	454.00	917.00	576.00	243.00	92.10	50.90	53.90	60.60
1954	63.40	75.10	132.00	750.00	615.00	337.00	123.00	34.80	30.00	43.70	52.00	30.80
1955	22.60	32.00	34.00	628.00	292.00	269.00	144.00	176.00	15.20	23.80	19.60	15.10
1956	14.00	19.00	24.20	1,212.00	431.00	232.00	42.60	23.70	19.80	17.40	45.10	19.10
1957	14.80	14.80	166.00	440.00	332.00	341.00	376.00	112.00	357.00	220.00	218.00	80.60
1958	50.60	44.30	113.00	178.00	104.00	166.00	229.00	45.10	38.60	36.90	73.10	45.30
1959	23.00	20.00	123.00	311.00	310.00	276.00	219.00	91.20	39.10	55.50	56.90	48.30
1960	58.00	48.40	98.40	925.00	420.00	442.00	219.00	105.00	172.00	100.00	84.10	58.80

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Wild Rice River at the mouth--Continued												
1961	41.20	37.30	214.00	313.00	619.00	189.00	56.10	25.60	35.90	46.90	42.10	27.90
1962	26.80	23.20	34.30	636.00	983.00	1,831.00	808.00	211.00	118.00	86.80	98.10	53.90
1963	10.70	5.91	115.00	489.00	381.00	828.00	134.00	56.70	64.40	28.80	32.90	20.00
1964	20.10	25.00	29.30	1,215.00	657.00	498.00	180.00	52.60	42.40	93.50	67.20	29.70
1965	30.60	32.40	24.10	2,329.00	774.00	755.00	251.00	70.80	78.30	173.00	97.40	122.00
1966	88.20	57.90	1,531.00	2,011.00	1,018.00	297.00	128.00	226.00	107.00	82.00	69.80	56.70
1967	63.30	71.00	319.00	1,619.00	663.00	538.00	261.00	45.20	17.70	26.50	24.90	50.80
1968	33.30	22.50	214.00	399.00	328.00	251.00	194.00	69.90	89.80	140.00	109.00	64.00
1969	57.60	63.60	73.30	2,555.00	562.00	315.00	173.00	52.70	38.70	156.00	175.00	112.00
1970	70.40	55.70	60.60	1,475.00	1,104.00	1,364.00	218.00	38.60	24.50	36.50	81.10	47.00
1971	35.90	38.80	201.00	820.00	342.00	167.00	77.90	37.20	125.00	767.00	808.00	165.00
1972	94.00	72.20	1,021.00	1,794.00	923.00	338.00	157.00	123.00	64.40	78.40	81.50	39.00
1973	40.80	44.70	420.00	253.00	211.00	146.00	84.60	85.60	850.00	659.00	299.00	148.00
1974	83.40	83.00	90.00	2,418.00	1,686.00	566.00	184.00	129.00	44.40	68.60	163.00	71.50
1975	63.50	67.60	103.00	2,222.00	1,192.00	908.00	3,234.00	221.00	84.70	72.10	119.00	70.40
1976	65.90	76.00	484.00	856.00	201.00	84.80	42.50	8.36	.74	7.92	10.60	1.11
1977	.10	.23	29.70	172.00	57.90	37.80	13.10	1.10	26.30	86.10	118.00	156.00
1978	83.80	53.10	148.00	3,363.00	421.00	171.00	75.40	65.40	95.30	50.90	40.70	33.10
1979	30.70	30.10	63.00	3,155.00	1,169.00	431.00	622.00	82.00	47.60	42.10	124.00	62.50
1980	48.10	49.70	73.20	694.00	159.00	48.30	12.30	6.23	12.70	27.50	30.10	15.90
1981	9.22	12.70	54.00	109.00	185.00	150.00	183.00	153.00	174.00	297.00	219.00	101.00
1982	64.30	61.90	226.00	1,688.00	631.00	227.00	117.00	40.20	19.70	273.00	171.00	68.80
1983	48.40	47.80	745.00	369.00	180.00	435.00	800.00	174.00	104.00	179.00	164.00	95.20
1984	66.40	128.00	816.00	913.00	255.00	1,602.00	123.00	23.70	15.00	97.40	116.00	76.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (intermittently January 1931 through May 1961) and gaged (intermittently April 1936 through September 1960, continuously June 1961 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Halstad, Minn.												
1931	42.40	77.60	215.00	599.00	349.00	220.00	81.50	64.10	13.60	28.10	117.00	67.00
1932	69.30	91.30	589.00	2,078.00	511.00	177.00	48.70	13.40	9.44	7.60	41.20	9.61
1933	8.24	.69	453.00	1,210.00	432.00	190.00	29.60	7.28	6.46	6.55	19.90	45.40
1934	29.20	43.80	186.00	836.00	219.00	63.10	40.90	6.29	3.99	8.74	17.30	3.60
1935	5.60	26.80	437.00	826.00	478.00	226.00	267.00	93.50	50.70	25.80	16.40	3.71
1936	29.00	14.50	22.50	2,899.00	803.00	194.00	58.30	8.67	11.80	10.50	6.26	18.00
1937	10.10	3.01	14.20	1,156.00	883.00	517.00	313.00	147.00	277.00	95.00	202.00	12.70
1938	12.10	33.10	666.00	525.00	2,311.00	969.00	281.00	58.00	58.40	61.00	88.30	67.50
1939	166.00	173.00	204.00	1,663.00	508.00	314.00	146.00	40.20	64.00	97.80	82.50	47.30
1940	2.80	20.40	94.40	2,157.00	1,041.00	448.00	88.40	13.20	46.50	70.70	138.00	105.00
1941	80.90	156.00	200.00	3,642.00	1,146.00	2,406.00	415.00	75.60	628.00	684.00	349.00	226.00
1942	195.00	191.00	848.00	1,738.00	2,957.00	2,595.00	738.00	896.00	1,333.00	593.00	865.00	576.00
1943	508.00	424.00	530.00	12,280.00	3,210.00	5,930.00	3,134.00	1,280.00	634.00	510.00	774.00	540.00
1944	335.00	270.00	296.00	1,800.00	2,362.00	3,417.00	4,136.00	3,003.00	2,624.00	1,000.00	1,269.00	851.00
1945	669.00	580.00	5,847.00	5,144.00	2,300.00	1,657.00	727.00	350.00	508.00	671.00	576.00	431.00
1946	312.00	196.00	3,981.00	3,783.00	1,412.00	879.00	1,039.00	1,099.00	443.00	691.00	1,011.00	824.00
1947	645.00	514.00	705.00	11,890.00	3,104.00	3,454.00	1,484.00	362.00	533.00	626.00	501.00	373.00
1948	239.00	181.00	515.00	8,100.00	3,479.00	1,190.00	558.00	468.00	318.00	200.00	305.00	159.00
1949	119.00	155.00	319.00	3,233.00	1,161.00	738.00	1,557.00	712.00	632.00	393.00	253.00	221.00
1950	157.00	228.00	524.00	12,500.00	11,530.00	4,555.00	2,459.00	1,357.00	920.00	1,163.00	289.00	260.00
1951	260.00	256.00	1,234.00	6,387.00	2,634.00	1,663.00	1,044.00	761.00	549.00	498.00	723.00	852.00
1952	807.00	767.00	1,052.00	12,830.00	2,926.00	1,789.00	2,826.00	824.00	475.00	309.00	578.00	378.00
1953	236.00	299.00	1,015.00	1,761.00	2,000.00	7,684.00	2,934.00	1,572.00	457.00	306.00	930.00	717.00
1954	563.00	521.00	844.00	2,568.00	1,988.00	1,820.00	1,323.00	496.00	237.00	216.00	385.00	353.00
1955	365.00	305.00	322.00	2,368.00	886.00	960.00	1,646.00	1,205.00	271.00	260.00	661.00	358.00
1956	389.00	352.00	247.00	4,179.00	2,189.00	1,563.00	541.00	383.00	559.00	160.00	163.00	150.00
1957	155.00	182.00	806.00	1,827.00	1,592.00	2,136.00	1,762.00	887.00	1,961.00	1,426.00	917.00	726.00
1958	514.00	471.00	1,028.00	1,446.00	757.00	615.00	2,039.00	435.00	363.00	124.00	405.00	337.00
1959	399.00	384.00	450.00	1,184.00	925.00	1,901.00	1,466.00	464.00	324.00	161.00	347.00	410.00
1960	344.00	363.00	255.00	5,288.00	2,125.00	1,682.00	1,032.00	386.00	403.00	105.00	359.00	278.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (intermittently January 1931 through May 1961) and gaged (intermittently April 1936 through September 1960, continuously June 1961 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Halstad, Minn.--Continued												
1961	241.00	279.00	879.00	921.00	1,134.00	753.00	313.00	197.00	186.00	297.00	228.00	146.00
1962	138.00	164.00	249.00	6,308.00	5,339.00	10,310.00	9,378.00	3,866.00	1,325.00	823.00	773.00	553.00
1963	396.00	303.00	688.00	2,189.00	1,323.00	3,918.00	930.00	444.00	392.00	328.00	319.00	247.00
1964	225.00	226.00	303.00	3,930.00	2,449.00	1,734.00	973.00	259.00	239.00	379.00	384.00	262.00
1965	285.00	267.00	299.00	12,200.00	3,581.00	4,137.00	2,195.00	1,035.00	751.00	1,359.00	878.00	831.00
1966	745.00	737.00	9,429.00	9,535.00	4,607.00	2,656.00	1,377.00	1,643.00	767.00	686.00	713.00	644.00
1967	612.00	519.00	1,519.00	7,193.00	3,674.00	3,241.00	1,731.00	441.00	170.00	278.00	292.00	291.00
1968	254.00	235.00	938.00	1,492.00	1,448.00	1,671.00	977.00	401.00	323.00	511.00	545.00	466.00
1969	332.00	529.00	919.00	20,080.00	6,715.00	2,364.00	2,080.00	558.00	219.00	380.00	473.00	335.00
1970	337.00	363.00	575.00	5,844.00	3,365.00	5,016.00	1,183.00	267.00	180.00	188.00	409.00	253.00
1971	211.00	226.00	1,556.00	3,085.00	1,481.00	937.00	1,327.00	345.00	680.00	1,602.00	1,771.00	1,164.00
1972	963.00	828.00	5,949.00	7,169.00	4,400.00	3,332.00	1,476.00	1,109.00	671.00	632.00	613.00	446.00
1973	435.00	579.00	2,919.00	1,382.00	803.00	608.00	314.00	265.00	1,285.00	1,386.00	1,000.00	948.00
1974	771.00	731.00	1,305.00	7,270.00	5,017.00	3,013.00	1,438.00	821.00	373.00	487.00	606.00	386.00
1975	329.00	445.00	724.00	11,250.00	6,195.00	4,583.00	20,060.00	1,494.00	758.00	682.00	761.00	484.00
1976	500.00	616.00	2,582.00	3,786.00	1,181.00	430.00	241.00	87.80	38.40	61.50	92.30	51.20
1977	32.10	45.90	331.00	733.00	449.00	242.00	251.00	59.50	221.00	646.00	593.00	731.00
1978	706.00	480.00	1,629.00	16,740.00	2,950.00	1,964.00	2,019.00	599.00	320.00	302.00	284.00	258.00
1979	178.00	174.00	461.00	17,350.00	8,994.00	2,812.00	2,487.00	1,400.00	847.00	635.00	814.00	518.00
1980	499.00	453.00	774.00	3,881.00	980.00	776.00	289.00	230.00	260.00	266.00	367.00	224.00
1981	140.00	203.00	618.00	705.00	923.00	568.00	678.00	541.00	291.00	617.00	756.00	483.00
1982	311.00	356.00	1,174.00	9,299.00	2,322.00	1,366.00	1,050.00	506.00	282.00	1,209.00	915.00	682.00
1983	411.00	315.00	3,674.00	2,924.00	1,057.00	1,607.00	3,442.00	777.00	743.00	737.00	777.00	601.00
1984	506.00	594.00	4,192.00	9,233.00	2,173.00	5,361.00	1,501.00	571.00	286.00	1,350.00	1,228.00	818.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Goose River at the mouth												
1931	0.13	1.76	12.00	28.70	3.81	4.54	1.36	1.42	0.35	0.32	0.21	0.21
1932	.21	21.40	291.00	256.00	29.30	13.50	1.05	.31	.42	.57	.90	.33
1933	.20	.17	150.00	113.00	17.70	6.43	1.18	.22	.11	.10	.21	.13
1934	.09	.13	3.31	35.40	2.19	2.94	1.33	1.55	2.97	.75	.21	.21
1935	.21	.32	74.90	34.30	21.30	92.10	12.80	1.07	.43	.32	.43	.21
1936	.21	.21	1.07	203.00	15.10	2.97	.62	.11	.11	.11	.11	.11
1937	.11	.21	.54	16.50	8.02	10.30	2.60	3.99	2.14	.11	.11	.11
1938	.11	.11	37.60	6.97	5.73	1.45	.01	0	0	0	0	0
1939	0	0	106.00	40.10	1.20	9.66	.13	0	0	0	0	0
1940	0	0	0	167.00	9.69	1.74	0	5.02	.01	0	0	0
1941	0	0	26.20	553.00	15.00	65.70	7.42	1.35	2.71	6.49	5.61	2.49
1942	.08	0	9.90	275.00	86.80	33.60	6.48	3.80	2.91	.98	.88	.79
1943	.48	.34	230.00	131.00	35.60	97.80	23.00	2.27	.49	.25	.44	.32
1944	.18	.13	2.16	70.10	17.80	22.70	6.12	41.70	13.60	3.07	14.50	5.99
1945	.71	.69	105.00	43.40	19.50	18.30	6.40	1.39	1.17	1.78	.57	.55
1946	.50	.60	225.00	55.20	17.10	9.75	9.47	.58	.90	1.46	1.56	.72
1947	.24	.15	130.00	423.00	41.00	55.70	9.82	2.08	.95	.82	2.34	1.56
1948	.48	.11	.57	1,970.00	158.00	24.80	16.70	10.60	1.02	.48	4.05	1.72
1949	.49	.28	1.22	552.00	40.60	170.00	19.90	13.40	1.19	3.46	7.08	5.31
1950	2.88	2.54	48.30	2,321.00	2,435.00	145.00	62.00	12.80	7.69	6.51	8.43	7.87
1951	6.71	6.22	98.60	309.00	29.30	15.40	3.86	1.69	4.59	2.83	4.74	1.99
1952	0	1.97	15.20	351.00	12.00	1.53	140.00	9.77	1.51	1.16	2.19	2.92
1953	2.01	2.06	30.40	23.30	30.60	146.00	109.00	2.32	3.06	.81	2.62	3.17
1954	2.73	17.20	61.90	65.50	20.70	44.10	5.02	.75	.37	.21	.28	.32
1955	.61	.75	1.05	230.00	6.80	66.00	6.06	2.76	.17	.21	.51	.69
1956	.62	.54	.76	302.00	59.30	61.30	6.48	1.06	1.04	.41	1.95	1.53
1957	1.06	.79	19.60	19.10	8.43	11.20	5.67	.12	56.70	17.70	15.80	4.50
1958	1.03	.87	1.68	16.90	5.21	3.37	31.00	3.77	.49	.34	.05	0
1959	0	0	36.00	39.80	7.17	7.29	.51	1.42	.31	.36	.72	.97
1960	.94	.86	76.90	467.00	16.10	13.60	10.90	4.42	1.72	.28	1.12	1.05

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Goose River at the mouth--Continued												
1961	0.82	0.88	58.20	28.80	21.00	3.71	0.17	0.09	0.43	2.62	0.74	0.65
1962	.61	.56	.91	739.00	192.00	156.00	51.40	11.80	132.00	17.70	15.40	9.74
1963	2.48	.32	31.40	95.30	19.70	11.20	12.60	2.23	.37	.92	.60	.13
1964	0	0	1.63	161.00	19.80	295.00	31.80	5.68	8.85	28.50	7.94	3.98
1965	3.21	1.97	1.48	1,747.00	184.00	74.70	72.70	25.00	38.70	53.70	29.40	18.70
1966	11.60	7.34	1,184.00	506.00	177.00	94.30	126.00	141.00	19.90	10.20	11.20	4.78
1967	5.10	4.17	303.00	1,013.00	431.00	105.00	18.30	2.33	1.11	2.10	4.00	3.61
1968	4.52	2.55	127.00	55.90	37.40	412.00	57.30	20.60	13.70	8.05	12.60	8.43
1969	4.25	3.81	6.20	1,697.00	142.00	85.70	78.80	15.90	34.00	29.40	16.60	15.50
1970	11.00	11.70	14.20	1,269.00	338.00	284.00	41.30	9.18	9.52	3.81	14.30	8.07
1971	3.82	5.31	84.50	524.00	70.10	74.30	66.40	7.10	4.36	32.30	49.80	17.20
1972	7.91	5.28	452.00	818.00	253.00	104.00	12.10	7.27	2.90	1.17	7.23	4.24
1973	3.93	6.39	294.00	54.10	19.80	13.10	3.87	1.91	4.72	10.60	9.27	5.11
1974	1.42	3.28	2.61	1,143.00	305.00	197.00	40.50	43.80	6.49	1.74	6.30	7.97
1975	7.40	6.62	28.60	985.00	260.00	95.70	62.70	3.04	2.38	1.07	5.02	3.83
1976	4.13	5.41	252.00	246.00	24.60	6.93	1.22	.07	0	0	0	.25
1977	.32	.32	2.42	18.80	10.40	5.42	4.47	.16	2.10	4.55	13.60	7.10
1978	4.35	2.21	324.00	1,030.00	83.90	37.10	10.60	1.41	5.82	1.11	1.09	1.73
1979	1.82	2.19	3.36	3,081.00	451.00	76.70	47.40	16.20	3.45	4.62	7.21	9.04
1980	5.37	5.06	59.20	230.00	10.40	2.84	.47	1.58	2.41	.83	2.60	2.57
1981	2.31	5.19	10.60	7.08	8.01	15.40	8.18	8.72	2.95	5.23	8.39	11.80
1982	5.60	4.48	86.30	875.00	68.80	20.40	20.10	1.71	.45	67.30	22.20	23.50
1983	9.59	8.56	448.00	247.00	61.10	139.00	67.10	31.00	47.40	28.40	27.50	16.40
1984	9.01	7.56	431.00	430.00	88.80	123.00	4.43	.06	0	6.32	4.82	.72

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Marsh River at the mouth												
1931	0.01	0.50	6.57	9.58	0.27	5.34	0.21	0.10	0.02	0.11	0.23	0.13
1932	.07	.08	199.00	7.14	1.27	6.59	.02	0	.02	.10	.06	.02
1933	.01	.01	11.50	6.64	1.93	1.50	.05	.03	.03	.16	.22	.15
1934	.07	.16	1.63	9.62	.30	.15	.01	0	.02	.27	.07	.06
1935	.05	.16	37.60	2.55	1.89	3.12	1.39	.17	.04	.19	.06	.02
1936	0	0	5.44	210.00	6.28	.91	0	.01	0	.02	.04	.02
1937	.02	.01	.09	9.03	7.39	3.96	.13	.20	.15	.08	.07	.01
1938	.01	.02	16.10	1.05	60.70	.41	.20	.03	.03	.03	.08	.04
1939	.02	.01	57.50	39.70	.40	.93	.03	0	0	.02	.07	.04
1940	0	0	0	27.70	2.19	.54	.02	.08	.02	.05	.15	.05
1941	.05	.06	10.30	70.30	1.01	23.20	.10	.03	.26	.50	.43	.08
1942	0	0	3.13	3.36	94.80	47.90	1.07	.80	28.70	5.68	3.20	.33
1943	.07	.04	149.00	950.00	53.10	443.00	84.80	13.30	1.52	.64	1.14	.16
1944	.04	.06	.14	83.30	43.50	113.00	328.00	164.00	144.00	19.00	11.80	3.56
1945	.82	.35	437.00	629.00	185.00	22.40	7.24	2.61	1.83	1.29	.82	.08
1946	0	0	364.00	280.00	60.70	13.00	12.80	.06	.45	3.99	1.68	.51
1947	0	0	22.00	1,273.00	424.00	608.00	130.00	65.90	56.00	73.00	55.80	47.50
1948	35.40	25.10	28.90	656.00	266.00	102.00	76.00	40.60	11.70	10.80	19.80	17.80
1949	18.20	14.90	18.10	217.00	198.00	412.00	585.00	363.00	74.20	60.50	74.30	58.60
1950	27.20	23.80	51.90	1,537.00	2,617.00	1,030.00	820.00	134.00	50.80	118.00	85.70	77.10
1951	64.50	62.10	107.00	1,190.00	714.00	301.00	102.00	60.70	122.00	130.00	102.00	13.10
1952	12.40	10.80	14.80	391.00	125.00	90.30	202.00	54.30	3.80	1.30	.88	.68
1953	.17	.13	52.10	46.50	38.50	100.00	119.00	6.61	1.64	.04	.23	.74
1954	.21	.05	6.64	135.00	60.20	22.40	2.21	.11	0	0	.05	.11
1955	0	0	.48	69.50	9.39	14.90	17.60	11.20	0	0	0	0
1956	0	0	.01	317.00	37.50	23.60	1.02	.04	.09	0	0	0
1957	0	0	40.50	35.50	10.30	41.60	17.20	.91	5.17	3.01	7.03	.95
1958	0	.34	1.33	4.13	1.35	3.00	15.50	.25	0	0	0	0
1959	0	.01	18.30	19.90	6.75	4.96	1.27	0	0	0	0	0
1960	0	0	23.70	109.00	10.60	12.60	8.27	.28	3.47	0	.12	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Marsh River at the mouth--Continued												
1961	0.00	0.00	35.60	12.90	25.00	3.03	0.00	0.00	0.01	0.39	0.00	0.00
1962	0	0	.26	97.90	199.00	347.00	264.00	8.75	1.50	.69	1.60	.71
1963	.15	0	20.60	33.70	11.60	32.70	.45	0	0	0	0	0
1964	0	0	0	103.00	23.20	18.60	3.26	.06	.17	.08	.12	0
1965	0	0	0	573.00	25.90	29.70	21.00	3.63	3.76	26.90	5.43	2.72
1966	.15	.07	389.00	292.00	50.40	9.99	2.38	1.70	2.32	.21	.03	0
1967	0	0	60.10	144.00	30.10	9.92	1.17	0	0	0	0	0
1968	0	0	19.90	11.80	5.42	15.70	1.06	0	0	0	0	0
1969	0	0	0	608.00	31.40	24.70	42.80	3.19	2.34	2.85	2.29	.77
1970	.18	.17	1.47	350.00	58.00	138.00	2.33	.05	.14	.25	.56	.02
1971	0	0	46.70	101.00	5.39	2.76	.46	0	0	60.70	60.20	4.57
1972	.50	0	318.00	321.00	52.90	4.71	5.26	2.43	.59	.84	0	.28
1973	.10	.08	84.10	10.30	4.21	.74	0	0	25.60	30.70	5.38	1.41
1974	.29	.17	.17	775.00	150.00	20.70	1.25	3.88	.08	.23	6.35	.59
1975	.23	.12	.13	553.00	86.00	17.00	230.00	.89	.01	0	.87	.01
1976	0	0	68.10	71.00	2.44	4.06	.01	0	0	0	0	0
1977	0	0	2.79	10.20	1.36	.57	0	0	0	.50	.18	.02
1978	.02	.02	15.50	676.00	9.95	1.00	.02	0	0	0	0	0
1979	0	0	0	895.00	43.70	13.40	53.40	1.43	.09	0	.63	.07
1980	.02	0	6.75	106.00	.87	0	0	.03	0	0	0	0
1981	0	1.36	1.30	.08	47.70	3.92	1.18	.20	4.64	12.70	5.32	1.54
1982	.10	.23	70.80	337.00	24.80	2.86	1.18	.12	0	12.00	7.46	5.04
1983	1.33	.79	342.00	68.80	4.34	247.00	55.70	20.50	18.50	6.18	5.05	1.89
1984	.66	3.60	323.00	176.00	11.60	35.70	2.86	.11	.07	1.88	1.28	.09

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sand Hill River at the mouth												
1931	3.20	9.15	35.80	62.80	20.70	14.10	9.73	11.20	6.01	10.10	9.74	4.96
1932	5.53	6.35	27.40	253.00	64.10	16.80	4.05	5.24	5.72	12.90	5.45	3.09
1933	3.86	2.38	43.70	151.00	48.40	13.00	5.34	8.44	6.99	9.23	9.54	7.75
1934	5.65	8.49	19.90	71.90	15.30	8.55	2.60	3.71	20.20	14.50	5.94	4.96
1935	4.57	8.49	58.20	70.30	53.70	22.10	20.90	12.60	7.50	10.10	5.62	4.96
1936	3.47	4.45	32.30	218.00	44.40	9.83	1.50	5.41	5.06	6.33	4.96	3.78
1937	2.80	2.72	1.96	44.20	31.30	24.00	8.03	13.10	10.70	6.33	5.99	3.78
1938	3.03	2.97	50.50	25.50	25.90	41.40	9.57	8.28	6.66	4.72	6.30	4.16
1939	2.69	2.26	96.50	77.80	10.90	10.40	4.70	4.07	2.63	3.51	5.89	4.26
1940	1.77	1.40	1.51	193.00	34.70	10.00	3.83	10.50	5.75	5.60	8.16	4.93
1941	4.73	5.42	30.80	413.00	44.20	30.70	7.09	8.52	12.60	36.20	12.70	13.00
1942	5.49	4.54	15.50	265.00	117.00	93.70	18.80	17.80	20.10	16.30	29.10	8.30
1943	5.47	4.45	36.50	307.00	117.00	235.00	66.40	33.40	19.50	18.40	17.10	5.82
1944	4.27	5.37	12.70	63.80	58.70	58.30	98.10	125.00	72.60	46.20	46.50	26.10
1945	12.30	8.83	181.00	295.00	145.00	97.00	41.70	30.50	45.40	57.60	34.40	7.17
1946	6.91	5.24	145.00	225.00	74.60	42.40	32.30	12.90	18.70	35.80	24.40	13.60
1947	12.70	13.00	24.00	687.00	192.00	368.00	65.40	30.30	19.40	19.30	18.60	11.30
1948	8.74	6.45	5.81	511.00	75.90	34.70	33.80	22.30	12.70	12.50	16.90	13.50
1949	9.08	8.95	14.50	172.00	60.40	197.00	69.20	28.90	12.90	24.00	27.50	18.00
1950	11.00	7.00	9.90	819.00	1,156.00	115.00	181.00	43.10	18.40	32.50	21.80	16.00
1951	14.00	12.00	12.50	429.00	131.00	44.60	20.30	18.40	25.60	21.10	20.70	14.00
1952	12.00	11.00	15.00	222.00	46.80	21.50	52.90	18.60	14.60	18.80	20.70	13.30
1953	7.90	10.80	68.40	99.20	65.90	80.30	49.70	28.60	16.30	12.50	13.50	10.90
1954	5.29	6.44	20.10	144.00	57.00	81.60	29.30	10.90	7.99	10.80	12.90	8.32
1955	6.81	7.36	7.42	150.00	31.50	34.40	15.60	12.40	6.49	10.40	8.64	6.13
1956	5.23	5.41	7.42	317.00	105.00	60.20	16.00	11.50	11.50	13.60	20.40	10.40
1957	8.52	7.54	48.60	120.00	41.10	118.00	130.00	23.60	52.00	31.40	43.00	17.40
1958	13.90	12.40	22.20	30.70	23.70	25.60	62.90	17.90	11.30	12.90	17.50	7.24
1959	4.81	3.84	36.90	78.60	68.20	27.50	16.50	14.30	7.89	18.70	11.80	12.20
1960	12.00	9.78	16.30	162.00	39.30	47.00	41.70	16.10	14.50	11.80	16.20	8.38

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Sand Hill River at the mouth--Continued												
1961	6.71	7.28	64.30	52.80	41.70	13.30	10.20	6.30	9.83	17.20	12.50	6.58
1962	2.02	3.55	6.21	254.00	232.00	293.00	298.00	60.10	46.80	36.00	32.40	17.40
1963	9.25	4.94	37.40	94.40	47.20	57.50	33.40	12.10	10.60	10.80	8.88	5.11
1964	6.60	9.59	11.80	226.00	88.80	48.30	68.10	17.60	34.50	24.80	19.60	11.50
1965	10.80	8.34	10.60	917.00	136.00	126.00	54.90	25.40	30.70	71.60	32.30	32.70
1966	18.10	16.20	385.00	935.00	192.00	67.70	25.20	27.70	21.90	18.90	12.30	10.50
1967	12.50	14.30	90.00	341.00	102.00	73.00	26.50	12.70	12.10	13.40	12.90	13.00
1968	10.20	7.96	101.00	67.90	37.60	269.00	48.50	15.00	12.20	21.00	19.40	12.60
1969	4.70	5.64	7.50	669.00	130.00	103.00	50.00	20.40	24.80	30.50	19.70	16.30
1970	13.00	11.10	12.70	751.00	241.00	165.00	37.50	16.80	13.30	25.00	30.40	11.30
1971	11.60	12.50	43.30	345.00	61.30	36.50	17.30	10.50	33.20	223.00	209.00	48.70
1972	25.80	19.10	319.00	717.00	169.00	49.20	29.00	33.40	17.40	22.50	32.70	12.70
1973	11.00	12.20	228.00	51.10	37.50	22.50	12.20	12.60	80.30	95.00	45.60	23.30
1974	18.70	18.00	19.00	712.00	300.00	87.50	19.40	24.60	18.60	18.50	33.90	17.00
1975	11.90	13.70	23.50	756.00	221.00	48.90	182.00	35.30	18.60	22.90	27.10	19.20
1976	15.90	15.10	83.80	317.00	41.30	33.30	19.50	10.70	7.34	9.43	10.20	8.91
1977	7.86	8.18	18.90	51.60	32.60	40.60	10.90	6.96	15.40	21.10	26.30	27.90
1978	18.30	13.20	37.20	946.00	63.40	53.50	21.60	15.30	17.20	13.60	14.80	13.30
1979	12.10	12.90	17.20	869.00	160.00	71.10	166.00	45.20	17.80	18.00	28.10	24.00
1980	19.20	21.30	42.90	280.00	33.50	11.50	8.95	10.20	11.10	15.40	15.30	9.56
1981	8.05	12.20	32.80	25.30	50.70	38.80	24.30	17.10	34.50	59.50	35.40	22.30
1982	12.10	10.30	49.90	348.00	144.00	35.70	42.40	12.70	10.20	81.80	27.50	26.90
1983	19.20	19.00	334.00	181.00	54.70	228.00	113.00	49.40	72.00	70.20	49.90	35.90
1984	26.80	46.80	202.00	337.00	55.50	596.00	44.60	17.00	11.80	35.80	24.80	7.98

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red Lake River at the mouth												
1931	129.00	162.00	287.00	394.00	252.00	245.00	84.50	33.20	23.00	37.10	109.00	77.20
1932	57.60	61.50	240.00	1,412.00	346.00	88.20	40.50	20.80	13.90	13.30	33.70	29.60
1933	25.00	32.00	118.00	663.00	176.00	134.00	40.00	16.80	14.50	9.57	12.90	21.80
1934	17.00	20.10	143.00	546.00	168.00	87.60	48.10	13.40	9.66	11.40	25.70	22.80
1935	17.50	23.10	371.00	566.00	309.00	173.00	98.30	35.00	61.70	34.10	34.10	31.50
1936	34.60	27.20	27.10	1,488.00	512.00	99.40	28.50	14.40	11.30	8.73	11.00	5.82
1937	21.60	19.40	28.50	440.00	780.00	416.00	767.00	1,264.00	629.00	182.00	100.00	39.10
1938	64.30	87.90	675.00	319.00	3,624.00	1,134.00	379.00	119.00	155.00	169.00	145.00	167.00
1939	171.00	155.00	219.00	719.00	450.00	338.00	196.00	101.00	257.00	314.00	290.00	262.00
1940	171.00	189.00	203.00	2,195.00	1,094.00	525.00	235.00	163.00	156.00	234.00	266.00	198.00
1941	228.00	231.00	215.00	2,883.00	804.00	2,762.00	552.00	332.00	971.00	1,184.00	774.00	588.00
1942	488.00	521.00	1,700.00	3,170.00	3,081.00	889.00	313.00	371.00	1,390.00	629.00	387.00	341.00
1943	395.00	368.00	576.00	4,319.00	2,472.00	3,756.00	1,542.00	1,014.00	1,037.00	942.00	744.00	544.00
1944	451.00	489.00	538.00	1,447.00	1,338.00	2,486.00	1,616.00	2,077.00	1,669.00	1,388.00	1,687.00	1,293.00
1945	773.00	762.00	3,709.00	5,665.00	3,159.00	1,516.00	938.00	624.00	1,055.00	1,185.00	803.00	653.00
1946	620.00	590.00	3,942.00	4,211.00	1,900.00	1,103.00	832.00	381.00	506.00	819.00	643.00	575.00
1947	540.00	494.00	692.00	4,641.00	3,602.00	6,068.00	2,692.00	1,025.00	1,234.00	1,342.00	971.00	1,066.00
1948	994.00	695.00	736.00	7,135.00	3,712.00	1,166.00	1,040.00	718.00	617.00	437.00	437.00	360.00
1949	383.00	386.00	518.00	2,817.00	1,368.00	3,192.00	1,322.00	2,154.00	1,372.00	931.00	943.00	653.00
1950	724.00	713.00	865.00	6,273.00	16,650.00	5,120.00	3,923.00	1,819.00	2,039.00	2,561.00	1,936.00	1,920.00
1951	1,811.00	1,594.00	1,776.00	6,069.00	4,645.00	2,120.00	1,324.00	570.00	794.00	743.00	746.00	1,142.00
1952	1,241.00	1,318.00	1,283.00	3,524.00	2,115.00	1,859.00	2,533.00	935.00	653.00	453.00	405.00	391.00
1953	400.00	409.00	916.00	969.00	1,125.00	1,363.00	1,129.00	492.00	428.00	388.00	374.00	357.00
1954	320.00	330.00	450.00	2,026.00	1,421.00	1,317.00	734.00	473.00	391.00	378.00	443.00	424.00
1955	351.00	367.00	399.00	2,824.00	770.00	1,218.00	530.00	295.00	281.00	285.00	195.00	206.00
1956	246.00	252.00	250.00	3,711.00	2,711.00	923.00	952.00	328.00	1,407.00	392.00	666.00	387.00
1957	252.00	129.00	729.00	2,733.00	1,385.00	3,046.00	3,630.00	1,497.00	2,383.00	2,499.00	1,967.00	853.00
1958	901.00	845.00	1,090.00	1,068.00	528.00	658.00	1,668.00	396.00	113.00	106.00	129.00	81.10
1959	80.50	91.30	325.00	1,654.00	746.00	524.00	346.00	199.00	140.00	240.00	230.00	219.00
1960	201.00	193.00	208.00	2,483.00	823.00	1,027.00	458.00	76.80	92.70	126.00	189.00	78.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red Lake River at the mouth--Continued												
1961	70.20	74.40	441.00	720.00	621.00	101.00	97.70	57.40	201.00	236.00	156.00	75.70
1962	86.00	89.30	112.00	3,103.00	5,140.00	7,846.00	4,134.00	2,075.00	1,887.00	1,652.00	1,492.00	1,023.00
1963	1,070.00	960.00	1,375.00	3,476.00	2,259.00	2,419.00	1,356.00	710.00	870.00	1,173.00	652.00	497.00
1964	592.00	559.00	394.00	2,006.00	1,423.00	2,728.00	1,260.00	821.00	506.00	1,085.00	893.00	669.00
1965	677.00	692.00	692.00	7,973.00	4,160.00	4,210.00	1,974.00	866.00	1,241.00	2,620.00	1,491.00	1,327.00
1966	1,183.00	1,133.00	1,835.00	11,170.00	5,722.00	2,611.00	1,513.00	1,911.00	1,620.00	1,308.00	1,255.00	1,207.00
1967	1,147.00	1,175.00	1,589.00	7,441.00	5,173.00	2,743.00	1,442.00	913.00	908.00	589.00	425.00	375.00
1968	341.00	284.00	1,320.00	916.00	435.00	2,342.00	3,938.00	2,022.00	1,433.00	1,035.00	1,258.00	1,361.00
1969	1,356.00	1,350.00	1,329.00	8,538.00	3,976.00	2,204.00	1,285.00	1,021.00	1,337.00	1,946.00	1,452.00	1,160.00
1970	1,213.00	1,128.00	1,131.00	6,093.00	4,236.00	4,422.00	1,672.00	885.00	1,051.00	1,015.00	1,027.00	860.00
1971	841.00	938.00	1,070.00	3,262.00	1,555.00	1,274.00	862.00	715.00	613.00	3,088.00	3,454.00	1,149.00
1972	982.00	1,004.00	2,494.00	5,890.00	3,241.00	1,743.00	1,023.00	1,282.00	1,392.00	1,213.00	742.00	717.00
1973	658.00	661.00	1,846.00	604.00	671.00	443.00	266.00	540.00	2,386.00	2,506.00	1,436.00	1,074.00
1974	1,011.00	1,098.00	1,092.00	7,466.00	6,267.00	3,000.00	1,765.00	2,204.00	1,586.00	1,721.00	1,556.00	996.00
1975	1,082.00	988.00	1,017.00	6,604.00	5,115.00	2,732.00	7,461.00	1,947.00	1,902.00	2,141.00	1,747.00	1,189.00
1976	1,456.00	1,348.00	1,745.00	3,712.00	1,459.00	1,251.00	996.00	1,079.00	729.00	305.00	200.00	212.00
1977	193.00	197.00	302.00	467.00	399.00	245.00	418.00	208.00	491.00	685.00	730.00	797.00
1978	680.00	677.00	755.00	8,177.00	1,958.00	1,404.00	1,481.00	906.00	664.00	668.00	566.00	549.00
1979	534.00	551.00	607.00	8,361.00	4,889.00	2,846.00	2,529.00	1,711.00	1,270.00	1,239.00	1,019.00	1,308.00
1980	1,182.00	1,130.00	1,165.00	2,895.00	881.00	700.00	419.00	452.00	415.00	203.00	196.00	150.00
1981	137.00	163.00	258.00	253.00	258.00	967.00	1,469.00	951.00	1,477.00	1,925.00	1,232.00	1,052.00
1982	1,070.00	995.00	1,081.00	4,944.00	3,764.00	1,864.00	2,186.00	1,476.00	1,080.00	2,388.00	1,675.00	1,421.00
1983	1,184.00	1,042.00	2,805.00	2,596.00	1,644.00	2,846.00	2,149.00	1,936.00	1,607.00	1,508.00	1,368.00	1,113.00
1984	1,053.00	1,131.00	1,946.00	2,682.00	1,270.00	3,809.00	1,466.00	895.00	623.00	874.00	992.00	1,122.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of North at Grand Forks, N.Dak.												
1931	161.00	273.00	477.00	1,092.00	612.00	492.00	277.00	136.00	59.50	111.00	199.00	133.00
1932	160.00	207.00	1,173.00	3,933.00	919.00	401.00	178.00	58.60	43.40	36.00	82.70	57.40
1933	38.60	33.60	927.00	2,254.00	768.00	428.00	116.00	41.50	31.30	31.70	79.00	52.50
1934	39.00	40.70	419.00	1,540.00	373.00	151.00	153.00	30.60	20.70	40.60	73.00	40.70
1935	27.70	31.80	898.00	1,521.00	856.00	503.00	666.00	404.00	184.00	103.00	83.30	70.60
1936	58.60	54.30	63.70	4,829.00	1,482.00	274.00	88.80	32.10	20.30	12.10	30.50	17.80
1937	18.80	2.87	42.10	1,485.00	1,636.00	922.00	767.00	1,333.00	794.00	316.00	214.00	55.90
1938	61.30	89.50	1,309.00	954.00	4,560.00	1,992.00	697.00	190.00	208.00	216.00	190.00	199.00
1939	237.00	229.00	455.00	3,126.00	912.00	687.00	388.00	118.00	225.00	324.00	336.00	282.00
1940	161.00	170.00	229.00	4,088.00	1,955.00	961.00	297.00	212.00	171.00	245.00	344.00	282.00
1941	334.00	358.00	448.00	7,013.00	2,166.00	4,704.00	986.00	756.00	1,602.00	1,725.00	1,104.00	880.00
1942	545.00	573.00	1,623.00	5,343.00	6,695.00	3,599.00	1,650.00	1,032.00	3,062.00	1,526.00	1,062.00	734.00
1943	773.00	680.00	1,068.00	18,310.00	5,760.00	10,390.00	4,972.00	2,282.00	1,616.00	1,341.00	1,172.00	921.00
1944	697.00	652.00	634.00	3,311.00	3,351.00	5,425.00	5,899.00	5,030.00	4,167.00	2,392.00	2,321.00	1,668.00
1945	1,377.00	1,373.00	9,093.00	12,190.00	5,862.00	3,161.00	1,627.00	1,017.00	1,336.00	1,696.00	1,213.00	952.00
1946	863.00	767.00	6,452.00	9,541.00	3,466.00	2,046.00	2,239.00	1,227.00	1,188.00	1,741.00	1,438.00	1,112.00
1947	1,075.00	839.00	1,377.00	19,620.00	7,486.00	10,320.00	4,287.00	1,413.00	1,393.00	1,599.00	1,330.00	1,255.00
1948	1,106.00	913.00	1,041.00	19,800.00	7,817.00	2,502.00	1,694.00	1,157.00	892.00	600.00	594.00	463.00
1949	417.00	444.00	679.00	6,780.00	2,657.00	4,843.00	3,306.00	3,065.00	1,612.00	1,072.00	1,172.00	1,038.00
1950	781.00	731.00	1,057.00	24,100.00	36,510.00	11,080.00	7,761.00	3,029.00	2,226.00	2,722.00	1,987.00	2,037.00
1951	1,929.00	821.00	2,269.00	14,380.00	8,193.00	4,087.00	2,249.00	1,113.00	1,427.00	1,314.00	1,270.00	1,850.00
1952	1,747.00	869.00	1,968.00	16,630.00	5,318.00	3,493.00	5,622.00	1,838.00	1,261.00	872.00	764.00	672.00
1953	575.00	607.00	1,906.00	3,152.00	3,071.00	8,945.00	4,526.00	2,036.00	1,220.00	865.00	936.00	847.00
1954	813.00	853.00	1,616.00	4,809.00	3,516.00	3,287.00	2,090.00	868.00	694.00	640.00	697.00	681.00
1955	725.00	666.00	684.00	5,598.00	1,708.00	2,237.00	2,153.00	1,576.00	779.00	752.00	526.00	376.00
1956	434.00	470.00	540.00	8,927.00	5,054.00	2,755.00	1,407.00	699.00	1,451.00	495.00	787.00	516.00
1957	416.00	429.00	1,552.00	4,416.00	3,084.00	4,251.00	5,760.00	2,471.00	4,266.00	3,245.00	2,809.00	1,511.00
1958	1,327.00	273.00	1,928.00	2,606.00	1,357.00	1,282.00	3,647.00	824.00	444.00	398.00	464.00	325.00
1959	376.00	375.00	923.00	2,995.00	1,605.00	2,432.00	1,850.00	646.00	475.00	496.00	446.00	434.00
1960	500.00	481.00	556.00	8,764.00	3,115.00	2,599.00	1,775.00	481.00	561.00	343.00	472.00	317.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of North at Grand Forks, N.Dak.--Continued							
1961	297.00	326.00	1,677.00	1,700.00	2,141.00	894.00	401.00	218.00	335.00	576.00	383.00	220.00
1962	199.00	217.00	314.00	10,640.00	9,754.00	19,340.00	13,970.00	5,887.00	3,231.00	2,334.00	2,113.00	1,583.00
1963	1,305.00	1,104.00	1,962.00	5,767.00	3,343.00	6,245.00	2,459.00	1,114.00	1,195.00	1,386.00	930.00	802.00
1964	763.00	736.00	705.00	6,295.00	4,039.00	4,550.00	2,318.00	993.00	703.00	1,533.00	1,262.00	872.00
1965	946.00	910.00	930.00	24,480.00	8,110.00	8,261.00	4,315.00	1,955.00	1,879.00	3,870.00	2,337.00	2,153.00
1966	1,892.00	1,813.00	10,250.00	25,360.00	10,870.00	5,228.00	2,956.00	3,495.00	2,308.00	1,906.00	1,798.00	1,789.00
1967	1,703.00	1,602.00	2,708.00	16,920.00	9,270.00	5,987.00	3,153.00	1,178.00	862.00	773.00	704.00	718.00
1968	592.00	540.00	1,877.00	2,541.00	1,880.00	4,580.00	4,193.00	2,155.00	1,550.00	1,465.00	1,657.00	1,608.00
1969	1,495.00	1,513.00	2,111.00	28,690.00	12,070.00	4,518.00	3,246.00	1,503.00	1,432.00	1,953.00	1,816.00	1,479.00
1970	1,411.00	1,536.00	1,676.00	14,150.00	8,235.00	9,791.00	2,897.00	1,091.00	1,159.00	1,131.00	1,415.00	1,134.00
1971	1,100.00	154.00	2,423.00	7,096.00	3,035.00	2,175.00	2,124.00	1,028.00	1,235.00	4,290.00	5,218.00	3,073.00
1972	1,827.00	480.00	8,595.00	15,700.00	7,597.00	5,197.00	2,276.00	2,267.00	1,905.00	1,800.00	1,409.00	1,163.00
1973	1,124.00	162.00	5,467.00	1,959.00	1,356.00	1,029.00	560.00	737.00	3,067.00	3,737.00	2,421.00	1,945.00
1974	1,701.00	658.00	2,048.00	16,670.00	13,150.00	5,928.00	2,860.00	2,699.00	1,793.00	1,939.00	1,972.00	1,240.00
1975	1,301.00	434.00	1,740.00	18,740.00	14,640.00	6,173.00	25,270.00	3,004.00	2,228.00	2,345.00	2,315.00	1,772.00
1976	1,705.00	699.00	3,704.00	9,237.00	2,515.00	1,556.00	1,106.00	976.00	700.00	407.00	300.00	196.00
1977	215.00	215.00	494.00	1,336.00	834.00	549.00	592.00	227.00	594.00	1,223.00	1,084.00	1,360.00
1978	1,285.00	113.00	2,504.00	30,180.00	4,977.00	3,151.00	3,065.00	1,405.00	973.00	880.00	804.00	761.00
1979	684.00	683.00	962.00	31,480.00	18,330.00	5,958.00	5,773.00	3,300.00	1,941.00	1,652.00	1,832.00	1,522.00
1980	1,341.00	404.00	1,853.00	8,707.00	1,848.00	1,451.00	669.00	456.00	767.00	424.00	436.00	353.00
1981	292.00	386.00	936.00	979.00	1,352.00	1,270.00	2,415.00	1,468.00	1,804.00	2,473.00	1,820.00	1,129.00
1982	1,136.00	1,071.00	2,380.00	17,400.00	6,015.00	3,353.00	3,200.00	1,898.00	1,268.00	3,687.00	2,347.00	1,909.00
1983	1,600.00	1,473.00	7,695.00	7,047.00	2,994.00	5,036.00	6,028.00	2,614.00	2,486.00	2,153.00	2,021.00	1,935.00
1984	1,679.00	1,813.00	5,607.00	15,460.00	3,846.00	11,530.00	3,062.00	1,482.00	955.00	2,227.00	2,018.00	1,444.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Turtle River at the mouth												
1931	0.89	0.88	6.73	34.60	6.12	7.73	3.25	2.58	0.47	1.48	2.07	0.33
1932	.30	20.40	224.00	1.48	29.90	16.70	2.78	1.04	.55	2.19	8.60	.34
1933	0	0	58.30	108.00	20.10	9.88	2.49	2.01	4.20	7.04	6.33	1.31
1934	.59	.48	28.80	41.20	3.99	5.69	3.21	2.72	3.31	2.65	2.07	.33
1935	.30	.43	64.40	40.00	23.30	64.60	13.00	2.17	.56	1.48	2.90	.33
1936	.30	.30	1.30	175.00	17.80	5.72	2.01	1.61	.16	.70	1.47	.17
1937	.16	.30	.69	21.80	10.90	13.80	4.87	4.79	2.46	.70	1.47	.17
1938	.16	.16	34.20	10.70	8.39	3.45	.16	.01	0	0	0	0
1939	0	0	88.50	45.60	2.49	13.20	.75	0	0	0	0	0
1940	0	0	0	149.00	12.60	3.94	.99	5.49	.02	0	0	0
1941	0	0	24.60	401.00	17.70	51.00	9.29	2.50	3.05	11.70	10.20	3.15
1942	.11	.14	10.00	225.00	69.40	31.70	8.54	4.65	3.25	3.20	4.12	1.10
1943	.63	.46	181.00	121.00	34.70	67.50	18.70	3.41	.64	1.23	2.94	.48
1944	.25	.18	2.48	72.40	20.20	24.10	8.25	19.50	13.40	6.99	16.20	7.04
1945	.89	.87	88.10	48.60	21.70	20.70	8.49	2.55	1.40	2.36	2.07	.42
1946	.11	.11	160.00	40.40	8.99	5.80	54.80	.33	6.53	13.00	5.00	2.17
1947	.22	.11	83.70	220.00	23.50	67.10	9.47	9.81	1.74	7.31	8.05	2.86
1948	.14	.11	.11	1,329.00	78.10	101.00	24.10	11.40	2.50	1.48	5.28	.54
1949	.15	.11	.11	440.00	32.80	38.80	9.59	3.48	.47	7.61	7.69	7.85
1950	.11	0	0	2,269.00	1,663.00	55.90	48.30	10.20	22.40	19.10	15.70	5.16
1951	5.82	2.28	47.10	241.00	27.50	16.10	4.51	13.70	47.40	8.53	9.37	6.30
1952	.85	.11	2.04	191.00	16.90	7.99	46.80	4.23	.80	.94	10.50	4.26
1953	1.31	.91	20.70	31.10	30.00	102.00	48.50	4.65	1.19	2.98	3.55	2.68
1954	.32	1.39	30.40	51.70	18.80	23.30	12.90	2.35	1.78	3.62	7.48	3.12
1955	1.23	.77	.06	257.00	21.60	126.00	12.00	4.15	.79	4.15	4.26	.75
1956	.40	.54	.77	369.00	71.50	48.90	7.99	2.47	5.14	1.10	9.59	4.13
1957	3.30	.73	51.60	46.40	18.50	15.90	1.87	8.06	246.00	42.70	28.40	8.44
1958	2.58	4.81	13.90	26.50	16.20	15.90	22.40	1.24	.35	1.66	5.84	1.46
1959	.02	0	43.90	67.90	18.80	12.80	8.93	3.30	.21	11.00	6.64	3.77
1960	2.78	2.09	42.60	490.00	27.90	20.20	8.11	2.31	1.39	.72	4.57	.70

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Turtle River at the mouth--Continued												
1961	0.90	0.63	41.10	29.60	16.70	3.92	1.31	0.75	1.34	6.76	3.64	1.47
1962	0	0	0	410.00	152.00	194.00	23.50	3.96	5.34	5.11	12.10	4.01
1963	.55	0	24.60	52.50	15.90	14.30	11.50	3.70	.74	1.27	.73	.11
1964	0	0	.08	169.00	23.00	307.00	23.80	8.69	16.10	14.20	8.39	3.86
1965	1.36	1.69	2.39	637.00	98.10	83.10	22.20	7.41	37.30	56.10	19.10	11.70
1966	5.53	1.90	547.00	451.00	169.00	39.60	52.00	25.20	9.21	10.20	9.42	6.45
1967	4.60	5.53	110.00	611.00	218.00	36.70	7.55	2.57	.95	5.09	6.96	4.24
1968	2.23	1.98	115.00	57.30	23.10	61.80	66.10	15.10	15.40	10.10	14.30	9.31
1969	2.03	.21	.09	722.00	36.10	43.30	18.30	4.88	12.50	16.00	12.70	8.86
1970	4.84	.96	2.18	710.00	180.00	64.90	17.10	14.70	12.30	8.11	16.10	9.24
1971	4.18	5.66	71.90	384.00	58.80	55.60	36.00	6.76	4.72	35.20	29.60	18.50
1972	8.17	5.63	335.00	554.00	159.00	70.40	12.60	6.85	3.24	3.60	11.50	5.13
1973	4.29	6.72	226.00	58.40	22.00	16.30	6.22	3.07	5.08	16.30	13.00	6.08
1974	1.69	3.63	2.95	731.00	184.00	111.00	26.50	8.04	6.81	4.74	10.80	9.15
1975	7.67	6.92	26.60	646.00	163.00	66.40	34.70	4.07	2.71	3.39	9.66	4.67
1976	4.50	5.76	196.00	205.00	26.10	10.40	3.05	5.08	2.04	1.43	4.35	.38
1977	.43	.43	2.75	24.40	13.30	8.76	6.80	.70	2.41	9.16	15.70	8.21
1978	4.71	2.52	247.00	671.00	67.60	34.10	11.60	2.57	6.17	3.48	4.58	2.26
1979	2.11	2.51	3.72	1,662.00	249.00	56.90	29.20	11.10	3.80	9.26	11.50	10.30
1980	5.72	5.41	51.90	194.00	13.40	5.55	1.69	2.75	2.74	2.86	7.00	3.23
1981	2.64	5.55	10.70	10.80	10.90	18.30	9.87	7.65	3.30	10.10	12.40	13.10
1982	5.94	4.84	73.30	586.00	57.90	22.30	17.20	2.88	.58	58.30	19.90	24.70
1983	9.74	8.78	333.00	206.00	52.80	86.50	36.20	16.40	42.30	32.20	22.20	17.70
1984	9.21	7.83	322.00	326.00	70.60	79.30	6.76	4.88	.54	11.50	9.47	1.01

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Forest River at the mouth												
1931	2.51	2.13	12.20	46.00	25.30	12.30	9.54	3.61	1.54	3.60	3.85	1.06
1932	.13	27.40	248.00	171.00	55.00	21.20	9.51	.73	.29	7.66	5.40	2.07
1933	0	0	93.20	289.00	45.10	20.10	6.93	3.70	8.13	11.00	10.60	4.86
1934	1.85	.78	34.40	74.00	19.90	9.42	1.63	5.53	7.02	5.34	3.85	1.06
1935	.21	.79	79.00	75.70	27.10	16.40	13.40	5.52	1.78	.38	0	0
1936	0	0	0	201.00	33.60	15.70	2.63	0	0	0	0	0
1937	0	0	0	26.70	19.20	12.10	.95	.21	0	0	0	0
1938	0	0	45.30	20.70	17.00	4.52	2.63	0	0	0	0	0
1939	0	0	38.70	71.40	13.00	3.02	24.60	0	0	0	0	0
1940	0	0	0	78.30	21.00	5.84	0	24.80	.41	0	0	0
1941	0	0	0	656.00	40.80	41.50	14.10	6.65	17.10	60.50	21.00	11.00
1942	.60	0	239.00	667.00	73.10	27.20	13.80	28.60	8.81	5.46	6.58	3.58
1943	2.39	2.08	269.00	185.00	44.30	361.00	342.00	38.10	18.00	5.15	9.56	8.60
1944	1.29	.06	.47	132.00	35.40	30.50	10.90	2.58	10.60	3.58	21.60	16.40
1945	3.74	2.41	132.00	69.40	29.50	22.30	8.21	4.26	1.45	3.11	4.05	1.54
1946	.73	.29	228.00	61.90	15.60	13.10	7.87	0	4.37	7.44	8.56	4.02
1947	.73	.03	132.00	142.00	25.30	22.80	28.80	7.88	5.36	5.74	8.95	7.68
1948	5.06	1.12	.26	1,745.00	156.00	59.40	27.40	14.00	6.96	5.94	10.30	5.40
1949	1.67	.73	.87	708.00	55.00	25.50	16.40	4.84	.95	8.23	10.20	7.34
1950	1.03	1.03	1.17	2,309.00	2,224.00	79.40	41.50	11.80	13.10	12.30	13.60	6.72
1951	5.36	6.61	45.80	292.00	40.20	22.80	9.51	13.70	12.40	9.36	9.85	6.02
1952	1.61	1.01	5.24	141.00	24.10	11.10	42.70	7.85	4.42	3.24	6.15	2.89
1953	.84	.12	4.37	32.20	24.20	75.40	14.80	3.14	.40	2.64	6.71	3.55
1954	.41	.34	36.30	58.40	26.90	64.30	14.70	16.30	9.44	10.30	9.64	5.87
1955	1.92	.75	.04	427.00	32.40	136.00	16.40	4.18	2.48	7.57	7.79	2.88
1956	.78	.70	.85	750.00	129.00	307.00	39.20	16.20	20.60	14.60	23.20	9.45
1957	6.56	2.25	69.10	37.90	29.90	21.90	9.47	11.40	83.10	18.80	20.80	10.00
1958	3.85	1.23	8.81	36.60	23.90	60.00	18.80	5.58	3.04	11.30	9.59	1.04
1959	.40	.15	15.80	157.00	27.00	16.20	8.38	3.16	.65	8.18	6.71	5.45
1960	2.74	1.45	30.20	890.00	45.10	22.30	6.80	2.79	1.38	2.38	6.03	1.09

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Forest River at the mouth--Continued												
1961	0.94	0.00	34.30	35.80	17.00	7.60	8.28	0.75	0.00	3.64	4.92	1.56
1962	.28	0	0	584.00	92.80	392.00	29.70	17.30	12.00	19.40	23.20	7.15
1963	1.39	0	61.90	50.60	27.70	33.30	38.90	5.48	1.17	4.62	7.85	1.66
1964	.22	.13	.38	204.00	41.10	392.00	74.10	17.80	15.30	18.50	14.80	7.32
1965	5.56	4.07	4.17	706.00	92.50	106.00	34.30	16.90	23.50	37.90	23.20	17.00
1966	7.28	3.14	643.00	523.00	336.00	84.10	53.60	25.80	14.50	16.00	15.80	12.00
1967	5.20	3.64	182.00	527.00	310.00	57.80	25.50	13.10	8.38	6.99	15.10	8.18
1968	2.97	2.28	97.60	67.50	31.30	27.40	24.40	17.30	15.40	13.10	16.00	8.23
1969	1.20	.60	.68	766.00	78.20	29.70	18.00	6.90	7.54	9.54	11.60	8.79
1970	7.90	3.32	1.16	703.00	204.00	61.50	58.40	16.70	9.59	13.40	15.80	6.46
1971	1.32	1.39	10.90	752.00	87.30	44.60	98.50	30.80	17.00	18.00	21.40	8.28
1972	1.17	.38	396.00	523.00	106.00	45.80	14.70	6.62	6.49	11.90	11.50	2.99
1973	.59	.78	87.30	58.60	27.70	41.70	9.03	2.16	6.55	17.20	6.46	4.54
1974	3.74	.87	1.34	970.00	713.00	258.00	40.40	28.80	11.20	19.50	21.70	12.40
1975	8.60	5.40	8.00	418.00	238.00	42.40	159.00	13.60	9.60	16.30	14.00	5.50
1976	5.28	6.08	159.00	570.00	50.80	25.70	12.50	4.26	2.25	2.05	3.21	.72
1977	0	0	16.20	48.30	26.00	16.20	9.97	4.61	6.11	13.30	7.49	1.89
1978	1.41	.25	109.00	727.00	82.80	89.80	38.80	12.00	12.70	8.04	4.51	3.11
1979	2.94	1.98	1.47	1,745.00	533.00	93.40	93.10	17.80	25.30	12.00	12.10	6.39
1980	1.53	1.95	12.00	103.00	18.50	10.80	2.74	1.94	4.37	7.84	15.30	12.00
1981	6.02	25.40	48.90	56.90	22.30	31.60	18.00	7.09	22.50	30.10	17.20	12.30
1982	2.26	.44	49.30	483.00	92.50	88.10	346.00	142.00	20.40	86.80	34.60	19.70
1983	14.20	18.30	348.00	289.00	77.10	47.90	27.40	11.60	25.10	13.40	22.00	5.18
1984	1.14	6.58	78.20	131.00	39.20	38.20	14.60	4.59	5.53	5.80	5.28	2.30

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Snake River at the mouth												
1931	1.11	1.00	57.40	85.00	45.10	8.14	1.29	1.40	0.25	0.22	0.14	0.07
1932	.04	37.10	31.80	524.00	75.40	29.80	.97	.22	.32	.47	3.37	.32
1933	0	0	66.50	267.00	77.40	12.30	2.19	.93	6.85	12.90	5.41	1.65
1934	.65	.25	31.80	101.00	8.78	4.84	1.25	1.54	3.37	.65	.14	.07
1935	.04	.22	100.00	98.50	23.00	295.00	20.00	.97	.32	.22	.32	.07
1936	.04	.14	1.40	433.00	43.40	4.91	.50	.07	.07	.07	.07	.04
1937	0	.14	.79	53.60	73.50	21.70	2.87	4.84	2.26	.07	.07	.04
1938	0	.07	82.90	26.20	22.30	2.08	0	0	0	0	0	0
1939	0	0	21.30	112.00	8.35	20.00	.07	0	0	0	0	0
1940	0	0	0	367.00	16.30	2.62	.65	6.38	0	0	0	0
1941	0	0	18.40	995.00	62.10	197.00	10.30	1.29	3.01	8.71	9.43	2.47
1942	.04	.11	152.00	556.00	194.00	88.70	8.68	4.55	3.30	.90	.93	.54
1943	.14	.25	268.00	664.00	319.00	1,367.00	76.40	16.70	5.09	4.48	3.80	.14
1944	.04	.07	1.83	86.60	83.80	79.40	181.00	309.00	93.10	34.30	34.80	8.17
1945	.25	.57	185.00	739.00	165.00	51.30	48.60	28.50	38.50	55.80	17.80	.32
1946	.14	.47	137.00	444.00	133.00	41.50	15.60	2.04	4.66	19.50	8.35	.47
1947	3.37	2.08	12.10	1,885.00	834.00	3,414.00	73.90	13.50	5.05	4.98	4.59	1.33
1948	1.25	.43	1.79	1,285.00	138.00	27.50	17.20	6.85	1.97	1.90	3.73	1.51
1949	1.40	.90	6.13	313.00	88.60	954.00	83.70	12.20	2.04	8.07	10.90	6.92
1950	2.40	.54	3.66	2,368.00	27,090.00	318.00	701.00	29.40	4.48	39.40	27.90	18.30
1951	11.50	9.86	14.90	1,208.00	258.00	25.70	5.48	10.90	98.60	42.70	17.70	12.90
1952	3.69	6.92	12.30	635.00	70.30	12.50	21.60	1.40	0	.14	1.79	.18
1953	0	0	56.30	119.00	78.90	60.60	12.40	.90	0	0	0	0
1954	0	0	0	108.00	77.00	91.10	11.10	.31	0	.08	.23	.15
1955	.11	0	0	198.00	47.60	280.00	17.30	.68	0	.73	.02	.22
1956	.18	0	0	276.00	325.00	67.40	549.00	23.20	14.80	2.96	55.30	9.10
1957	6.95	5.59	143.00	246.00	151.00	232.00	314.00	13.50	584.00	146.00	84.30	26.60
1958	8.96	6.09	13.50	43.70	19.10	17.40	670.00	18.90	.54	.97	1.97	2.33
1959	.72	0	5.77	749.00	107.00	56.30	35.70	15.60	8.71	44.80	37.60	15.50
1960	7.53	3.98	6.02	1,101.00	179.00	176.00	37.30	3.19	.79	1.15	1.51	2.04

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Snake River at the mouth--Continued												
1961	1.18	0.68	82.50	97.90	38.70	2.76	0.00	0.00	5.27	29.50	10.50	3.30
1962	1.36	.47	0	878.00	1,072.00	1,728.00	157.00	26.30	27.30	9.43	15.00	12.50
1963	1.47	0	67.00	678.00	149.00	110.00	24.70	16.70	.50	.04	.65	.11
1964	0	0	0	265.00	160.00	1,097.00	145.00	101.00	30.20	96.80	46.30	14.10
1965	9.18	4.19	4.91	2,068.00	570.00	366.00	331.00	18.00	28.50	231.00	77.40	30.60
1966	14.50	6.88	333.00	2,678.00	832.00	117.00	384.00	86.80	17.00	18.10	6.92	3.26
1967	2.33	1.90	55.90	1,696.00	846.00	75.30	17.60	.57	0	1.94	5.84	2.15
1968	0	.47	93.20	68.80	14.50	835.00	735.00	101.00	100.00	83.50	46.60	19.40
1969	3.23	5.92	10.70	1,982.00	227.00	169.00	41.20	4.23	.79	.61	1.51	1.72
1970	1.29	.14	0	1,086.00	1,183.00	2,366.00	91.10	9.86	3.12	7.42	16.20	8.14
1971	5.56	5.16	22.10	581.00	99.70	43.40	12.20	.93	.32	2.51	27.50	10.10
1972	1.29	.22	73.90	760.00	129.00	62.40	7.96	.07	.07	.04	.61	0
1973	0	0	125.00	23.00	11.80	1.33	0	.07	.29	6.85	8.71	.18
1974	.36	.22	0	1,527.00	688.00	161.00	10.80	1.76	1.25	1.25	2.19	2.33
1975	2.87	1.36	4.45	807.00	452.00	165.00	2,466.00	39.40	5.52	4.19	15.50	6.09
1976	6.06	6.45	75.60	678.00	58.40	11.80	4.66	.25	0	0	0	0
1977	0	0	2.65	36.90	15.70	11.70	.79	1.15	.25	.29	16.00	14.50
1978	4.45	2.98	48.00	1,717.00	419.00	175.00	220.00	25.50	3.84	1.43	5.63	4.45
1979	3.12	2.19	5.09	2,190.00	455.00	171.00	44.10	5.77	2.40	1.08	5.84	4.77
1980	4.55	3.73	7.17	405.00	24.10	2.83	.07	.50	2.12	1.08	.25	.18
1981	.04	1.83	19.80	19.30	7.60	30.10	76.40	.14	2.76	0	0	0
1982	0	0	33.60	1,018.00	366.00	58.10	187.00	41.90	1.76	337.00	86.00	56.60
1983	16.70	11.90	778.00	559.00	203.00	220.00	70.60	3.58	1.61	15.00	24.70	14.30
1984	5.88	3.76	207.00	405.00	80.30	325.00	11.10	.54	.04	.93	1.72	1.22

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Park River at the mouth												
1931	0.03	0.87	43.10	223.00	18.20	4.42	1.42	0.28	0.15	0.15	0.58	0.15
1932	0	2.91	21.80	269.00	31.50	8.11	.39	0	0	1.45	1.16	0
1933	0	0	58.10	597.00	32.40	17.70	.73	.29	0	0	0	0
1934	0	.07	21.80	113.00	3.14	.60	.02	0	.12	0	0	0
1935	0	0	100.00	95.80	8.82	5.68	2.91	.73	0	0	0	0
1936	0	0	0	330.00	17.40	18.90	.05	0	0	0	0	0
1937	0	0	0	131.00	30.70	5.36	6.90	1.70	0	0	0	0
1938	0	0	78.00	7.85	8.55	.51	6.84	0	0	0	0	0
1939	0	0	12.70	34.40	2.98	4.11	.17	0	0	0	0	0
1940	0	0	0	55.20	6.10	.55	.20	.39	0	0	0	0
1941	0	0	.55	839.00	25.60	17.40	2.15	.33	46.20	47.50	12.20	4.53
1942	0	0	174.00	1,269.00	86.60	23.80	5.06	4.91	4.78	.39	1.06	.07
1943	.14	.16	372.00	247.00	43.70	294.00	219.00	18.50	.36	.02	1.09	1.03
1944	.01	0	.48	161.00	10.30	12.10	3.52	16.60	11.30	1.22	21.20	10.20
1945	.38	.33	596.00	195.00	82.40	45.80	10.70	1.24	.89	.23	.31	.20
1946	.15	.19	344.00	99.50	13.90	7.16	1.85	.19	.54	.55	.28	.06
1947	0	0	6.89	247.00	14.20	30.20	90.10	18.50	5.44	1.86	3.65	3.50
1948	.70	.17	.67	2,629.00	317.00	54.90	65.70	44.30	3.39	.70	1.50	.55
1949	.33	.29	.45	1,118.00	74.70	16.70	3.31	1.67	.09	.57	.28	.15
1950	.15	.15	.25	2,981.00	3,010.00	94.50	30.80	18.80	1.83	3.17	2.34	3.07
1951	1.60	.83	17.60	481.00	49.10	9.34	1.03	4.33	60.00	49.60	1.93	.83
1952	.14	0	.29	68.20	12.00	.57	.33	0	32.10	0	.04	1.18
1953	.31	0	3.23	11.80	7.64	14.70	1.67	.07	.29	.09	1.00	.25
1954	.02	2.17	8.57	23.40	19.80	190.00	27.60	8.78	7.08	7.08	5.70	1.70
1955	.29	.29	1.16	647.00	67.40	112.00	15.30	1.89	17.20	.64	0	0
1956	0	0	17.30	1,474.00	650.00	238.00	28.50	4.91	10.90	10.50	11.80	4.49
1957	2.30	7.92	83.60	69.80	33.10	15.10	2.73	6.77	219.00	10.00	10.40	6.29
1958	2.46	1.98	5.28	26.20	5.75	3.89	4.14	.11	0	1.83	0	.28
1959	.58	0	.96	353.00	39.20	8.50	4.77	.05	.01	0	.10	.09
1960	.07	.02	1.51	1,369.00	49.70	16.40	1.53	.04	.61	.77	0	0

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Park River at the mouth--Continued												
1961	0.00	0.00	4.61	18.30	3.39	0.00	0.08	0.08	0.06	0.03	1.25	0.42
1962	.12	4.26	14.80	1,042.00	150.00	339.00	27.00	16.00	.17	.36	.70	.12
1963	0	.35	44.00	37.30	12.70	153.00	25.00	12.80	0	.61	.03	0
1964	.11	1.08	1.06	323.00	84.70	837.00	93.30	3.82	1.69	9.72	2.89	.58
1965	.16	2.15	8.47	1,298.00	237.00	124.00	32.00	14.40	54.90	67.00	22.80	14.10
1966	3.04	.28	433.00	927.00	641.00	123.00	198.00	48.40	2.95	1.34	1.77	2.73
1967	1.64	1.93	161.00	926.00	746.00	33.90	2.88	.12	0	.05	.19	.07
1968	.03	2.44	121.00	67.40	74.00	33.70	13.70	.38	.16	.23	.11	.17
1969	.12	3.31	11.70	1,248.00	44.50	21.10	10.30	.61	3.27	.64	.13	3.59
1970	.39	.19	.87	921.00	302.00	56.20	21.80	.42	.01	.02	4.65	1.15
1971	.01	.92	24.70	1,273.00	83.40	110.00	109.00	7.21	.05	7.76	9.69	.62
1972	0	5.61	466.00	606.00	83.10	13.90	.32	.03	2.78	.06	.11	4.72
1973	1.05	.45	91.10	41.00	18.00	13.70	.55	1.34	.83	7.95	8.01	10.80
1974	2.33	2.64	12.30	1,567.00	1,000.00	147.00	8.11	6.60	1.10	.31	5.84	12.60
1975	7.40	4.78	5.28	358.00	212.00	22.40	116.00	.73	.39	1.16	10.70	10.10
1976	7.51	6.61	49.10	788.00	38.80	119.00	5.36	.58	.55	.33	2.47	3.08
1977	3.18	2.91	8.81	12.80	7.06	2.24	.19	.13	.08	.31	3.50	3.63
1978	3.49	2.11	28.80	1,257.00	144.00	32.60	6.70	.51	2.94	.26	7.60	5.99
1979	1.34	1.12	3.44	2,107.00	414.00	68.30	78.80	9.01	6.48	.45	8.09	6.22
1980	3.55	1.92	3.33	134.00	17.90	35.60	.97	2.92	57.60	58.60	45.50	20.50
1981	7.88	66.40	164.00	157.00	41.10	73.70	85.90	13.80	15.50	12.70	10.90	9.14
1982	7.83	4.91	42.10	724.00	161.00	142.00	369.00	56.10	2.14	102.00	32.10	25.30
1983	20.20	15.10	581.00	465.00	84.70	108.00	29.70	.94	.19	1.87	7.19	1.41
1984	.68	2.49	53.30	113.00	30.70	24.80	3.27	1.85	.09	4.01	11.20	2.37

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1936, intermittently April 1936 through March 1949) and gaged (seasonally April 1936 through March 1949, continuously April 1949 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Drayton, N.Dak.												
1931	163.00	270.00	1,043.00	1,153.00	628.00	499.00	327.00	156.00	61.00	120.00	222.00	136.00
1932	162.00	204.00	1,483.00	4,426.00	962.00	403.00	211.00	67.50	44.30	39.50	94.00	58.50
1933	39.00	33.00	936.00	2,467.00	797.00	920.00	110.00	47.90	31.80	34.80	89.90	53.50
1934	39.40	40.00	422.00	1,654.00	373.00	144.00	182.00	35.40	20.90	44.50	83.20	41.40
1935	28.00	31.20	851.00	1,633.00	893.00	511.00	779.00	458.00	192.00	112.00	94.70	72.00
1936	59.20	53.40	58.40	5,768.00	1,826.00	399.00	118.00	50.10	27.40	13.80	35.50	18.10
1937	19.00	2.80	37.80	1,729.00	1,952.00	968.00	896.00	1,495.00	843.00	339.00	238.00	57.00
1938	61.90	88.10	1,580.00	1,001.00	5,169.00	2,280.00	815.00	217.00	217.00	233.00	212.00	204.00
1939	239.00	226.00	460.00	3,478.00	954.00	709.00	456.00	135.00	235.00	347.00	370.00	289.00
1940	163.00	168.00	224.00	4,609.00	2,125.00	943.00	350.00	242.00	178.00	263.00	378.00	289.00
1941	337.00	354.00	453.00	8,122.00	2,366.00	4,607.00	1,148.00	852.00	1,717.00	1,819.00	1,181.00	905.00
1942	550.00	567.00	1,532.00	11,400.00	7,003.00	3,665.00	1,912.00	1,160.00	3,311.00	1,611.00	1,137.00	755.00
1943	780.00	674.00	1,312.00	20,640.00	6,606.00	10,690.00	5,699.00	2,547.00	1,733.00	1,417.00	1,252.00	948.00
1944	703.00	646.00	834.00	3,694.00	3,741.00	6,030.00	6,750.00	5,577.00	4,525.00	2,514.00	2,440.00	1,720.00
1945	1,388.00	1,363.00	10,690.00	15,870.00	6,780.00	3,504.00	1,886.00	1,143.00	1,429.00	1,788.00	1,295.00	980.00
1946	870.00	760.00	7,442.00	12,430.00	3,687.00	2,132.00	2,587.00	1,377.00	1,268.00	1,835.00	1,529.00	1,145.00
1947	1,084.00	832.00	1,301.00	23,970.00	10,360.00	11,140.00	5,267.00	1,762.00	1,490.00	1,687.00	1,417.00	1,293.00
1948	1,115.00	905.00	986.00	24,210.00	12,700.00	3,096.00	2,067.00	1,299.00	949.00	639.00	645.00	475.00
1949	421.00	439.00	700.00	11,440.00	2,977.00	5,460.00	3,425.00	3,265.00	1,737.00	1,125.00	1,283.00	1,069.00
1950	798.00	730.00	979.00	31,120.00	58,890.00	15,360.00	8,463.00	3,325.00	2,300.00	2,954.00	1,987.00	2,013.00
1951	1,974.00	1,830.00	2,281.00	17,170.00	9,022.00	4,466.00	2,441.00	1,245.00	1,711.00	1,360.00	1,285.00	1,742.00
1952	1,639.00	1,876.00	1,989.00	16,590.00	6,534.00	3,559.00	5,676.00	2,121.00	1,322.00	906.00	812.00	695.00
1953	600.00	619.00	1,669.00	3,643.00	3,068.00	8,839.00	5,236.00	2,229.00	1,320.00	864.00	928.00	894.00
1954	810.00	845.00	1,597.00	5,472.00	3,862.00	3,693.00	2,237.00	981.00	692.00	658.00	731.00	683.00
1955	723.00	653.00	661.00	7,273.00	2,084.00	3,016.00	2,271.00	1,684.00	863.00	849.00	607.00	431.00
1956	424.00	451.00	524.00	10,930.00	8,233.00	3,963.00	2,503.00	908.00	1,616.00	599.00	1,080.00	563.00
1957	441.00	427.00	1,320.00	4,856.00	3,728.00	3,833.00	6,863.00	2,614.00	5,392.00	3,625.00	3,324.00	1,632.00
1958	1,356.00	1,286.00	1,894.00	2,986.00	1,527.00	1,476.00	3,990.00	977.00	480.00	416.00	498.00	362.00
1959	368.00	383.00	776.00	5,005.00	1,769.00	2,587.00	2,132.00	777.00	548.00	548.00	550.00	465.00
1960	573.00	563.00	545.00	13,490.00	3,778.00	2,807.00	2,151.00	564.00	684.00	345.00	490.00	356.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Estimated (January 1931 through March 1936, intermittently April 1936 through March 1949) and gaged (seasonally April 1936 through March 1949, continuously April 1949 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Drayton, N.Dak.--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	337.00	336.00	1,667.00	2,097.00	2,375.00	1,060.00	472.00	261.00	368.00	663.00	423.00	241.00
1962	200.00	203.00	280.00	14,090.00	9,922.00	23,420.00	14,970.00	6,987.00	3,390.00	2,379.00	2,114.00	1,602.00
1963	1,343.00	1,120.00	1,743.00	6,430.00	3,511.00	6,511.00	2,850.00	1,172.00	1,197.00	1,435.00	1,025.00	788.00
1964	774.00	764.00	695.00	7,567.00	4,700.00	7,483.00	3,227.00	1,301.00	695.00	1,770.00	1,313.00	843.00
1965	885.00	873.00	987.00	25,310.00	13,030.00	9,178.00	5,034.00	2,042.00	1,915.00	4,098.00	2,497.00	2,258.00
1966	2,065.00	1,826.00	7,663.00	38,390.00	14,400.00	5,895.00	3,581.00	3,512.00	2,431.00	1,847.00	1,729.00	1,576.00
1967	1,710.00	1,550.00	2,213.00	22,710.00	14,520.00	5,993.00	3,278.00	1,315.00	876.00	840.00	725.00	659.00
1968	525.00	536.00	1,713.00	3,531.00	2,185.00	5,594.00	5,739.00	2,570.00	1,899.00	1,600.00	1,865.00	1,660.00
1969	1,525.00	1,576.00	2,153.00	27,480.00	18,730.00	5,060.00	3,548.00	1,666.00	1,471.00	1,968.00	1,924.00	1,726.00
1970	1,381.00	1,401.00	1,544.00	17,340.00	13,940.00	12,470.00	3,727.00	1,131.00	1,201.00	1,105.00	1,357.00	1,096.00
1971	1,065.00	1,131.00	2,640.00	11,130.00	3,480.00	2,429.00	2,471.00	1,135.00	1,413.00	4,463.00	5,653.00	3,072.00
1972	1,861.00	1,449.00	7,256.00	22,230.00	9,171.00	6,079.00	2,396.00	2,439.00	2,079.00	1,775.00	1,473.00	1,149.00
1973	1,126.00	1,197.00	6,106.00	2,450.00	1,575.00	1,200.00	579.00	802.00	3,008.00	4,412.00	2,707.00	2,014.00
1974	1,744.00	1,672.00	2,016.00	18,950.00	18,260.00	7,633.00	3,297.00	3,232.00	1,967.00	1,951.00	2,079.00	1,284.00
1975	1,329.00	1,435.00	1,686.00	16,280.00	22,890.00	5,971.00	28,240.00	4,003.00	2,479.00	2,364.00	2,573.00	1,724.00
1976	1,630.00	1,729.00	3,298.00	13,300.00	3,016.00	1,914.00	1,359.00	1,163.00	713.00	375.00	277.00	149.00
1977	197.00	201.00	429.00	1,794.00	938.00	676.00	639.00	243.00	521.00	1,287.00	1,121.00	1,449.00
1978	1,343.00	1,124.00	2,171.00	36,740.00	7,427.00	3,798.00	3,710.00	1,537.00	1,074.00	986.00	814.00	797.00
1979	725.00	723.00	880.00	29,260.00	32,090.00	6,653.00	6,268.00	3,341.00	2,097.00	1,661.00	1,800.00	1,491.00
1980	1,388.00	1,463.00	1,654.00	10,040.00	2,072.00	1,532.00	758.00	489.00	846.00	556.00	651.00	411.00
1981	304.00	340.00	1,233.00	1,275.00	1,365.00	1,311.00	2,765.00	1,509.00	1,897.00	2,571.00	1,903.00	1,186.00
1982	1,112.00	1,041.00	1,946.00	23,650.00	7,805.00	3,705.00	4,246.00	2,292.00	1,263.00	4,272.00	2,457.00	2,114.00
1983	1,607.00	1,471.00	9,329.00	10,950.00	3,388.00	5,122.00	6,550.00	2,886.00	2,941.00	2,195.00	1,978.00	1,805.00
1984	1,581.00	1,582.00	4,443.00	19,240.00	4,246.00	11,920.00	3,331.00	1,442.00	975.00	2,208.00	2,152.00	1,540.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Pembina River at the mouth												
1931	8.34	7.64	52.30	536.00	119.00	25.80	12.50	2.40	0.45	0.74	5.70	1.20
1932	.15	3.99	16.30	490.00	215.00	82.40	24.40	7.06	2.13	8.72	9.28	3.14
1933	0	0	20.70	835.00	643.00	370.00	86.30	31.50	33.50	54.60	27.90	11.10
1934	5.49	5.57	87.10	397.00	178.00	78.40	23.00	1.59	.12	1.94	1.24	.10
1935	0	0	14.60	167.00	74.30	125.00	72.20	27.20	17.30	16.20	5.80	2.54
1936	.66	.04	0	788.00	495.00	228.00	66.00	24.00	29.30	16.30	8.20	4.09
1937	.64	0	0	130.00	86.60	75.80	16.50	14.50	.46	.94	.42	.20
1938	0	0	207.00	117.00	90.60	42.40	14.50	.06	0	0	0	0
1939	0	0	1.57	73.70	22.40	16.10	.96	0	0	0	0	0
1940	0	0	0	208.50	52.26	10.38	.78	7.61	.03	0	.03	0
1941	0	0	0	1,449.37	419.75	230.54	66.87	28.75	187.37	167.16	67.78	35.73
1942	8.12	2.01	125.83	2,731.58	1,171.07	424.34	140.53	164.41	109.30	58.97	42.80	11.21
1943	8.59	6.52	336.17	766.02	395.87	614.47	322.39	214.93	185.53	127.67	79.08	44.09
1944	9.10	3.70	3.79	473.02	239.73	291.16	596.10	853.28	540.99	216.76	373.82	136.85
1945	54.47	58.78	1,304.25	1,277.62	898.28	535.48	312.29	154.31	110.22	78.16	47.67	29.39
1946	13.78	13.04	850.52	782.55	329.74	133.18	76.97	33.80	27.83	41.42	31.50	10.29
1947	1.87	1.22	2.49	865.22	337.09	310.45	116.65	137.77	72.19	69.62	40.60	24.71
1948	21.03	7.33	7.72	1,763.50	1,094.84	464.75	376.58	223.19	124.91	76.60	55.57	23.88
1949	14.51	12.49	16.07	2,993.35	1,660.63	693.46	284.73	147.88	74.49	72.84	53.82	21.95
1950	10.01	7.90	11.30	2,365.11	4,148.81	1,365.79	649.37	422.50	237.89	169.92	101.03	44.82
1951	36.74	28.38	120.32	1,175.66	579.57	293.00	127.67	80.18	56.95	39.95	24.34	13.59
1952	5.06	4.01	14.97	428.93	225.03	130.43	75.32	22.50	6.33	14.24	14.60	7.60
1953	1.75	.82	7.04	101.95	103.79	206.66	99.20	78.90	19.93	12.68	12.40	3.89
1954	2.99	3.60	30.59	203.90	137.77	551.09	709.99	416.08	231.46	154.31	85.24	32.15
1955	14.33	21.13	18.65	2,038.12	921.24	654.88	413.32	116.65	63.74	70.72	39.40	20.48
1956	19.20	21.40	24.06	2,080.38	2,925.38	992.89	424.34	200.23	177.27	153.39	77.34	29.39
1957	24.62	12.31	239.73	364.64	270.04	177.27	83.58	101.95	180.94	184.62	135.02	80.18
1958	42.25	28.56	52.81	256.26	146.04	51.25	68.06	8.63	5.20	24.06	20.48	10.38
1959	6.46	5.69	17.36	807.35	228.70	166.25	48.31	21.22	18.28	40.51	69.25	106.54
1960	74.95	46.38	28.93	2,452.36	1,386.00	506.09	213.09	99.20	47.67	38.12	28.84	15.43

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1984) streamflow, in cubic feet per second, for the Pembina River at the mouth--Continued												
1961	8.54	4.48	90.93	299.43	197.47	59.79	15.16	3.89	4.54	9.55	12.58	4.76
1962	4.24	1.85	2.52	1,070.04	628.25	500.58	180.94	113.89	124.00	64.66	39.49	28.47
1963	33.25	17.36	108.38	234.21	223.19	475.78	225.95	154.31	97.36	74.49	60.71	11.21
1964	9.37	7.56	3.44	584.16	440.87	442.71	127.67	63.47	91.21	63.10	34.54	26.73
1965	17.91	11.57	19.56	1,521.02	1,034.22	570.38	216.76	93.69	124.91	143.28	83.31	50.88
1966	37.29	25.81	546.50	2,188.76	1,411.72	434.44	339.84	139.61	55.94	68.61	40.69	36.65
1967	17.36	17.18	132.26	1,413.55	1,568.78	328.82	115.73	41.61	23.15	45.56	59.15	20.67
1968	21.03	17.18	217.68	287.49	261.77	118.48	87.26	164.41	363.72	386.68	208.50	87.90
1969	30.68	27.00	42.89	3,962.36	1,944.44	664.07	392.19	189.21	124.91	103.79	86.34	56.85
1970	36.83	34.63	28.56	2,286.12	2,921.71	1,626.64	841.34	339.84	191.96	122.16	94.60	47.58
1971	36.65	20.39	21.95	3,193.58	1,659.71	730.20	394.95	276.46	162.57	129.51	113.89	73.75
1972	24.06	21.40	554.77	1,680.83	973.60	378.42	217.68	188.29	122.16	83.40	72.65	19.20
1973	13.13	14.14	200.23	143.28	97.36	64.20	74.95	66.41	65.58	78.90	50.70	30.59
1974	23.61	15.89	46.11	3,815.40	5,363.05	1,885.66	546.50	155.22	102.87	74.95	49.97	35.09
1975	28.20	21.03	19.38	461.08	1,322.62	684.27	277.38	112.97	58.88	56.95	56.58	32.42
1976	25.35	28.93	45.37	3,234.00	1,487.95	601.61	260.85	92.77	46.66	32.79	16.62	4.67
1977	7.38	7.32	36.83	82.30	93.69	62.64	42.16	10.65	32.15	33.25	17.73	11.94
1978	14.05	27.65	41.15	1805.75	619.06	208.50	69.44	49.97	51.16	35.91	36.65	36.10
1979	8.75	28.38	62.46	2,771.08	3,886.12	949.72	347.19	93.69	124.00	55.11	34.81	17.36
1980	20.76	17.73	27.74	319.63	90.47	39.68	13.59	40.51	98.28	36.92	41.42	20.57
1981	15.16	81.65	200.23	366.48	198.39	125.83	47.49	34.26	47.21	104.71	79.45	18.92
1982	4.88	2.51	72.01	908.38	766.94	611.71	309.53	154.31	85.42	94.20	33.40	24.00
1983	14.80	6.29	338.92	1,264.76	518.95	302.18	84.78	27.92	21.31	28.30	22.00	2.77
1984	.61	0	33.98	216.76	194.72	163.49	57.04	9.83	12.12	8.38	5.15	2.62

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Emerson, Man.												
1931	176.00	200.00	960.00	3,385.00	881.00	660.00	356.00	158.00	81.00	84.80	221.00	187.00
1932	166.00	138.00	1,364.00	7,809.00	1,925.00	586.00	256.00	62.50	40.00	46.10	121.00	89.00
1933	54.00	49.30	862.00	5,839.00	1,548.00	1,026.00	253.00	73.10	45.90	48.80	84.80	46.20
1934	54.30	32.60	492.00	2,178.00	663.00	196.00	138.00	46.60	23.80	47.10	77.20	41.70
1935	14.10	27.00	749.00	3,325.00	1,173.00	438.00	1,082.00	514.00	269.00	117.00	77.80	59.20
1936	56.80	54.00	58.20	6,739.00	2,602.00	583.00	121.00	79.30	66.90	28.60	23.70	33.50
1937	7.09	1.21	2.25	2,025.00	2,886.00	1,059.00	830.00	1,565.00	818.00	402.00	281.00	72.40
1938	53.30	75.90	1,453.00	1,282.00	4,870.00	2,584.00	855.00	218.00	193.00	200.00	207.00	182.00
1939	198.00	255.00	260.00	3,718.00	1,193.00	659.00	566.00	188.00	230.00	357.00	385.00	278.00
1940	135.00	148.00	224.00	5,085.00	2,232.00	1,053.00	357.00	255.00	187.00	236.00	392.00	296.00
1941	312.00	348.00	362.00	13,650.00	3,120.00	5,284.00	1,426.00	755.00	1,853.00	3,065.00	1,389.00	888.00
1942	565.00	635.00	1,962.00	16,530.00	8,966.00	4,187.00	1,809.00	1,254.00	3,110.00	1,643.00	1,135.00	775.00
1943	798.00	700.00	1,207.00	23,130.00	7,258.00	12,440.00	6,497.00	2,584.00	1,818.00	1,473.00	1,432.00	926.00
1944	663.00	736.00	768.00	4,349.00	3,776.00	6,947.00	6,806.00	6,003.00	5,909.00	2,906.00	4,026.00	2,733.00
1945	1,294.00	1,365.00	9,121.00	20,150.00	8,646.00	4,043.00	2,187.00	1,309.00	1,776.00	1,975.00	1,398.00	988.00
1946	945.00	791.00	5,738.00	14,640.00	4,119.00	2,223.00	2,442.00	1,273.00	1,167.00	1,661.00	1,617.00	1,169.00
1947	1,031.00	897.00	1,057.00	17,830.00	11,940.00	12,050.00	5,785.00	2,029.00	1,571.00	1,865.00	1,653.00	1,346.00
1948	1,084.00	845.00	851.00	24,890.00	20,050.00	3,858.00	3,139.00	1,661.00	1,009.00	674.00	712.00	556.00
1949	449.00	454.00	596.00	14,720.00	5,092.00	6,070.00	3,414.00	3,289.00	1,806.00	1,146.00	1,387.00	1,066.00
1950	827.00	748.00	927.00	26,540.00	72,820.00	22,300.00	10,110.00	3,805.00	2,617.00	3,330.00	2,073.00	2,160.00
1951	2,053.00	1,800.00	2,287.00	19,650.00	10,860.00	4,941.00	2,742.00	1,461.00	1,955.00	1,581.00	1,413.00	1,906.00
1952	1,788.00	1,914.00	2,009.00	17,150.00	7,663.00	3,815.00	5,878.00	2,285.00	1,376.00	945.00	864.00	698.00
1953	610.00	611.00	1,365.00	4,064.00	3,151.00	8,890.00	5,531.00	2,301.00	1,317.00	893.00	961.00	936.00
1954	834.00	847.00	1,376.00	5,823.00	4,230.00	4,283.00	2,958.00	1,436.00	895.00	816.00	829.00	718.00
1955	732.00	652.00	653.00	10,600.00	3,226.00	4,286.00	2,741.00	1,815.00	942.00	942.00	604.00	450.00
1956	432.00	455.00	509.00	12,750.00	14,560.00	5,427.00	4,092.00	1,156.00	2,028.00	682.00	1,325.00	614.00
1957	443.00	408.00	1,445.00	5,882.00	4,537.00	4,202.00	9,284.00	2,880.00	6,388.00	3,776.00	3,381.00	1,714.00
1958	1,383.00	1,305.00	1,867.00	3,330.00	1,648.00	1,424.00	4,055.00	1,005.00	459.00	430.00	489.00	358.00
1959	348.00	343.00	633.00	6,052.00	2,110.00	2,747.00	2,067.00	759.00	544.00	564.00	588.00	627.00
1960	618.00	557.00	471.00	16,530.00	5,206.00	3,110.00	2,283.00	589.00	619.00	342.00	555.00	379.00

Supplement 1.--Gaged and estimated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Gaged (January 1931 through December 1984) streamflow, in cubic feet per second, for the Red River of the North at Emerson, Man.--Continued							
1961	345.00	293.00	1,721.00	2,592.00	2,400.00	1,111.00	441.00	275.00	267.00	594.00	411.00	263.00
1962	198.00	200.00	225.00	14,750.00	12,010.00	25,430.00	16,060.00	7,212.00	3,368.00	2,450.00	2,177.00	1,636.00
1963	1,246.00	1,074.00	1,515.00	7,847.00	3,739.00	7,490.00	3,049.00	1,315.00	1,213.00	1,395.00	966.00	697.00
1964	767.00	754.00	686.00	8,474.00	5,455.00	9,511.00	3,625.00	1,321.00	672.00	1,701.00	1,390.00	910.00
1965	910.00	890.00	950.00	24,980.00	18,580.00	10,030.00	5,632.00	2,345.00	2,096.00	4,417.00	3,337.00	2,760.00
1966	1,879.00	1,648.00	5,841.00	45,820.00	20,250.00	7,007.00	4,752.00	3,785.00	2,894.00	1,992.00	2,132.00	1,824.00
1967	1,632.00	1,478.00	2,086.00	25,420.00	20,000.00	6,548.00	3,588.00	1,487.00	951.00	906.00	963.00	673.00
1968	491.00	493.00	1,434.00	4,883.00	2,502.00	6,037.00	6,866.00	3,292.00	2,994.00	2,204.00	2,143.00	1,956.00
1969	1,696.00	1,613.00	2,173.00	29,160.00	27,410.00	6,454.00	4,023.00	2,076.00	1,656.00	2,084.00	2,043.00	1,571.00
1970	1,454.00	1,411.00	1,578.00	19,180.00	22,960.00	16,950.00	5,515.00	1,614.00	1,400.00	1,282.00	1,667.00	1,094.00
1971	1,033.00	999.00	1,960.00	14,470.00	5,486.00	3,252.00	2,909.00	1,462.00	1,499.00	4,021.00	5,163.00	2,681.00
1972	1,963.00	1,598.00	6,832.00	23,910.00	10,890.00	6,367.00	2,482.00	2,479.00	2,058.00	1,834.00	1,709.00	1,153.00
1973	1,112.00	1,116.00	5,817.00	2,707.00	1,716.00	1,311.00	622.00	779.00	2,567.00	4,152.00	2,613.00	2,079.00
1974	1,713.00	1,688.00	2,022.00	19,340.00	29,660.00	10,760.00	3,744.00	3,262.00	2,051.00	1,937.00	2,141.00	1,358.00
1975	1,314.00	1,412.00	1,651.00	12,950.00	27,310.00	6,923.00	28,020.00	4,713.00	2,560.00	2,429.00	2,409.00	1,564.00
1976	1,523.00	1,643.00	2,794.00	17,430.00	4,398.00	2,375.00	1,554.00	1,119.00	728.00	387.00	314.00	177.00
1977	180.00	190.00	400.00	2,101.00	1,202.00	862.00	636.00	261.00	534.00	1,423.00	1,126.00	1,293.00
1978	1,226.00	987.00	1,737.00	36,030.00	10,240.00	3,870.00	3,615.00	1,730.00	1,118.00	958.00	872.00	647.00
1979	562.00	579.00	775.00	26,080.00	49,220.00	8,093.00	6,432.00	3,371.00	2,227.00	1,750.00	1,955.00	1,526.00
1980	1,351.00	1,331.00	1,479.00	10,140.00	2,399.00	1,630.00	861.00	485.00	837.00	551.00	657.00	359.00
1981	292.00	296.00	1,471.00	1,807.00	1,386.00	1,582.00	2,737.00	1,517.00	1,808.00	2,402.00	1,963.00	1,104.00
1982	1,151.00	1,055.00	1,754.00	22,080.00	8,865.00	4,261.00	4,090.00	2,465.00	1,346.00	4,332.00	2,535.00	1,935.00
1983	1,614.00	1,378.00	9,361.00	12,530.00	3,948.00	4,835.00	6,393.00	2,500.00	2,794.00	2,138.00	2,107.00	1,723.00
1984	1,380.00	1,274.00	2,896.00	19,140.00	4,253.00	11,580.00	3,399.00	1,531.00	959.00	1,850.00	1,862.00	1,111.00

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1944 and October 1975 through December 1984) and gaged (April 1944 through September 1975) streamflow, in cubic feet per second, for the Maple River near Mapleton, N.Dak.												
1931	0.01	0.25	10.90	57.50	5.16	10.80	0.69	1.08	0.25	0.40	1.44	1.05
1932	.07	5.73	311.00	198.00	29.80	12.70	2.63	.21	.29	.70	2.42	.41
1933	.02	.11	167.00	96.40	19.30	4.11	1.11	.15	.06	.06	.69	.17
1934	0	.08	2.69	47.60	3.21	2.44	.14	1.19	2.37	.93	1.44	.49
1935	.14	.06	73.30	33.50	22.60	7.19	9.13	.80	.30	.40	2.08	.35
1936	.02	.04	.80	161.00	16.80	2.80	.35	.07	.07	.13	1.00	.30
1937	.07	.04	.38	45.50	9.77	8.61	.96	3.25	1.67	.13	1.00	.30
1938	.01	.02	35.20	20.90	7.32	1.54	.25	.97	.13	.06	.55	.14
1939	.01	.04	106.00	69.50	1.91	2.85	.50	.05	.03	.02	.69	.22
1940	.02	.01	.02	136.00	11.50	1.88	.14	4.14	.01	.05	.59	.16
1941	.01	.07	24.00	390.00	16.70	33.30	10.00	1.02	2.15	8.02	8.12	2.25
1942	.06	.02	8.53	211.00	75.80	57.80	9.49	3.08	2.32	1.22	3.04	1.17
1943	.15	.09	242.00	109.00	35.30	80.40	62.70	1.78	.35	.30	2.11	1.54
1944	.08	.06	1.69	59.10	56.30	23.20	12.90	12.90	9.95	5.06	14.50	4.84
1945	.33	0	93.20	86.40	25.20	16.50	3.60	3.37	.47	1.32	2.35	.79
1946	.10	.03	116.00	69.80	8.82	9.37	4.41	.04	.13	5.96	5.48	1.28
1947	.13	0	101.00	946.00	59.30	353.00	17.90	1.02	4.04	2.38	6.48	5.61
1948	2.58	.32	6.33	518.00	51.30	19.50	13.80	9.14	1.55	.69	6.20	1.75
1949	.04	0	8.96	209.00	15.40	8.07	7.26	.23	0	.47	2.73	1.00
1950	.04	0	86.10	927.00	620.00	76.70	65.20	6.46	2.46	4.29	3.55	1.36
1951	.71	.20	7.37	234.00	16.10	11.60	11.40	6.02	10.80	4.61	6.10	6.32
1952	1.45	.36	.24	906.00	25.70	6.67	48.70	.55	.01	0	1.75	1.99
1953	1.42	1.47	25.00	21.00	88.50	717.00	63.40	51.10	1.78	.80	5.90	5.17
1954	2.48	3.57	38.40	37.10	14.10	6.52	12.90	2.56	3.15	.79	3.37	3.05
1955	1.48	.25	.18	118.00	6.30	13.40	63.20	9.47	.28	.62	1.99	.63
1956	.02	0	0	114.00	27.30	13.60	2.90	.49	.24	.02	7.42	1.89
1957	.50	.15	7.10	27.10	13.50	54.30	13.80	15.20	25.50	10.30	19.40	7.33
1958	2.35	.59	31.80	74.80	16.90	15.70	42.40	3.09	5.11	1.90	2.46	.31
1959	0	0	10.20	13.90	8.35	113.00	21.00	1.10	0	.77	1.84	1.10
1960	.82	.40	70.30	360.00	15.80	5.82	2.01	0	0	0	0	0

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Estimated (January 1931 through March 1944 and October 1975 through December 1984) and gaged (April 1944 through September 1975) streamflow, in cubic feet per second, for the Maple River near Mapleton, N.Dak.--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	0.00	0.00	30.10	18.00	17.30	1.71	0.00	0.00	3.98	22.80	3.38	2.05
1962	.44	.17	.91	693.00	213.00	170.00	761.00	267.00	65.80	30.50	28.40	12.20
1963	.76	0	15.50	160.00	33.20	34.90	12.60	6.67	5.63	3.15	5.12	1.06
1964	.10	.10	5.87	111.00	39.10	49.20	17.10	8.65	4.00	4.00	6.69	1.38
1965	1.20	.56	.30	1,149.00	92.50	42.40	64.60	58.20	40.10	38.40	21.20	10.90
1966	3.07	1.09	1,040.00	457.00	150.00	43.30	22.60	21.10	8.65	6.33	6.02	1.88
1967	.82	.85	78.70	379.00	169.00	28.80	6.55	1.22	.65	2.97	5.25	2.46
1968	.27	.17	46.60	61.50	30.80	116.00	41.20	11.80	6.17	5.35	6.91	3.01
1969	.05	0	0	1,708.00	151.00	35.60	373.00	35.50	22.00	15.70	13.30	7.10
1970	3.78	2.13	41.30	522.00	428.00	478.00	32.90	7.05	27.40	9.00	12.30	2.11
1971	.49	0	206.00	130.00	27.50	38.80	54.70	5.80	27.70	49.10	36.20	11.20
1972	3.57	1.94	478.00	272.00	375.00	108.00	41.70	52.10	28.90	7.17	14.40	6.70
1973	4.30	4.85	402.00	79.90	23.70	8.09	1.04	1.93	12.70	9.16	7.63	3.81
1974	.23	.05	.33	558.00	172.00	49.20	13.50	16.00	7.14	2.51	15.70	4.53
1975	1.16	0	.94	1,305.00	328.00	346.00	2,375.00	50.30	27.20	1.32	7.66	3.43
1976	5.39	1.29	266.00	191.00	25.60	9.38	2.81	.04	.02	.34	.81	.53
1977	.22	.06	1.91	19.80	12.20	4.48	1.24	.11	1.64	5.62	13.00	3.01
1978	.41	.49	348.00	675.00	73.60	15.70	8.44	1.08	4.85	1.38	3.41	1.88
1979	.33	.49	2.70	1,045.00	312.00	99.40	36.20	14.40	2.78	5.72	9.28	3.89
1980	.39	1.20	57.10	180.00	12.30	6.78	3.15	1.22	1.90	1.03	5.41	4.56
1981	.22	1.24	9.15	58.20	9.76	15.10	28.70	7.45	2.36	6.47	10.10	1.37
1982	.06	1.06	85.20	585.00	62.10	42.50	30.00	1.32	.32	83.20	16.80	11.80
1983	13.80	2.13	492.00	192.00	56.00	62.80	155.00	28.70	45.10	35.10	18.90	15.70
1984	12.10	1.86	472.00	313.00	77.30	46.20	6.87	.04	1.33	7.81	7.49	4.94

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through July 1946) and gaged (August 1946 through December 1984) streamflow, in cubic feet per second, for the Rush River at Amenia, N.Dak.												
1931	0.00	0.11	6.48	2.67	0.55	0.26	0.07	0.03	0.01	0.03	0.04	0.03
1932	.02	1.41	40.40	25.50	3.17	.98	.03	.01	.01	.03	.01	0
1933	0	0	9.57	11.00	2.05	.40	.02	.01	.01	.04	.04	.03
1934	.02	.04	3.18	3.32	.34	.15	.04	.05	.12	.07	.01	.01
1935	.02	.04	15.30	3.21	2.41	10.30	.30	.05	.01	.05	.01	0
1936	0	0	.74	20.10	1.79	.15	.02	0	0	.01	.01	0
1937	.01	0	.45	1.51	1.04	.71	.05	.17	.04	.02	.01	0
1938	0	.01	9.35	.62	.78	1.71	.07	.01	.01	.01	.01	.01
1939	.01	0	19.60	3.78	.20	.65	.01	0	0	.01	.01	.01
1940	0	0	.09	16.40	1.23	.08	.01	.22	.01	.02	.03	.01
1941	.02	.02	7.23	56.60	1.78	6.81	.04	.04	.07	.12	.08	.06
1942	0	0	3.60	27.50	8.02	2.99	.24	.18	4.04	.99	.67	.06
1943	.02	.01	34.10	12.80	3.74	11.10	6.22	2.07	.31	.15	.23	.03
1944	.01	.02	1.22	6.71	2.06	1.85	18.50	3.29	.79	3.11	4.42	.17
1945	.09	.05	19.50	4.09	2.23	1.42	.19	.09	.46	.43	.15	.06
1946	.03	.02	33.60	5.25	2.00	.66	7.18	0	0	.30	.85	.17
1947	0	0	30.70	174.00	7.83	38.80	1.53	0	0	.04	.10	.13
1948	.10	0	0	138.00	5.50	1.50	.51	.11	0	0	.18	.03
1949	0	0	15.20	40.60	2.58	1.09	1.98	.10	0	0	.04	0
1950	0	0	24.70	204.00	81.30	17.10	2.60	.03	0	.15	.15	0
1951	0	0	29.80	28.20	2.20	3.06	.63	0	.26	.01	.73	.28
1952	0	0	0	76.10	1.68	.08	1.13	.01	0	0	0	0
1953	0	0	5.30	2.23	5.66	48.90	8.10	.91	0	0	0	0
1954	0	.16	5.97	9.09	2.09	1.76	.04	0	0	0	0	0
1955	0	0	6.13	11.50	.12	1.38	0	1.73	0	0	0	0
1956	0	0	0	25.80	2.79	8.81	.07	0	0	0	0	0
1957	0	0	3.77	1.72	2.17	16.60	6.65	2.64	1.73	.90	2.75	.06
1958	0	1.18	1.89	3.40	1.87	3.09	9.72	0	0	0	0	0
1959	0	0	16.30	1.44	1.23	4.50	.19	0	0	0	0	0
1960	0	0	27.50	49.00	2.59	.95	11.50	.01	0	0	0	0

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	0.00	0.00	7.54	2.94	2.15	0.15	0.00	0.00	0.00	4.24	0.13	0.00
1962	0	0	11.30	93.30	16.80	8.07	38.60	2.76	1.50	.51	2.63	1.24
1963	0	0	2.40	10.20	3.42	3.87	.02	0	0	0	0	0
1964	0	0	0	21.80	4.88	10.20	.43	.03	.10	.12	.66	.10
1965	0	0	0	109.00	15.20	4.49	5.98	.10	.59	4.20	1.18	.35
1966	0	0	58.90	48.20	14.10	4.60	2.44	2.16	.19	.01	.01	0
1967	0	0	19.00	50.30	9.83	2.74	1.17	0	0	0	0	0
1968	0	0	10.20	9.75	6.71	30.90	1.82	0	0	.09	.47	.17
1969	0	0	0	238.00	8.42	5.44	22.70	.68	.34	.74	1.68	.32
1970	.03	.01	32.30	113.00	24.30	31.30	1.53	.04	.47	.24	1.09	.12
1971	0	0	20.50	18.40	6.96	2.63	.48	0	0	.59	2.15	.35
1972	.01	0	20.90	38.60	13.90	1.85	1.11	.32	.02	.24	.98	.04
1973	0	0	33.80	3.02	1.39	.20	0	.04	7.88	2.63	1.66	.23
1974	0	0	0	137.00	25.70	10.90	3.82	.45	.01	0	1.45	.08
1975	0	0	.11	286.00	43.80	40.20	39.50	.08	0	.07	.31	.04
1976	0	2.21	35.40	13.70	1.46	.03	0	0	0	0	0	0
1977	0	0	2.35	3.00	2.35	.39	0	0	0	1.33	.09	0
1978	0	0	81.80	43.50	7.35	4.81	.39	.07	.08	0	0	0
1979	0	0	0	382.00	20.00	8.94	1.17	.07	0	0	.14	.18
1980	0	0	11.10	16.00	.87	.30	0	.49	.54	0	.12	.05
1981	0	.37	1.73	1.12	2.94	3.39	.16	0	0	0	0	0
1982	0	0	3.55	141.00	17.70	1.66	0	0	0	11.40	3.50	1.02
1983	0	.36	35.80	18.30	6.85	36.30	10.60	.02	0	0	0	0
1984	0	0	136.00	52.50	4.79	21.60	1.16	0	0	0	0	0

Estimated (January 1931 through July 1946) and gaged (August 1946 through December 1984) streamflow, in cubic feet per second, for the Rush River at Amenia, N.Dak.--Continued

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January, February, and March 1931) and gaged (April 1931 through December 1984) streamflow, in cubic feet per second, for the Buffalo River near Dilworth, Minn.												
1931	5.04	16.60	70.80	33.50	27.20	26.10	17.40	12.70	6.18	13.30	18.00	14.00
1932	10.80	11.50	54.20	123.00	51.40	31.60	6.66	2.85	5.73	12.70	9.67	5.88
1933	4.62	4.40	90.50	119.00	60.90	24.00	9.01	7.27	7.78	15.30	17.60	15.10
1934	11.00	15.30	38.20	141.00	28.50	15.10	4.09	1.45	5.73	19.40	10.60	9.64
1935	9.16	15.30	124.00	76.80	60.30	42.90	40.20	15.90	8.66	16.80	9.99	6.29
1936	2.97	1.00	65.00	579.00	98.30	17.60	2.23	0	.79	6.39	8.74	6.00
1937	6.00	5.00	3.00	137.00	105.00	46.90	14.10	17.20	14.80	11.40	10.70	4.75
1938	4.34	5.46	106.00	51.20	247.00	85.40	17.10	7.00	7.23	7.50	11.30	7.97
1939	5.80	4.17	216.00	270.00	32.20	18.80	7.84	1.74	1.75	5.48	10.50	8.16
1940	.87	0.76	2.26	229.00	64.10	18.00	6.26	11.10	5.78	8.99	14.90	9.48
1941	9.44	9.84	61.60	351.00	46.70	61.50	12.30	7.40	19.10	25.50	23.90	11.20
1942	2.24	1.56	29.10	87.10	296.00	209.00	35.80	31.40	153.00	74.80	58.00	21.20
1943	10.70	8.12	74.20	1,158.00	234.00	434.00	247.00	109.00	41.80	28.50	36.70	15.50
1944	8.65	9.76	23.40	214.00	230.00	263.00	473.00	710.00	517.00	134.00	129.00	63.80
1945	21.60	15.90	861.00	583.00	246.00	134.00	31.10	22.20	50.70	49.10	31.00	20.60
1946	13.10	9.52	441.00	230.00	101.00	86.90	269.00	53.10	32.20	76.40	66.00	41.40
1947	30.10	21.50	128.00	1,054.00	268.00	274.00	67.70	18.40	20.00	27.10	25.70	22.60
1948	17.00	16.20	44.40	618.00	98.70	62.10	34.70	23.60	14.60	13.60	17.60	14.00
1949	10.90	9.84	18.20	215.00	108.00	36.80	101.00	55.10	17.00	24.90	28.90	21.50
1950	9.55	6.18	202.00	1,577.00	852.00	168.00	53.10	16.10	12.70	19.70	17.30	15.60
1951	13.50	13.80	19.20	800.00	144.00	173.00	51.60	32.90	38.70	57.20	44.50	38.60
1952	27.30	26.70	28.80	1,284.00	120.00	32.70	508.00	232.00	91.70	35.80	40.10	23.10
1953	15.70	17.40	202.00	295.00	250.00	956.00	133.00	206.00	53.50	29.70	31.10	26.10
1954	22.10	31.90	98.90	358.00	263.00	143.00	45.50	20.30	25.80	39.00	32.60	18.60
1955	13.00	13.30	14.50	368.00	89.30	99.50	466.00	435.00	55.90	44.90	30.60	20.90
1956	16.80	20.10	25.00	1,034.00	221.00	98.20	26.00	23.70	14.10	19.70	38.90	18.00
1957	13.90	14.20	187.00	346.00	145.00	210.00	198.00	65.20	336.00	186.00	160.00	51.40
1958	31.60	26.60	60.70	116.00	77.80	140.00	653.00	53.80	79.80	51.10	85.00	39.00
1959	16.90	13.60	117.00	212.00	171.00	389.00	388.00	87.50	54.20	52.00	40.50	35.00
1960	34.30	26.90	62.30	837.00	356.00	126.00	103.00	42.00	44.20	27.40	30.90	20.70

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Estimated (January, February, and March 1931) and gaged (April 1931 through December 1984) streamflow, in cubic feet per second, for the Buffalo River near Dilworth, Minn.--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	17.50	16.50	143.00	163.00	247.00	51.90	19.40	9.02	16.20	26.20	22.10	15.10
1962	9.89	11.40	15.00	674.00	906.00	2,138.00	563.00	153.00	65.50	56.10	68.10	35.40
1963	9.60	6.23	94.70	232.00	158.00	492.00	29.80	70.60	102.00	38.20	34.10	20.60
1964	16.80	18.10	44.50	854.00	349.00	119.00	43.50	18.40	29.00	34.80	34.60	14.60
1965	15.80	16.40	17.00	1,392.00	309.00	261.00	77.60	40.30	55.80	111.00	73.20	65.30
1966	36.50	29.10	1,308.00	639.00	406.00	105.00	82.50	186.00	49.10	57.90	43.30	33.90
1967	36.30	39.90	195.00	851.00	281.00	328.00	84.10	20.50	16.00	20.30	19.80	19.00
1968	10.50	10.30	92.40	169.00	129.00	108.00	75.50	22.40	32.60	57.10	53.30	27.40
1969	17.30	15.00	17.90	1,903.00	196.00	63.80	98.40	31.70	17.20	35.20	40.60	25.30
1970	19.10	18.40	42.80	440.00	259.00	245.00	51.40	9.10	9.44	20.30	34.50	18.50
1971	12.50	13.80	83.60	255.00	84.40	59.30	116.00	21.20	122.00	186.00	305.00	97.00
1972	34.90	30.40	714.00	623.00	420.00	135.00	44.80	46.60	29.50	28.20	42.60	25.00
1973	15.70	15.70	122.00	97.60	66.80	36.20	22.90	23.50	132.00	184.00	82.50	56.40
1974	30.50	32.60	52.00	774.00	456.00	186.00	69.00	55.00	29.70	33.00	46.60	27.40
1975	20.20	19.00	27.00	951.00	394.00	805.00	2,814.00	78.90	31.40	48.00	58.70	33.20
1976	25.30	28.50	194.00	307.00	66.50	23.80	10.10	1.74	2.54	8.42	12.50	8.46
1977	8.82	9.37	41.40	89.30	35.20	37.00	28.70	5.48	36.70	96.60	67.90	66.90
1978	51.20	30.70	389.00	1,984.00	187.00	61.30	36.30	13.40	9.52	12.80	19.30	18.10
1979	14.30	13.00	17.90	1,335.00	323.00	122.00	188.00	53.70	16.80	18.70	60.10	33.70
1980	21.60	23.80	67.70	497.00	58.40	33.90	12.90	10.40	29.80	34.40	37.00	24.30
1981	17.50	29.00	61.60	83.40	152.00	46.80	40.40	61.50	37.50	79.40	72.30	33.20
1982	13.30	14.40	238.00	715.00	152.00	55.50	77.90	27.00	17.70	132.00	58.80	44.90
1983	25.40	26.60	203.00	146.00	104.00	75.80	807.00	106.00	59.80	77.60	71.00	46.00
1984	28.80	61.10	618.00	535.00	126.00	564.00	55.20	13.30	10.80	151.20	70.80	41.10

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1955, October 1963 through September 1980) and gaged (October 1955 through September 1963, October 1980 through September 1981, seasonally October 1981 through December 1984) streamflow, in cubic feet per second, for the Elm River near Kelso, N.Dak.												
1931	0.00	0.04	0.50	0.24	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	.54	65.60	22.50	.60	.23	0	0	0	0	.01	0
1933	0	0	18.50	4.18	.17	.06	.02	0	0	0	0	0
1934	0	0	.08	.37	.01	.01	0	0	.01	0	0	0
1935	0	0	3.18	.35	.27	8.26	.21	0	0	0	0	0
1936	0	0	0	14.00	.11	.01	0	0	0	0	0	0
1937	0	0	0	.08	.09	.14	.01	.02	.01	0	0	0
1938	0	0	.68	.01	.05	0	0	.02	0	0	0	0
1939	0	0	6.89	.48	0	.12	0	0	0	0	0	0
1940	0	0	0	9.30	.12	0	0	.04	0	0	0	0
1941	0	0	.31	112.00	.11	4.40	.07	0	.01	.06	.04	.01
1942	0	0	.03	26.20	8.90	1.25	.06	.02	.01	0	0	0
1943	0	0	38.80	5.59	.97	9.25	.62	.01	0	0	0	0
1944	0	0	0	1.54	.17	.60	.05	1.88	.23	.01	.26	.05
1945	0	0	6.81	.57	.22	.40	.06	0	0	.01	0	0
1946	0	0	36.80	.94	.16	.12	.12	0	0	0	0	0
1947	0	0	10.80	63.80	1.38	3.22	.13	.01	0	0	.01	0
1948	0	0	0	1,549.00	39.70	.71	.34	.14	0	0	.02	0
1949	0	0	0	111.00	1.34	26.10	.47	.22	0	.02	.07	.04
1950	.01	.01	1.19	2,177.00	3,784.00	19.20	3.94	.21	.08	.06	.09	.08
1951	.06	.05	5.86	33.40	.60	.29	.02	0	.03	.01	.03	.01
1952	.03	.01	.09	43.40	.06	0	18.10	.12	0	0	.01	.01
1953	.01	.01	.43	.16	.67	19.50	11.40	.01	.01	0	.01	.02
1954	.01	.36	2.07	1.34	.25	2.08	.04	0	0	0	0	0
1955	0	0	0	18.10	.06	4.44	.05	.01	0	0	0	0
1956	0	0	0	10.20	2.08	2.07	0	0	0	0	0	0
1957	0	0	.27	.12	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	.71	.19	0	0	0	0	0	0	0	0
1960	0	0	5.16	46.80	.15	.01	0	0	0	0	0	0

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1955, October 1963 through September 1980) and gaged (October 1955 through September 1963, October 1980 through September 1981, seasonally October 1981 through December 1984) streamflow, in cubic feet per second, for the Elm River near Kelso, N.Dak.--Continued												
1961	0.00	0.00	1.87	0.21	0.05	0.00	0.00	0.00	0.00	0.28	0.00	0.00
1962	0	0	0	91.50	11.40	8.94	37.60	1.43	5.19	1.11	.59	.50
1963	.03	0	1.72	8.83	.92	.49	0	0	0	0	0	0
1964	.01	.04	0	8.58	.23	73.10	1.13	.05	.10	.92	.08	.02
1965	.02	.01	0	1,208.00	57.70	5.59	5.31	.72	1.64	3.02	.98	.42
1966	.17	.07	1,499.00	92.70	52.10	8.64	14.90	18.40	.47	.14	.16	.03
1967	.04	.03	71.70	390.00	148.00	10.50	.40	.01	0	.01	.02	.02
1968	.03	.01	10.40	.96	1.09	136.00	3.40	.50	.23	.09	.20	.09
1969	.03	.02	.01	1,137.00	30.50	7.23	6.17	.31	1.28	.98	.33	.30
1970	.16	.17	.08	623.00	94.20	67.80	1.84	.11	.12	.02	.25	.09
1971	.02	.04	4.15	99.80	5.23	5.53	4.48	.07	.03	1.17	2.61	.36
1972	.08	.04	175.00	251.00	54.60	10.30	.19	.07	.01	0	.07	.03
1973	.02	.06	67.30	.90	.23	.21	.02	.01	.03	.14	.11	.04
1974	0	.02	0	502.00	77.70	34.30	1.77	2.06	.06	0	.05	.08
1975	.07	.06	.37	368.00	57.60	8.88	4.03	.01	.01	0	.04	.02
1976	.02	.04	47.40	20.80	.39	.07	0	0	0	.01	0	0
1977	0	0	0	.10	.05	.04	.03	0	.01	.03	.23	.07
1978	.03	.01	83.50	404.00	8.18	1.51	.15	0	.05	0	0	0
1979	.01	.01	0	3,916.00	161.00	5.87	2.39	.32	.02	.03	.07	.11
1980	.04	.04	1.88	18.10	.05	.01	0	0	.01	0	0	0
1981	0	.01	.01	.01	0	0	0	0	0	.04	.09	.18
1982	.04	.03	4.72	240.00	14.50	2.35	2.83	0	0	4.60	.57	.64
1983	.12	.10	131.00	68.30	9.03	111.00	20.50	4.00	2.39	.91	.86	.33
1984	.11	.08	147.00	54.60	8.29	94.10	.53	0	.03	.05	.03	0

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1944) and gaged (April 1944 through December 1984) streamflow, in cubic feet per second, for the Wild Rice River at Hendrum, Minn.												
1931	3.40	20.50	118.00	59.60	49.30	50.10	30.40	15.30	5.09	13.50	13.40	8.61
1932	10.40	11.20	80.90	218.00	99.60	61.40	11.90	1.90	4.62	12.70	4.51	1.24
1933	3.51	3.30	155.00	211.00	120.00	45.80	16.00	6.26	6.83	16.20	12.90	10.20
1934	10.60	16.20	51.80	250.00	51.90	28.00	7.41	.80	4.62	21.90	5.30	3.74
1935	8.40	16.20	232.00	136.00	119.00	84.90	68.80	19.70	7.82	18.20	4.78	1.44
1936	2.00	.50	102.00	19.50	204.00	33.00	1.39	1.46	.37	5.31	3.78	1.29
1937	4.90	3.89	2.03	243.00	219.00	93.30	24.80	21.60	15.50	11.10	5.39	.77
1938	3.25	4.35	190.00	91.00	563.00	176.00	29.90	5.97	6.22	6.51	5.93	2.44
1939	4.70	3.08	471.00	477.00	59.40	35.40	14.00	1.01	1.02	4.37	5.21	2.57
1940	.42	.35	1.41	405.00	127.00	33.80	11.20	10.70	4.68	8.21	9.62	3.60
1941	8.73	9.21	95.20	619.00	89.60	124.00	21.70	6.40	21.40	31.00	22.00	5.23
1942	1.40	.88	36.60	154.00	688.00	456.00	61.50	42.70	303.00	122.00	104.00	21.80
1943	10.20	7.21	121.00	33.50	531.00	989.00	404.00	197.00	58.10	35.70	46.60	10.80
1944	7.81	9.11	27.80	303.00	502.00	661.00	1,122.00	960.00	762.00	299.00	228.00	139.00
1945	76.00	63.40	1,077.00	1,451.00	671.00	244.00	99.60	93.90	149.00	225.00	141.00	71.60
1946	35.20	22.90	745.00	881.00	426.00	265.00	201.00	30.20	35.80	192.00	113.00	70.30
1947	54.50	46.70	177.00	1,789.00	663.00	735.00	98.00	13.60	5.99	13.30	9.69	6.64
1948	4.09	3.40	3.24	837.00	157.00	38.70	18.40	3.93	.18	.44	3.32	1.73
1949	.80	.40	.46	227.00	99.00	204.00	428.00	275.00	55.40	41.20	44.00	31.40
1950	13.40	12.60	84.60	1,738.00	1,634.00	483.00	258.00	7.50	4.56	6.19	4.75	3.56
1951	3.03	2.81	8.16	799.00	197.00	71.80	8.82	7.76	16.60	16.60	25.20	152.00
1952	99.20	83.10	80.80	1,239.00	296.00	9.15	273.00	147.00	58.10	31.70	42.70	48.50
1953	36.90	36.60	198.00	500.00	440.00	889.00	559.00	236.00	89.30	49.40	52.30	58.80
1954	61.50	72.80	128.00	727.00	596.00	327.00	119.00	33.70	29.10	42.40	50.40	29.90
1955	21.90	31.00	33.00	609.00	283.00	261.00	140.00	171.00	14.70	23.10	19.00	14.60
1956	13.60	18.40	23.50	1,175.00	418.00	225.00	41.30	23.00	19.20	16.90	43.70	18.50
1957	14.40	14.40	161.00	427.00	322.00	331.00	365.00	109.00	346.00	213.00	211.00	78.20
1958	49.10	43.00	110.00	173.00	101.00	161.00	222.00	43.70	37.40	35.80	70.90	43.90
1959	22.30	19.40	119.00	302.00	301.00	268.00	212.00	88.40	37.90	53.80	55.20	46.80
1960	56.20	46.90	95.40	897.00	407.00	429.00	212.00	102.00	167.00	97.30	81.60	57.00

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated (January 1931 through March 1944) and gaged (April 1944 through December 1984) streamflow, in cubic feet per second, for the Wild Rice River at Hendrum, Minn.--Continued							
1961	40.00	36.20	208.00	304.00	600.00	183.00	54.40	24.80	34.80	45.50	40.80	27.10
1962	26.00	22.50	33.30	617.00	953.00	1,776.00	784.00	205.00	114.00	84.20	95.10	52.30
1963	10.40	5.73	112.00	474.00	369.00	803.00	130.00	55.00	62.50	27.90	31.90	19.40
1964	19.50	24.20	28.40	1,178.00	637.00	483.00	175.00	51.00	41.10	90.70	65.20	28.80
1965	29.70	31.40	23.40	2,259.00	751.00	732.00	243.00	68.70	75.90	168.00	94.50	118.00
1966	85.50	56.10	1,485.00	1,950.00	987.00	288.00	124.00	219.00	104.00	79.50	67.70	55.00
1967	61.40	68.90	309.00	1,570.00	643.00	522.00	253.00	43.80	17.20	25.70	24.10	49.30
1968	32.30	21.80	208.00	387.00	318.00	243.00	188.00	67.80	87.10	136.00	106.00	62.10
1969	55.90	61.70	71.10	2,478.00	545.00	305.00	168.00	51.10	37.50	151.00	170.00	109.00
1970	68.30	54.00	58.80	1,430.00	1,071.00	1,323.00	211.00	37.40	23.80	35.40	78.60	45.60
1971	34.80	37.60	195.00	795.00	332.00	162.00	75.50	36.10	121.00	744.00	784.00	160.00
1972	91.20	70.00	990.00	1,740.00	895.00	328.00	152.00	119.00	62.50	76.00	79.00	37.80
1973	39.60	43.30	407.00	245.00	205.00	142.00	82.00	83.00	824.00	639.00	290.00	144.00
1974	80.90	80.50	87.30	2,345.00	1,635.00	549.00	178.00	125.00	43.10	66.50	158.00	69.30
1975	61.60	65.60	99.40	2,155.00	1,156.00	881.00	3,136.00	214.00	82.10	69.90	115.00	68.30
1976	63.90	73.70	469.00	830.00	195.00	82.20	41.20	8.11	.72	7.68	10.30	1.08
1977	.09	.22	28.80	167.00	56.10	36.70	12.70	1.07	25.50	83.50	114.00	151.00
1978	81.30	51.50	144.00	3,261.00	408.00	166.00	73.10	63.40	92.40	49.40	39.50	32.10
1979	29.80	29.20	61.10	3,060.00	1,134.00	418.00	603.00	79.50	46.20	40.80	120.00	60.60
1980	46.60	48.20	71.00	673.00	154.00	46.80	11.90	6.04	12.30	26.70	29.20	15.40
1981	8.94	12.30	52.40	106.00	179.00	145.00	177.00	148.00	169.00	288.00	212.00	98.40
1982	62.40	60.00	219.00	1,637.00	612.00	220.00	113.00	39.00	19.10	265.00	166.00	66.70
1983	46.90	46.40	722.00	358.00	175.00	422.00	776.00	169.00	101.00	174.00	159.00	92.30
1984	64.40	124.00	791.00	885.00	247.00	1,554.00	119.00	23.00	14.50	94.40	113.00	73.70

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January, February, March 1931) and gaged (seasonally April 1931 through March 1934, continuously April 1934 through December 1984) streamflow, in cubic feet per second, for the Goose River at Hillsboro, N.Dak.												
1931	0.12	1.64	11.20	26.80	3.56	4.24	1.27	1.33	0.33	0.30	0.20	0.20
1932	.20	20.00	272.00	239.00	27.40	12.60	.98	.29	.39	.53	.84	.31
1933	.19	.16	140.00	106.00	16.50	6.01	1.10	.21	.10	.09	.20	.12
1934	.08	.12	3.09	33.10	2.05	2.75	1.24	1.45	2.77	.70	.20	.20
1935	.20	.30	70.00	32.00	19.90	86.00	12.00	1.00	.40	.30	.40	.20
1936	.20	.20	1.00	190.00	14.10	2.77	.58	.10	.10	.10	.10	.10
1937	.10	.20	.50	15.40	7.49	9.65	2.43	3.73	2.00	.10	.10	.10
1938	.10	.10	35.10	6.51	5.35	1.35	.01	0	0	0	0	0
1939	0	0	99.00	37.50	1.12	9.02	.12	0	0	0	0	0
1940	0	0	0	156.00	9.05	1.63	0	4.69	.01	0	0	0
1941	0	0	24.50	517.00	14.00	61.40	6.93	1.26	2.53	6.06	5.24	2.33
1942	.07	0	9.25	257.00	81.10	31.40	6.05	3.55	2.72	.92	.82	.74
1943	.45	.32	215.00	122.00	33.30	91.40	21.50	2.12	.46	.23	.41	.30
1944	.17	.12	2.02	65.50	16.60	21.20	5.72	39.00	12.70	2.87	13.50	5.60
1945	.66	.64	98.50	40.50	18.20	17.10	5.98	1.30	1.09	1.66	.53	.51
1946	.47	.56	210.00	51.60	16.00	9.11	8.85	.54	.84	1.36	1.46	.67
1947	.22	.14	121.00	395.00	38.30	52.00	9.17	1.94	.89	.77	2.19	1.46
1948	.45	.10	.53	1,840.00	148.00	23.20	15.60	9.90	.95	.45	3.78	1.61
1949	.46	.26	1.14	516.00	37.90	159.00	18.60	12.50	1.11	3.23	6.61	4.96
1950	2.69	2.37	45.10	2,168.00	2,275.00	135.00	57.90	12.00	7.18	6.08	7.88	7.35
1951	6.27	5.81	92.10	289.00	27.40	14.40	3.61	1.58	4.29	2.64	4.43	1.86
1952	0	1.84	14.20	328.00	11.20	1.43	131.00	9.13	1.41	1.08	2.05	2.73
1953	1.88	1.92	28.40	21.80	28.60	136.00	102.00	2.17	2.86	.76	2.45	2.96
1954	2.55	16.10	57.80	61.20	19.30	41.20	4.69	.70	.35	.20	.26	.30
1955	.57	.70	.98	215.00	6.35	61.70	5.66	2.58	.16	.20	.48	.64
1956	.58	.50	.71	282.00	55.40	57.30	6.05	.99	.97	.38	1.82	1.43
1957	.99	.74	18.30	17.80	7.88	10.50	5.30	.11	53.00	16.50	14.80	4.20
1958	.96	.81	1.57	15.80	4.87	3.15	29.00	3.52	.46	.32	.05	0
1959	0	0	33.60	37.20	6.70	6.81	.48	1.33	.29	.34	.67	.91
1960	.88	.80	71.80	436.00	15.00	12.70	10.20	4.13	1.61	.26	1.05	.98

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January, February, March 1931) and gaged (seasonally April 1931 through March 1934, continuously April 1934 through December 1984) streamflow, in cubic feet per second, for the Goose River at Hillsboro, N.Dak.--Continued												
1961	0.77	0.82	54.40	26.90	19.60	3.47	0.16	0.08	0.40	2.45	0.69	0.61
1962	.57	.52	.85	690.00	179.00	146.00	48.00	11.00	123.00	16.50	14.40	9.10
1963	2.32	.30	29.30	89.00	18.40	10.50	11.80	2.08	.35	.86	.56	.12
1964	0	0	1.52	150.00	18.50	276.00	29.70	5.31	8.27	26.60	7.42	3.72
1965	3.00	1.84	1.38	1,632.00	172.00	69.80	67.90	23.40	36.20	50.20	27.50	17.50
1966	10.80	6.86	1,106.00	473.00	165.00	88.10	118.00	132.00	18.60	9.56	10.50	4.47
1967	4.76	3.90	283.00	946.00	403.00	97.70	17.10	2.18	1.04	1.96	3.74	3.37
1968	4.22	2.38	119.00	52.20	34.90	385.00	53.50	19.20	12.80	7.52	11.80	7.88
1969	3.97	3.56	5.79	1,585.00	133.00	80.10	73.60	14.90	31.80	27.50	15.50	14.50
1970	10.30	10.90	13.30	1,186.00	316.00	265.00	38.60	8.58	8.89	3.56	13.40	7.54
1971	3.57	4.96	78.90	490.00	65.50	69.40	62.00	6.63	4.07	30.20	46.50	16.10
1972	7.39	4.93	422.00	764.00	236.00	97.00	11.30	6.79	2.71	1.09	6.75	3.96
1973	3.67	5.97	275.00	50.50	18.50	12.20	3.62	1.78	4.41	9.89	8.66	4.77
1974	1.33	3.06	2.44	1,068.00	285.00	184.00	37.80	40.90	6.06	1.63	5.89	7.45
1975	6.91	6.18	26.70	920.00	243.00	89.40	58.60	2.84	2.22	1.00	4.69	3.58
1976	3.86	5.05	235.00	230.00	23.00	6.47	1.14	.06	0	0	0	.23
1977	.30	.30	2.26	17.60	9.72	5.06	4.18	.15	1.96	4.25	12.70	6.63
1978	4.06	2.06	303.00	962.00	78.40	34.70	9.93	1.32	5.44	1.04	1.02	1.62
1979	1.70	2.05	3.14	2,878.00	421.00	71.70	44.30	15.10	3.22	4.32	6.74	8.45
1980	5.02	4.73	55.30	215.00	9.76	2.65	.44	1.48	2.25	.78	2.43	2.40
1981	2.16	4.85	9.88	6.61	7.48	14.40	7.64	8.15	2.76	4.89	7.84	11.00
1982	5.23	4.19	80.60	817.00	64.30	19.10	18.80	1.60	.42	62.90	20.70	22.00
1983	8.96	8.00	419.00	231.00	57.10	130.00	62.70	29.00	44.30	26.50	25.70	15.30
1984	8.42	7.06	403.00	402.00	83.00	115.00	4.14	.06	0	5.90	4.50	.67

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1945, October 1970 through December 1984) and gaged (October 1945 through September 1970) streamflow, in cubic feet per second, for the Turtle River at Manvel, N.Dak.												
1931	0.78	0.77	5.89	30.30	5.36	6.77	2.85	2.26	0.41	1.30	1.81	0.29
1932	.26	17.80	196.00	1.30	26.20	14.60	2.43	.91	.48	1.92	7.53	.30
1933	0	0	51.00	94.50	17.60	8.65	2.18	1.76	3.68	6.16	5.54	1.15
1934	.52	.42	25.20	36.00	3.49	4.98	2.81	2.38	2.90	2.32	1.81	.29
1935	.26	.38	56.40	35.10	20.40	56.60	11.40	1.90	.49	1.30	2.54	.29
1936	.26	.26	1.14	153.00	15.60	5.01	1.76	1.41	.14	.61	1.29	.15
1937	.14	.26	.60	19.10	9.55	12.10	4.26	4.19	2.15	.61	1.29	.15
1938	.14	.14	29.90	9.37	7.35	3.02	.14	.01	0	0	0	0
1939	0	0	77.50	40.00	2.18	11.50	.66	0	0	0	0	0
1940	0	0	0	130.00	11.10	3.45	.87	4.81	.02	0	0	0
1941	0	0	21.50	351.00	15.50	44.60	8.13	2.19	2.67	10.20	8.93	2.76
1942	.10	.12	8.79	197.00	60.80	27.80	7.48	4.07	2.85	2.80	3.61	.96
1943	.55	.40	158.00	106.00	30.40	59.10	16.40	2.99	.56	1.08	2.57	.42
1944	.22	.16	2.17	63.40	17.70	21.10	7.22	17.10	11.80	6.12	14.20	6.16
1945	.78	.76	77.20	42.60	19.00	18.10	7.43	2.23	1.23	2.07	1.81	.37
1946	.10	.10	140.00	35.40	7.87	5.08	48.00	.29	5.72	11.40	4.38	1.90
1947	.19	.10	73.30	193.00	20.60	58.80	8.29	8.59	1.52	6.40	7.05	2.50
1948	.12	.10	.10	1,164.00	68.40	88.20	21.10	10.00	2.19	1.30	4.62	.47
1949	.13	.10	.10	385.00	28.70	34.00	8.40	3.05	.41	6.66	6.73	6.87
1950	.10	0	0	1,987.00	1,456.00	48.90	42.30	8.92	19.60	16.70	13.70	4.52
1951	5.10	2.00	41.20	211.00	24.10	14.10	3.95	12.00	41.50	7.47	8.20	5.52
1952	.74	.10	1.79	167.00	14.80	7.00	41.00	3.70	.70	.82	9.24	3.73
1953	1.15	.80	18.10	27.20	26.30	89.70	42.50	4.07	1.04	2.61	3.11	2.35
1954	.28	1.22	26.60	45.30	16.50	20.40	11.30	2.06	1.56	3.17	6.55	2.73
1955	1.08	.67	.05	225.00	18.90	110.00	10.50	3.63	.69	3.63	3.73	.66
1956	.35	.47	.67	323.00	62.60	42.80	7.00	2.16	4.50	.96	8.40	3.62
1957	2.89	.64	45.20	40.60	16.20	13.90	1.64	7.06	215.00	37.40	24.90	7.39
1958	2.26	4.21	12.20	23.20	14.20	13.90	19.60	1.09	.31	1.45	5.11	1.28
1959	.02	0	38.40	59.50	16.50	11.20	7.82	2.89	.18	9.67	5.81	3.30
1960	2.43	1.83	37.30	429.00	24.40	17.70	7.10	2.02	1.22	.63	4.00	.61

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through September 1946, October 1970 through December 1984) and gaged (October 1946 through September 1970) streamflow, in cubic feet per second, for the Turtle River at Manvel, N.Dak.--Continued												
1961	0.79	0.55	36.00	25.90	14.60	3.43	1.15	0.66	1.17	5.92	3.19	1.29
1962	0	0	0	359.00	133.00	170.00	20.60	3.47	4.68	4.47	10.60	3.51
1963	.48	0	21.50	46.00	13.90	12.50	10.10	3.24	.65	1.11	.64	.10
1964	0	0	.07	148.00	20.10	269.00	20.80	7.61	14.10	12.40	7.35	3.38
1965	1.19	1.48	2.09	558.00	85.90	72.80	19.40	6.49	32.70	49.10	16.70	10.20
1966	4.84	1.66	479.00	395.00	148.00	34.70	45.50	22.10	8.06	8.90	8.25	5.65
1967	4.03	4.84	96.40	535.00	191.00	32.10	6.61	2.25	.83	4.46	6.09	3.71
1968	1.95	1.73	101.00	50.20	20.20	54.10	57.90	13.20	13.50	8.82	12.50	8.15
1969	1.78	.18	.08	632.00	31.60	37.90	16.00	4.27	10.90	14.00	11.10	7.76
1970	4.24	.84	1.91	622.00	158.00	56.80	15.00	12.90	10.80	7.10	14.10	8.09
1971	3.66	4.96	62.90	336.00	51.50	48.60	31.50	5.92	4.13	30.80	25.90	16.20
1972	7.15	4.93	294.00	485.00	139.00	61.60	11.00	6.00	2.84	3.15	10.10	4.49
1973	3.76	5.88	198.00	51.10	19.30	14.30	5.45	2.69	4.45	14.30	11.40	5.32
1974	1.48	3.18	2.58	640.00	161.00	96.80	23.20	7.04	5.96	4.15	9.45	8.01
1975	6.72	6.06	23.30	566.00	142.00	58.20	30.40	3.56	2.37	2.97	8.46	4.09
1976	3.94	5.04	172.00	180.00	22.80	9.12	2.67	4.45	1.79	1.25	3.81	.33
1977	.38	.38	2.41	21.40	11.70	7.67	5.95	.61	2.11	8.02	13.80	7.19
1978	4.12	2.21	217.00	587.00	59.20	29.80	10.20	2.25	5.40	3.05	4.01	1.98
1979	1.85	2.20	3.26	1,455.00	218.00	49.80	25.60	9.69	3.33	8.11	10.10	8.99
1980	5.01	4.74	45.40	170.00	11.70	4.86	1.48	2.41	2.40	2.50	6.13	2.83
1981	2.31	4.86	9.33	9.49	9.54	16.00	8.64	6.70	2.89	8.83	10.90	11.40
1982	5.20	4.24	64.20	513.00	50.70	19.60	15.10	2.52	.51	51.10	17.50	21.60
1983	8.53	7.69	292.00	180.00	46.30	75.80	31.70	14.30	37.00	28.20	19.40	15.50
1984	8.06	6.86	282.00	285.00	61.90	69.50	5.92	4.27	.47	10.00	8.29	.88

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1944) and gaged (April 1944 through December 1984) streamflow, in cubic feet per second, for the Forest River at Minto, N.Dak.												
1931	1.71	1.45	8.28	31.30	17.20	8.40	6.50	2.46	1.05	2.45	2.62	0.72
1932	.09	18.70	169.00	117.00	37.50	14.50	6.48	.50	.20	5.22	3.68	1.41
1933	0	0	63.50	197.00	30.70	13.70	4.72	2.52	5.54	7.52	7.24	3.31
1934	1.26	.53	23.40	50.40	13.60	6.42	1.11	3.77	4.78	3.64	2.62	.72
1935	.14	.54	53.80	51.60	18.40	11.20	9.13	3.76	1.21	.26	0	0
1936	0	0	0	137.00	22.90	10.70	1.79	0	0	0	0	0
1937	0	0	0	18.20	13.00	8.24	.65	.14	0	0	0	0
1938	0	0	30.80	14.10	11.60	3.08	1.79	0	0	0	0	0
1939	0	0	26.40	48.60	8.87	2.06	16.80	0	0	0	0	0
1940	0	0	0	53.40	14.30	3.98	0	16.90	.28	0	0	0
1941	0	0	0	447.00	27.80	28.30	9.59	4.53	11.60	41.20	14.30	7.49
1942	.41	0	163.00	454.00	49.80	18.60	9.42	19.50	6.00	3.72	4.48	2.44
1943	1.63	1.42	183.00	126.00	30.20	246.00	233.00	26.00	12.30	3.51	6.51	5.86
1944	.88	.04	.32	90.00	24.10	20.80	7.42	1.76	7.22	2.44	14.70	11.20
1945	2.55	1.64	89.60	47.30	20.10	15.20	5.59	2.90	.99	2.12	2.76	1.05
1946	.50	.20	155.00	42.20	10.60	8.90	5.36	0	2.98	5.07	5.83	2.74
1947	.50	.02	90.00	96.70	17.20	15.50	19.60	5.37	3.65	3.91	6.10	5.23
1948	3.45	.76	.18	1,189.00	106.00	40.50	18.70	9.51	4.74	4.05	7.01	3.68
1949	1.14	.50	.59	482.00	37.50	17.40	11.20	3.30	.65	5.61	6.97	5.00
1950	.70	.70	.80	1,573.00	1,515.00	54.10	28.30	8.05	8.93	8.41	9.24	4.58
1951	3.65	4.50	31.20	199.00	27.40	15.50	6.48	9.32	8.42	6.38	6.71	4.10
1952	1.10	.69	3.57	96.00	16.40	7.57	29.10	5.35	3.01	2.21	4.19	1.97
1953	.57	.08	2.98	21.90	16.50	51.40	10.10	2.14	.27	1.80	4.57	2.42
1954	.28	.23	24.70	39.80	18.30	43.80	10.00	11.10	6.43	7.01	6.57	4.00
1955	1.31	.51	.03	291.00	22.10	92.40	11.20	2.85	1.69	5.16	5.31	1.96
1956	.53	.48	.58	511.00	87.90	209.00	26.70	11.00	14.00	9.96	15.80	6.44
1957	4.47	1.53	47.10	25.80	20.40	14.90	6.45	7.78	56.60	12.80	14.20	6.85
1958	2.62	.84	6.00	24.90	16.30	40.90	12.80	3.80	2.07	7.73	6.53	.71
1959	.27	.10	10.80	107.00	18.40	11.00	5.71	2.15	.44	5.57	4.57	3.71
1960	1.87	.99	20.60	606.00	30.70	15.20	4.63	1.90	.94	1.62	4.11	.74

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated (January 1931 through March 1944) and gaged (April 1944 through December 1984) streamflow, in cubic feet per second, for the Forest River at Minto, N.Dak.--Continued							
1961	0.64	0.00	23.40	24.40	11.60	5.18	5.64	0.51	0.00	2.48	3.35	1.06
1962	.19	0	0	398.00	63.20	267.00	20.20	11.80	8.21	13.20	15.80	4.87
1963	.95	0	42.20	34.50	18.90	22.70	26.50	3.73	.80	3.15	5.35	1.13
1964	.15	.09	.26	139.00	28.00	267.00	50.50	12.10	10.40	12.60	10.10	4.99
1965	3.79	2.77	2.84	481.00	63.00	71.90	23.40	11.50	16.00	25.80	15.80	11.60
1966	4.96	2.14	438.00	356.00	229.00	57.30	36.50	17.60	9.88	10.90	10.80	8.15
1967	3.54	2.48	124.00	359.00	211.00	39.40	17.40	8.90	5.71	4.76	10.30	5.57
1968	2.02	1.55	66.50	46.00	21.30	18.70	16.60	11.80	10.50	8.91	10.90	5.61
1969	.82	.41	.46	522.00	53.30	20.20	12.30	4.70	5.14	6.50	7.93	5.99
1970	5.38	2.26	.79	479.00	139.00	41.90	39.80	11.40	6.53	9.14	10.80	4.40
1971	.90	.95	7.45	512.00	59.50	30.40	67.10	21.00	11.60	12.30	14.60	5.64
1972	.80	.26	270.00	356.00	71.90	31.20	10.00	4.51	4.42	8.08	7.82	2.04
1973	.40	.53	59.50	39.90	18.90	28.40	6.15	1.47	4.46	11.70	4.40	3.09
1974	2.55	.59	.91	661.00	486.00	176.00	27.50	19.60	7.60	13.30	14.80	8.46
1975	5.86	3.68	5.45	285.00	162.00	28.90	108.00	9.28	6.54	11.10	9.54	3.75
1976	3.60	4.14	108.00	388.00	34.60	17.50	8.50	2.90	1.53	1.40	2.19	.49
1977	0	0	11.00	32.90	17.70	11.00	6.79	3.14	4.16	9.04	5.10	1.29
1978	.96	.17	74.50	495.00	56.40	61.20	26.40	8.17	8.64	5.48	3.07	2.12
1979	2.00	1.35	1.00	1,189.00	363.00	63.60	63.40	12.10	17.20	8.14	8.25	4.35
1980	1.04	1.33	8.16	70.20	12.60	7.33	1.87	1.32	2.98	5.34	10.40	8.19
1981	4.10	17.30	33.30	38.80	15.20	21.50	12.30	4.83	15.30	20.50	11.70	8.35
1982	1.54	.30	33.60	329.00	63.00	60.00	236.00	96.40	13.90	59.10	23.60	13.40
1983	9.66	12.50	237.00	197.00	52.50	32.60	18.70	7.92	17.10	9.15	15.00	3.53
1984	.78	4.48	53.30	89.00	26.70	26.00	9.92	3.13	3.77	3.95	3.60	1.57

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1945, October 1945 through September 1950) and gaged (April 1945 through September 1945, October 1950 through December 1984) streamflow, in cubic feet per second, for the Middle River at Argyle, Minn.												
1931	0.31	0.28	16.00	23.70	12.60	2.27	0.36	0.39	0.07	0.06	0.04	0.02
1932	.01	10.30	8.88	146.00	21.00	8.32	.27	.06	.09	.13	.94	.09
1933	0	0	18.50	74.30	21.60	3.44	.61	.26	1.91	3.61	1.51	.46
1934	.18	.07	8.88	28.30	2.45	1.35	.35	.43	.94	.18	.04	.02
1935	.01	.06	27.90	27.50	6.41	82.30	5.57	.27	.09	.06	.09	.02
1936	.01	.04	.39	121.00	12.10	1.37	.14	.02	.02	.02	.02	.01
1937	0	.04	.22	15.00	20.50	6.06	.80	1.35	.63	.02	.02	.01
1938	0	.02	23.10	7.31	6.23	.58	0	0	0	0	0	0
1939	0	0	5.94	31.30	2.33	5.59	.02	0	0	0	0	0
1940	0	0	0	103.00	4.55	.73	.18	1.78	0	0	0	0
1941	0	0	5.14	277.00	17.30	55.10	2.86	.36	.84	2.43	2.63	.69
1942	.01	.03	42.30	155.00	54.00	24.70	2.42	1.27	.92	.25	.26	.15
1943	.04	.07	74.70	185.00	89.00	381.00	21.30	4.67	1.42	1.25	1.06	.04
1944	.01	.02	.51	24.20	23.40	22.20	50.50	86.30	26.00	9.57	9.70	2.28
1945	.07	.16	51.70	289.00	73.70	26.50	15.00	4.81	19.50	15.60	4.98	.09
1946	.04	.13	38.30	124.00	37.20	11.60	4.34	.57	1.30	5.44	2.33	.13
1947	.94	.58	3.37	526.00	233.00	952.00	20.60	3.77	1.41	1.39	1.28	.37
1948	.35	.12	.50	358.00	38.50	7.68	4.79	1.91	.55	.53	1.04	.42
1949	.39	.25	1.71	87.40	24.70	266.00	23.40	3.39	.57	2.25	3.04	1.93
1950	.67	.15	1.02	660.00	7,556.00	88.70	196.00	8.20	1.25	11.00	7.79	5.11
1951	3.21	2.75	4.16	337.00	72.00	7.18	1.53	3.03	27.50	11.90	4.93	3.61
1952	1.03	1.93	3.42	177.00	19.60	3.50	6.03	.39	0	.04	.50	.05
1953	0	0	15.70	33.20	22.00	16.90	3.45	.25	0	0	0	0
1954	0	0	0	51.80	39.80	50.70	6.26	.19	0	.05	.14	.09
1955	.03	0	0	70.70	23.90	137.00	8.82	.37	0	.44	.01	.13
1956	.05	0	0	132.00	132.00	26.90	313.00	11.80	7.32	1.79	33.40	5.50
1957	1.94	1.56	39.80	68.60	42.00	64.70	87.60	3.77	163.00	40.60	23.50	7.41
1958	2.50	1.70	3.76	12.20	5.32	4.85	187.00	5.28	.15	.27	.55	.65
1959	.20	0	1.61	209.00	29.90	15.70	9.97	4.36	2.43	12.50	10.50	4.31
1960	2.10	1.11	1.68	307.00	49.90	49.20	10.40	.89	.22	.32	.42	.57

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through March 1945, October 1945 through September 1950) and gaged (April 1945 through September 1945, October 1950 through December 1984) streamflow, in cubic feet per second, for the Middle River at Argyle, Minn.--Continued												
1961	0.33	0.19	23.00	27.30	10.80	0.77	0.00	0.00	1.47	8.23	2.93	0.92
1962	.38	.13	0	245.00	299.00	482.00	43.90	7.34	7.60	2.63	4.19	3.48
1963	.41	0	18.70	189.00	41.70	30.60	6.88	4.67	.14	.01	.18	.03
1964	0	0	0	73.80	44.60	306.00	40.40	28.20	8.43	27.00	12.90	3.94
1965	2.56	1.17	1.37	577.00	159.00	102.00	92.20	5.02	7.96	64.50	21.60	8.54
1966	4.05	1.92	93.00	747.00	232.00	32.70	107.00	24.20	4.74	5.05	1.93	.91
1967	.65	.53	15.60	473.00	236.00	21.00	4.91	.16	0	.54	1.63	.60
1968	0	.13	26.00	19.20	4.04	233.00	205.00	28.10	27.90	23.30	13.00	5.41
1969	.90	1.65	2.97	553.00	63.20	47.10	11.50	1.18	.22	.17	.42	.48
1970	.36	.04	0	303.00	330.00	660.00	25.40	2.75	.87	2.07	4.52	2.27
1971	1.55	1.44	6.17	162.00	27.80	12.10	3.39	.26	.09	.70	7.67	2.82
1972	.36	.06	20.60	212.00	36.00	17.40	2.22	.02	.02	.01	.17	0
1973	0	0	34.80	6.42	3.30	.37	0	.02	.08	1.91	2.43	.05
1974	.10	.06	0	426.00	192.00	45.00	3.01	.49	.35	.35	.61	.65
1975	.80	.38	1.24	225.00	126.00	46.00	688.00	11.00	1.54	1.17	4.32	1.70
1976	1.69	1.80	21.10	189.00	16.30	3.29	1.30	.07	0	0	0	0
1977	0	0	.74	10.30	4.38	3.25	.22	.32	.07	.08	4.46	4.04
1978	1.24	.83	13.40	479.00	117.00	48.90	61.30	7.11	1.07	.40	1.57	1.24
1979	.87	.61	1.42	611.00	127.00	47.70	12.30	1.61	.67	.30	1.63	1.33
1980	1.27	1.04	2.00	113.00	6.72	.79	.02	.14	.59	.30	.07	.05
1981	.01	.51	5.51	5.38	2.12	8.40	21.30	.04	.77	0	0	0
1982	0	0	9.36	284.00	102.00	16.20	52.30	11.70	.49	94.10	24.00	15.80
1983	4.65	3.32	217.00	156.00	56.70	61.30	19.70	1.00	.45	4.17	6.90	3.99
1984	1.64	1.05	57.70	113.00	22.40	90.70	3.09	.15	.01	.26	.48	.34

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January, February, March, April 1931) and gaged (May 1931 through December 1984) streamflow, in cubic feet per second, for the Park River at Grafton, N.Dak.												
1931	0.02	0.60	29.60	153.00	12.50	3.04	0.98	0.19	0.10	0.10	0.40	0.10
1932	0	2.00	15.00	185.00	21.70	5.58	.27	0	0	1.00	.80	0
1933	0	0	40.00	411.00	22.30	12.20	.50	.20	0	0	0	0
1934	0	.05	15.00	78.00	2.16	.41	.01	0	.08	0	0	0
1935	0	0	68.90	65.90	6.07	3.91	2.00	.50	0	0	0	0
1936	0	0	0	227.00	12.00	13.00	.04	0	0	0	0	0
1937	0	0	0	90.20	21.10	3.69	4.75	1.17	0	0	0	0
1938	0	0	53.70	5.40	5.88	.35	4.71	0	0	0	0	0
1939	0	0	8.77	23.70	2.05	2.83	.12	0	0	0	0	0
1940	0	0	0	38.00	4.20	.38	.14	.27	0	0	0	0
1941	0	0	.38	577.00	17.60	12.00	1.48	.23	31.80	32.70	8.40	3.12
1942	0	0	120.00	873.00	59.60	16.40	3.48	3.38	3.29	.27	.73	.05
1943	.10	.11	256.00	170.00	30.10	202.00	151.00	12.70	.25	.02	.75	.71
1944	.01	0	.33	111.00	7.11	8.32	2.42	11.40	7.81	.84	14.60	6.99
1945	.26	.23	410.00	134.00	56.70	31.50	7.34	.85	.61	.16	.21	.14
1946	.10	.13	237.00	68.50	9.54	4.93	1.27	.13	.37	.38	.19	.04
1947	0	0	4.74	170.00	9.75	20.80	62.00	12.70	3.74	1.28	2.51	2.41
1948	.48	.12	.46	1,809.00	218.00	37.80	45.20	30.50	2.33	.48	1.03	.38
1949	.23	.20	.31	769.00	51.40	11.50	2.28	1.15	.06	.39	.19	.10
1950	.10	.10	.17	2,051.00	2,071.00	65.00	21.20	12.90	1.26	2.18	1.61	2.11
1951	1.10	.57	12.10	331.00	33.80	6.43	.71	2.98	41.30	34.10	1.33	.57
1952	.10	0	.20	46.90	8.24	.39	.23	0	22.10	0	.03	.81
1953	.21	0	2.22	8.09	5.26	10.10	1.15	.05	.20	.06	.69	.17
1954	.02	1.49	5.90	16.10	13.60	131.00	19.00	6.04	4.87	4.87	3.92	1.17
1955	.20	.20	.80	445.00	46.40	76.80	10.50	1.30	11.80	.44	0	0
1956	0	0	11.90	1,014.00	447.00	164.00	19.60	3.38	7.50	7.23	8.14	3.09
1957	1.58	5.45	57.50	48.00	22.80	10.40	1.88	4.66	151.00	6.90	7.16	4.33
1958	1.69	1.36	3.63	18.00	3.96	2.68	2.85	.08	0	1.26	0	.19
1959	.40	0	.66	243.00	27.00	5.85	3.28	.03	.01	0	.07	.07
1960	.05	.01	1.04	942.00	34.20	11.30	1.05	.03	.42	.53	0	0

Supplement 2.--Gaged and estimated streamflow for 10 gaging stations that are used to estimate streamflow at one of the 29 sites in the Red River of the North basin, 1931-84--Continued

Estimated (January, February, March, April 1931) and gaged (May 1931 through December 1984) streamflow, in cubic feet per second, for the Park River at Grafton, N.Dak.--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1961	0.00	0.00	3.17	12.60	2.33	0.00	0.06	0.05	0.04	0.02	0.86	0.29
1962	.08	2.93	10.20	717.00	103.00	233.00	18.60	11.00	.12	.25	.48	.08
1963	0	.24	30.30	25.70	8.74	105.00	17.20	8.83	0	.42	.02	0
1964	.07	.74	.73	222.00	58.30	576.00	64.20	2.63	1.16	6.69	1.99	.40
1965	.11	1.48	5.83	893.00	163.00	85.20	22.00	9.93	37.80	46.10	15.70	9.72
1966	2.09	.19	298.00	638.00	441.00	84.90	136.00	33.30	2.03	.92	1.22	1.88
1967	1.13	1.33	111.00	637.00	513.00	23.30	1.98	.09	0	.03	.13	.05
1968	.02	1.68	83.40	46.40	50.90	23.20	9.40	.26	.11	.16	.08	.12
1969	.08	2.28	8.02	859.00	30.60	14.50	7.12	.42	2.25	.44	.09	2.47
1970	.27	.13	.60	634.00	208.00	38.70	15.00	.29	.01	.01	3.20	.79
1971	.01	.63	17.00	876.00	57.40	75.80	74.70	4.96	.03	5.34	6.67	.43
1972	0	3.86	321.00	417.00	57.20	9.56	.22	.02	1.91	.04	.07	3.25
1973	.72	.31	62.70	28.20	12.40	9.45	.38	.92	.57	5.47	5.51	7.41
1974	1.60	1.82	8.50	1,078.00	688.00	101.00	5.58	4.54	.76	.21	4.02	8.68
1975	5.09	3.29	3.63	246.00	146.00	15.40	79.60	.50	.27	.80	7.36	6.97
1976	5.17	4.55	33.80	542.00	26.70	81.70	3.69	.40	.38	.23	1.70	2.12
1977	2.19	2.00	6.06	8.83	4.86	1.54	.13	.09	.06	.21	2.41	2.50
1978	2.40	1.45	19.80	865.00	98.90	22.40	4.61	.35	2.02	.18	5.23	4.12
1979	.92	.77	2.37	1,450.00	285.00	47.00	54.20	6.20	4.46	.31	5.57	4.28
1980	2.44	1.32	2.29	92.40	12.30	24.50	.67	2.01	39.60	40.30	31.30	14.10
1981	5.42	45.70	113.00	108.00	28.30	50.70	59.10	9.49	10.70	8.76	7.50	6.29
1982	5.39	3.38	29.00	498.00	111.00	98.00	254.00	38.60	1.47	69.90	22.10	17.40
1983	13.90	10.40	400.00	320.00	58.30	74.10	20.40	.65	.13	1.29	4.95	.97
1984	.47	1.71	36.70	77.60	21.10	17.10	2.25	1.27	.06	2.76	7.67	1.63

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, above the Sheyenne River near Warwick, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1960	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, above the Sheyenne River near Warwick, N.Dak.--Continued												
1961	0.42	0.47	0.44	0.50	0.50	0.50	0.50	0.50	0.71	0.57	0.44	0.42
1962	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1963	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1964	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1965	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1966	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1967	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1968	.42	.47	.44	.50	.50	.50	.50	.50	.71	.57	.44	.42
1969	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1970	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1971	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1972	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1973	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1974	.42	.47	.44	.81	.83	.81	1.12	1.01	.71	.57	.44	.42
1975	1.82	2.02	1.82	1.88	1.87	1.90	2.09	2.02	2.00	1.82	1.88	1.82
1976	0	0	0	1.20	1.28	1.25	1.78	1.60	1.46	1.16	0	0
1977	.36	.40	.36	.38	.43	.40	.73	.62	.53	.36	.38	.36
1978	.31	.35	.31	.32	.31	.32	.31	.31	.32	.31	.32	.31
1979	.44	.49	.53	.55	.48	.50	.45	.45	.46	.44	.46	.44
1980	.03	.03	.03	.03	.09	.05	.33	.25	.16	.03	.03	.03
1981	.03	.03	.05	.05	.07	.05	.17	.13	.09	.03	.03	.03
1982	.39	.43	.41	.42	.50	.45	.95	.79	.63	.39	.40	.39
1983	0	0	.12	1.32	1.33	1.30	1.79	1.66	1.47	1.16	0	0
1984	0	0	.21	1.41	1.39	1.34	1.87	1.67	1.50	1.16	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River near Warwick to the Sheyenne River near Cooperstown, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1955	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1956	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1957	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1958	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1959	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1960	0	0	0	0	.06	.03	.25	.20	.12	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River near Warwick to the Sheyenne River near Cooperstown, N.Dak.--Continued												
1961	0.00	0.00	0.00	0.00	0.06	0.03	0.25	0.20	0.12	0.00	0.00	0.00
1962	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1963	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1964	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1965	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1966	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1967	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1968	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1969	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1970	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1971	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1972	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1973	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1974	0	0	0	0	.06	.03	.25	.20	.12	0	0	0
1975	0	0	0	0	0	0	.02	.01	.01	0	0	0
1976	0	0	0	0	0	0	.01	0	0	0	0	0
1977	0	0	0	0	.11	.04	.57	.41	.24	0	0	0
1978	0	0	0	0	.13	.05	.67	.48	.28	0	0	0
1979	0	0	0	0	.01	0	.06	.04	.02	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	.01	.01	.07	.05	.03	0	0	0
1984	0	0	0	0	.17	.06	.87	.62	.36	.16	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from Baldhill Dam to the Sheyenne River at Valley City, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
										0		
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
										0		
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
										0		
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
										0		
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from Baldhill Dam to the Sheyenne River at Valley City, N.Dak.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	1.39	1.35	1.38	1.26	1.31	1.26
1964	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1965	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1966	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1967	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1968	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1969	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1970	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1971	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1972	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1973	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1974	1.26	1.40	1.28	1.33	1.31	1.33	1.39	1.35	1.38	1.26	1.31	1.26
1975	1.26	1.40	1.27	1.31	1.27	1.31	1.28	1.28	1.31	1.26	1.30	1.26
1976	1.28	1.41	1.28	1.32	1.31	1.33	1.48	1.42	1.40	1.28	1.32	1.28
1977	1.34	1.49	1.55	1.60	1.46	1.49	.91	1.03	1.44	1.34	1.39	1.34
1978	0	0	0	0	.05	.02	.25	.18	.10	0	0	0
1979	1.31	1.45	1.31	1.35	1.33	1.36	1.44	1.40	1.41	1.31	1.35	1.31
1980	1.28	1.42	1.28	1.33	1.33	1.35	1.52	1.46	1.43	1.28	1.33	1.28
1981	1.03	1.14	1.03	1.06	1.06	1.08	1.21	1.15	1.14	1.03	1.06	1.03
1982	1.33	1.47	1.33	1.37	1.45	1.38	1.49	1.44	1.44	1.33	1.37	1.33
1983	1.25	1.38	1.25	1.29	1.28	1.30	1.42	1.37	1.36	1.25	1.29	1.25
1984	1.30	1.44	1.30	1.35	1.37	1.37	1.64	1.55	1.49	1.30	1.35	1.30

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Valley City to the Sheyenne River at Lisbon, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	.10	.10	.10	0	0	0	0	0	0	0
1941	0	0	.10	.10	.10	0	0	0	0	0	0	0
1942	0	0	.10	.10	.10	0	0	0	0	0	0	0
1943	0	0	.10	.10	.10	0	0	0	0	0	0	0
1944	0	0	.10	.10	.10	0	0	0	0	0	0	0
1945	0	0	.10	.10	.10	0	0	0	0	0	0	0
1946	0	0	.10	.10	.10	0	0	0	0	0	0	0
1947	0	0	.10	.10	.10	0	0	0	0	0	0	0
1948	0	0	.10	.10	.10	0	0	0	0	0	0	0
1949	0	0	.10	.10	.10	0	0	0	0	0	0	0
1950	0	0	.10	.10	.10	0	0	0	0	0	0	0
1951	0	0	.10	.10	.10	0	0	0	0	0	0	0
1952	0	0	.10	.10	.10	0	0	0	0	0	0	0
1953	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1954	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1955	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1956	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1957	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1958	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1959	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1960	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Valley City to the Sheyenne River at Lisbon, N.Dak.--Continued												
1961	0.00	0.00	0.10	0.10	0.31	0.16	1.41	1.02	0.61	0.00	0.00	0.00
1962	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1963	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1964	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1965	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1966	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1967	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1968	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1969	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1970	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1971	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1972	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1973	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1974	0	0	.10	.10	.31	.16	1.41	1.02	.61	0	0	0
1975	0	0	.29	.30	.37	.22	1.29	.92	.54	0	0	0
1976	0	0	.07	.08	.48	.21	2.36	1.68	.99	0	0	0
1977	0	0	.08	.08	.38	.17	1.79	1.28	.75	0	0	0
1978	0	0	.07	.07	.28	.13	1.32	.94	.55	0	0	0
1979	0	0	.03	.03	.08	.04	.37	.26	.15	0	0	0
1980	0	0	.02	.02	.26	.11	1.31	.93	.55	0	0	0
1981	.08	.09	.12	.12	.21	.15	.68	.51	.34	.08	.09	.08
1982	.01	.01	.05	.05	.06	.07	.66	.47	.28	.01	.01	.01
1983	.08	.09	.11	.12	.14	.11	.34	.26	.19	.08	.08	.08
1984	.08	.09	.12	.13	.64	.31	2.91	2.10	1.27	.08	.08	.08

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Lisbon to the Sheyenne River near Kindred, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1957	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1958	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1959	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1960	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Lisbon to the Sheyenne River near Kindred, N.Dak.--Continued												
1961	0.00	0.00	0.85	0.89	0.89	0.89	1.45	1.23	0.51	0.00	0.00	0.00
1962	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1963	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1964	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1965	0	0	.85	.89	.89	.89	1.45	1.23	.51	0	0	0
1966	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1967	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1968	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1969	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1970	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1971	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1972	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1973	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1974	0	0	.85	.89	.89	.89	2.18	1.84	.76	0	0	0
1975	1.75	1.93	2.27	2.35	2.11	2.09	2.50	2.28	2.12	1.75	1.80	1.75
1976	0	0	0	0	.27	.11	1.43	1.02	.60	0	0	0
1977	.01	.01	2.02	2.09	.95	.93	.42	.31	.18	.01	.01	.01
1978	0	0	.96	.99	1.02	.66	3.20	2.28	1.34	0	0	0
1979	0	0	.74	.76	1.52	.79	6.30	4.50	2.64	0	0	0
1980	0	0	.27	.28	.80	.38	3.61	2.58	1.51	0	0	0
1981	0	0	.71	.73	.71	.47	2.12	1.52	.89	0	0	0
1982	0	.01	.93	.96	1.47	.83	5.59	3.99	2.34	0	.01	0
1983	0	0	.74	.76	.94	.71	4.18	5.62	1.22	.21	.10	0
1984	0	0	0	0	.53	.37	8.75	8.91	2.05	.03	.03	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Kindred to the Sheyenne River at West Fargo, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at Kindred to the Sheyenne River at West Fargo, N.Dak.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0
1975	.01	.02	.10	.10	.05	.05	.01	.01	.02	.01	.02	.01
1976	0	0	.14	.14	.07	.06	.06	.04	25.00	25.00	25.00	25.00
1977	25.00	25.00	25.00	13.33	.01	0	.05	.03	.02	0	0	0
1978	0	0	0	0	.02	.01	.08	.06	.03	0	0	0
1979	0	0	0	0	.01	0	.03	.02	.02	0	0	0
1980	0	0	0	0	0	0	.03	.02	.01	0	0	0
1981	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1982	0	0	0	0	.01	.01	.06	.05	.03	0	0	0
1983	0	0	0	0	0	0	.03	.03	.01	0	0	0
1984	0	0	0	0	.01	0	.05	.14	.24	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at West Fargo to the Sheyenne River at the mouth												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Sheyenne River at West Fargo to the Sheyenne River at the mouth--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1964	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1965	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1966	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1967	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1968	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1969	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1970	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1971	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1972	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1973	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1974	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1975	0	0	0	0	.01	.01	.04	.03	.02	0	0	0
1976	0	0	0	0	.01	.01	.07	.05	.03	0	0	0
1977	0	0	0	0	.01	0	.04	.03	.02	0	0	0
1978	0	0	0	0	0	0	.01	.01	.01	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	.01	0	.04	.03	.02	0	0	0
1981	0	0	0	0	.02	.01	.11	.08	.05	0	0	0
1982	0	0	0	0	.10	.04	.51	.37	.21	0	0	0
1983	0	0	0	0	.12	.05	.64	.46	.27	0	0	0
1984	0	0	0	0	.10	.04	.54	.38	.23	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Buffalo River, Minn.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Buffalo River, Minn.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	.21	.22	.21	.29	.27	.24	.21	0	0
1963	0	0	0	.30	.31	.30	.38	.36	.31	.30	0	0
1964	0	0	0	.30	.31	.30	.38	.36	.31	.30	0	0
1965	0	0	0	.30	.31	.30	.38	.36	.31	.30	0	0
1966	0	0	0	.30	.31	.30	.38	.36	.31	.30	0	0
1967	0	0	0	.30	.31	.30	.38	.36	.31	.30	0	0
1968	0	0	0	.30	.36	.32	.66	.56	.42	.30	0	0
1969	0	0	0	.30	.36	.32	.66	.56	.42	.30	0	0
1970	0	0	0	.30	.36	.32	.66	.56	.42	.30	0	0
1971	0	0	0	.30	.36	.32	.67	.56	.42	.30	0	0
1972	0	0	0	.30	.36	.32	.67	.56	.42	.30	0	0
1973	0	0	0	.30	.36	.32	.67	.56	.42	.30	0	0
1974	0	0	0	.30	.37	.32	.73	.61	.44	.30	0	0
1975	0	0	0	.30	.37	.32	.73	.61	.44	.30	0	0
1976	0	0	0	.30	.42	.34	.92	.81	.55	.30	0	0
1977	.03	.03	.03	.33	.58	.42	1.65	1.34	.86	.33	.03	.03
1978	.03	.03	.03	.33	.60	.43	1.78	1.41	.91	.33	.03	.03
1979	.03	.03	.03	.33	.60	.43	1.78	1.41	.91	.33	.03	.03
1980	.03	.03	.03	.33	.60	.43	1.78	1.41	.91	.33	.03	.03
1981	.04	.04	.04	.16	.46	.27	1.73	1.28	.80	.16	.04	.04
1982	.04	.04	.04	.23	.57	.35	1.99	1.49	.94	.23	.04	.04
1983	.03	.03	.03	.36	.96	.58	3.52	2.61	1.64	.36	.03	.03
1984	.03	.03	.03	.27	.50	.36	1.48	1.13	.76	.27	.03	.03

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Elm River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Elm River, N.Dak.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1965	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1966	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1967	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1968	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1969	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1970	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1971	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1972	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1973	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1974	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1975	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1976	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
1977	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
1978	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
1979	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
1980	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
1981	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
1982	0	0	0	0	0	0	0	0	0	0	0	0
1983	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
1984	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Wild Rice River, Minn.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Wild Rice River, Minn.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1978	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1979	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1980	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1981	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1982	0	0	0	0	.01	0	.03	.02	.01	0	0	0
1983	0	0	0	0	.04	.01	.19	.14	.08	0	0	0
1984	0	0	0	0	.04	.01	.19	.14	.08	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at the Sheyenne River mouth to the Red River of the North at Halstad, Minn.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at the Sheyenne River mouth to the Red River of the North at Halstad, Minn.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	.01	0	.04	.03	.01	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	.01	0	.06	.04	.02	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Goose River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1957	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1958	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1959	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1960	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Goose River, N.Dak.--Continued												
1961	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
1962	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1963	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
1964	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1965	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1966	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1967	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1968	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1969	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1970	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1971	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1972	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1973	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1974	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1975	.36	.36	.36	.36	.56	.51	.82	.74	.60	.36	.36	.36
1976	.57	.57	.57	.57	.67	.61	1.06	.92	.77	.57	.57	.57
1977	.46	.46	.46	.46	.48	.47	.54	.51	.49	.46	.46	.46
1978	.30	.30	.30	.30	.38	.33	.70	.59	.46	.30	.30	.30
1979	.50	.50	.50	.50	.57	.53	.88	.77	.50	.50	.50	.50
1980	.45	.45	.45	.45	.46	.45	.51	.49	.47	.45	.45	.45
1981	.55	.55	.55	.55	.67	.60	1.17	.99	.80	.55	.55	.55
1982	.90	.90	.90	.90	1.21	1.01	2.54	2.07	1.56	.90	.90	.90
1983	1.01	1.01	1.01	1.01	1.26	1.10	2.34	1.95	1.55	1.01	1.01	1.01
1984	1.01	1.01	1.01	1.01	1.13	1.05	1.68	1.49	1.28	1.01	1.01	1.01

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Sand Hill River, Minn.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Sand Hill River, Minn.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	.04	.02	.23	.16	.09	0	0	0
1972	0	0	0	0	.04	.02	.23	.16	.09	0	0	0
1973	0	0	0	0	.04	.02	.23	.16	.09	0	0	0
1974	0	0	0	0	.04	.02	.23	.16	.09	0	0	0
1975	0	0	0	0	.04	.02	.23	.16	.09	0	0	0
1976	0	0	0	0	.06	.02	.31	.22	.12	0	0	0
1977	0	0	0	0	.06	.02	.31	.22	.12	0	0	0
1978	0	0	0	0	.06	.02	.31	.22	.12	0	0	0
1979	0	0	0	0	.06	.02	.31	.22	.12	0	0	0
1980	0	0	0	0	.06	.02	.31	.22	.12	0	0	0
1981	0	0	0	0	.02	.01	.10	.07	.04	0	0	0
1982	0	0	0	0	.18	.07	.96	.69	.39	0	0	0
1983	0	0	0	0	.09	.03	.46	.33	.19	0	0	0
1984	0	0	0	0	.18	.07	.97	.69	.39	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Red Lake River, Minn.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	.28
1957	0	0	0	0	0	0	0	0	0	0	0	.28
1958	0	0	0	0	0	0	0	0	0	0	0	.35
1959	0	0	.14	.14	.14	.14	.14	.14	.14	0	0	.35
1960	0	0	.14	.14	.14	.14	.14	.14	.14	0	0	3.29

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1980) and reported (January 1981 through December 1984) surface-water withdrawals, in cubic feet per second, for the Red Lake River, Minn.--Continued												
1961	0.00	0.00	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.00	0.00	3.29
1962	0	0	.14	.14	.14	.14	.14	.14	.14	0	0	3.29
1963	5.10	5.10	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.10	5.10	7.45
1964	5.10	5.10	5.24	5.30	5.26	5.57	5.48	5.37	5.24	5.10	5.10	7.56
1965	5.10	5.10	5.24	5.30	5.26	5.57	5.48	5.37	5.24	5.10	5.10	7.56
1966	5.10	5.10	5.24	5.30	5.26	5.57	5.48	5.37	5.24	5.10	5.10	7.56
1967	5.10	5.10	5.24	5.37	5.28	5.94	5.74	5.52	5.24	5.10	5.10	7.56
1968	5.10	5.10	5.24	7.44	6.06	16.80	13.50	9.92	5.24	5.10	5.10	7.56
1969	5.10	5.10	5.24	8.83	6.58	24.09	18.70	12.87	5.24	5.10	5.10	7.56
1970	5.10	5.10	5.24	13.27	8.24	47.39	35.34	22.30	5.24	5.10	5.10	7.56
1971	5.10	5.10	5.24	16.91	9.60	66.49	48.98	30.03	5.24	5.10	5.10	7.56
1972	5.10	5.10	5.24	28.11	13.80	125.09	90.88	53.77	5.24	5.10	5.10	7.56
1973	5.10	5.10	5.24	28.51	13.95	127.21	92.40	54.63	5.24	5.10	5.10	7.56
1974	5.10	5.10	5.24	28.55	13.96	127.40	92.54	56.71	5.24	5.10	5.10	7.56
1975	7.30	7.30	7.44	30.75	16.16	129.60	94.74	58.91	7.44	7.30	7.30	7.56
1976	7.30	7.30	7.44	30.89	16.21	130.34	95.27	59.21	7.44	7.30	7.30	7.63
1977	7.30	7.30	7.44	30.94	16.23	130.63	95.48	59.33	7.44	7.30	7.30	7.25
1978	7.30	7.30	7.44	30.98	16.24	130.85	95.63	59.42	7.44	7.30	7.30	9.01
1979	7.30	7.30	7.44	33.60	17.23	144.65	106.14	64.37	7.44	7.30	7.30	8.31
1980	7.30	7.30	7.44	33.60	17.23	144.65	106.14	64.37	7.44	7.30	7.30	7.87
1981	6.81	6.81	6.96	31.11	16.01	133.76	97.52	58.28	6.96	6.81	6.81	8.86
1982	8.04	8.04	8.17	28.87	15.93	116.87	85.77	52.16	8.17	8.04	8.04	6.90
1983	5.34	5.34	5.47	36.52	17.11	168.47	121.87	71.47	5.47	5.34	5.34	6.07
1984	8.85	8.85	8.98	40.89	20.99	177.18	129.13	77.06	8.98	8.85	8.85	4.07

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Halstad, Minn. to the Red River of the North at Grand Forks, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1939	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1940	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1941	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1942	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1943	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1944	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1945	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1946	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1947	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1948	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1949	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1950	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1951	0	0	0	0	.16	.06	.84	.60	.35	0	0	0
1952	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1953	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1954	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1955	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1956	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1957	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1958	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1959	0	0	0	0	.27	.10	1.40	1.00	.57	0	0	0
1960	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Halstad, Minn. to the Red River of the North at Grand Forks, N.Dak.--Continued												
1961	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1962	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1963	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1964	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1965	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1966	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1967	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1968	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1969	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1970	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1971	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1972	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1973	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1974	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1975	2.94	2.94	2.94	2.94	3.21	3.04	4.34	3.94	3.51	2.94	2.94	2.94
1976	3.06	3.06	3.06	3.06	3.40	3.19	4.84	4.33	3.78	3.06	3.06	3.06
1977	2.64	2.64	2.64	2.64	2.75	2.68	3.19	3.04	2.87	2.64	2.64	2.64
1978	4.38	4.38	4.38	4.38	4.57	4.45	5.35	5.07	4.77	4.38	4.38	4.38
1979	3.67	3.67	3.67	3.67	3.77	3.71	4.17	4.03	3.87	3.67	3.67	3.67
1980	2.66	2.66	2.66	2.66	3.43	2.95	6.70	5.55	4.29	2.66	2.66	2.72
1981	2.54	2.54	2.54	2.54	2.81	2.64	4.01	3.58	3.13	2.54	2.54	2.54
1982	1.90	1.90	1.90	1.99	2.04	2.42	2.82	2.51	2.13	1.90	1.90	1.90
1983	3.35	3.35	3.35	3.35	3.51	3.41	4.18	3.94	3.69	3.35	3.35	3.35
1984	1.94	1.94	1.94	1.94	2.23	2.05	3.44	3.02	2.55	1.94	1.94	1.94

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Forest River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1958	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1959	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1960	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Forest River, N.Dak.--Continued												
1961	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
1962	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1963	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1964	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1965	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1966	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1967	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1968	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1969	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1970	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1971	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1972	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1973	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1974	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1975	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1976	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1977	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1978	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1979	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1980	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1981	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1982	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08
1983	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
1984	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Park River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1957	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1958	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1959	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1960	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Park River, N.Dak.--Continued												
1961	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
1962	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1963	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1964	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1965	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1966	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1967	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1968	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1969	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1970	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1971	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1972	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1973	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1974	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1975	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
1976	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
1977	.79	.79	.79	.79	.79	.79	.79	.79	.79	.79	.79	.78
1978	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
1979	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
1980	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
1981	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
1982	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47
1983	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
1984	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Grand Forks, N.Dak. to the Red River of the North at Drayton, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1957	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1958	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
1959	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
1960	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Grand Forks, N.Dak. to the Red River of the North at Drayton, N.Dak.--Continued												
1961	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
1962	.35	.35	.35	.35	.52	.41	1.26	1.00	.72	.35	.35	.35
1963	.35	.35	.35	.35	.54	.42	1.38	1.09	4.93	4.51	4.51	4.51
1964	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1965	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1966	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1967	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1968	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1969	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1970	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1971	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1972	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1973	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1974	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1975	.46	.46	.46	.46	.65	.53	1.49	1.20	5.04	4.62	4.62	4.62
1976	.41	.41	.41	.41	.59	.47	1.37	1.10	4.96	4.57	4.57	4.57
1977	.45	.45	.45	.45	.62	.51	1.38	1.11	4.98	4.61	4.61	4.61
1978	.47	.47	.47	.47	.65	.53	1.40	1.14	5.01	4.63	4.63	4.63
1979	.48	.48	.48	.48	.65	.54	1.39	1.13	5.01	4.64	4.64	4.64
1980	.99	.99	.99	.99	1.23	1.08	2.27	1.90	5.67	5.15	5.15	5.15
1981	.92	.92	.92	.92	1.78	1.24	5.38	4.10	8.13	6.32	6.32	6.32
1982	.98	.98	.98	.98	1.06	1.01	1.41	1.29	5.17	5.00	5.00	5.00
1983	1.29	1.29	1.29	1.29	1.34	1.31	1.56	1.48	2.83	2.72	2.72	2.72
1984	1.24	1.24	1.24	1.24	1.26	1.25	1.34	1.32	2.18	2.13	2.13	2.13

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Pembina River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1959	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1960	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Pembina River, N.Dak.--Continued												
1961	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1962	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1963	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1964	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1965	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1966	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1967	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1968	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
1969	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1970	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1971	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1972	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1973	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1974	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1975	1.11	1.11	1.11	1.11	1.14	1.12	1.27	1.22	1.17	1.11	1.11	1.11
1976	1.11	1.11	1.11	1.11	1.14	1.12	1.30	1.25	1.18	1.11	1.11	1.11
1977	1.01	1.01	1.01	1.01	1.08	1.03	1.35	1.25	1.15	1.01	1.01	1.01
1978	1.04	1.04	1.04	1.04	1.14	1.08	1.57	1.42	1.25	1.04	1.04	1.04
1979	1.17	1.17	1.17	1.17	1.18	1.17	1.20	1.19	1.17	1.17	1.17	1.17
1980	1.09	1.09	1.09	1.09	1.14	1.11	1.37	1.29	1.20	1.09	1.09	1.09
1981	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
1982	.91	.91	.91	.91	.92	.91	.97	.95	.93	.91	.91	.91
1983	1.04	1.04	1.04	1.04	1.05	1.04	1.08	1.07	1.06	1.04	1.04	1.04
1984	1.05	1.05	1.05	1.05	1.06	1.05	1.08	1.07	1.06	1.05	1.05	1.05

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Tongue River, N.Dak.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, for the Tongue River, N.Dak.--Continued												
1961	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
1962	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1963	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1964	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1965	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1966	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1967	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1968	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
1969	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1970	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1971	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1972	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1973	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1974	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1975	.28	.28	.28	.28	.31	.29	.45	.40	.34	.28	.28	.28
1976	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61
1977	.91	.91	.91	.91	.94	.92	1.09	1.04	.98	.91	.91	.91
1978	.23	.23	.23	.23	.25	.24	.31	.29	.26	.23	.23	.23
1979	0	0	0	0	.05	.02	.28	.20	0	0	0	0
1980	.20	.20	.20	.20	.27	.23	.54	.45	.34	.20	.20	.20
1981	0	0	0	0	.01	0	.06	.04	.03	0	0	0
1982	.15	.15	.15	.15	.16	.15	.21	.20	.18	.15	.15	.15
1983	.19	.19	.19	.19	.19	.19	.21	.20	.20	.19	.19	.19
1984	.19	.19	.19	.19	.23	.21	.41	.35	.28	.19	.19	.19

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Drayton, N.Dak. to the Red River of the North at Emerson, Man.												
1931	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0
1951	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0

Supplement 3.--Estimated and reported surface-water withdrawals for 21 river reaches or tributaries in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated (January 1931 through December 1975) and reported (January 1976 through December 1984) surface-water withdrawals, in cubic feet per second, from the Red River of the North at Drayton, N.Dak. to the Red River of the North at Emerson, Man.--Continued												
1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1964	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1965	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1966	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1967	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1968	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1969	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1970	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1971	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1972	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1973	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1974	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1975	0	0	3.00	0	0	0	0	0	3.94	5.31	4.13	2.53
1976	0	0	2.06	0	0	0	0	0	2.06	2.06	2.06	2.06
1977	0	0	2.91	0	0	0	0	0	2.91	2.91	2.91	2.91
1978	0	0	5.03	0	0	0	0	0	5.03	5.03	5.03	5.03
1979	0	0	0	1.30	0	0	0	0	.65	2.75	4.19	5.94
1980	0	0	1.60	0	0	0	0	0	2.97	11.26	10.47	4.42
1981	0	0	0	0	0	0	0	0	2.25	10.73	7.94	0
1982	0	0	0	0	0	0	0	0	8.04	7.54	0	0
1983	0	0	0	0	0	0	0	0	5.54	0	0	0
1984	0	0	0	0	0	0	0	0	3.44	0	0	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Fargo, N.Dak.												
1931	21.10	39.30	128.00	190.00	168.00	132.00	64.80	20.80	15.60	26.60	28.00	21.60
1932	36.10	47.30	135.00	232.00	55.60	33.20	7.73	0	8.78	14.10	6.74	1.93
1933	0	.18	129.00	207.00	73.60	51.10	15.30	1.59	.08	4.72	2.49	13.30
1934	14.00	20.50	43.00	102.00	8.12	3.31	0	0	0	0	.59	.57
1935	0	11.70	386.00	152.00	113.00	86.70	184.00	32.50	8.45	4.88	1.91	.59
1936	13.90	5.81	161.00	428.00	86.70	2.87	0	0	0	0	0	4.23
1937	4.40	.97	26.80	445.00	253.00	183.00	107.00	55.70	139.00	89.00	59.00	0
1938	5.34	14.90	236.00	164.00	426.00	330.00	98.90	18.50	57.70	29.00	19.10	21.80
1939	93.90	98.10	739.00	706.00	213.00	130.00	85.40	12.00	0	9.85	17.40	14.00
1940	1.08	8.57	40.10	447.00	384.00	185.00	15.10	3.20	0	5.71	35.00	37.70
1941	42.70	87.00	252.00	644.00	324.00	485.00	130.00	25.30	81.50	93.10	125.00	98.20
1942	112.00	110.00	190.00	326.00	1,299.00	1,665.00	989.00	470.00	608.00	530.00	432.00	314.00
1943	319.00	272.00	464.00	6,164.00	1,860.00	2,803.00	1,765.00	771.00	428.00	401.00	371.00	290.00
1944	202.00	163.00	255.00	868.00	1,196.00	2,128.00	2,013.00	689.00	770.00	745.00	730.00	510.00
1945	431.00	389.00	2,814.00	1,671.00	999.00	1,107.00	375.00	155.00	134.00	218.00	248.00	219.00
1946	187.00	113.00	1,550.00	1,348.00	640.00	420.00	706.00	599.00	504.00	578.00	535.00	490.00
1947	414.00	339.00	513.00	3,537.00	1,881.00	1,612.00	1,149.00	247.00	202.00	217.00	205.00	183.00
1948	140.00	103.00	216.00	1,806.00	1,619.00	625.00	274.00	218.00	172.00	141.00	104.00	63.30
1949	65.30	86.30	181.00	718.00	251.00	225.00	872.00	230.00	88.40	78.70	80.50	95.60
1950	88.30	134.00	527.00	3,669.00	3,320.00	1,768.00	1,521.00	768.00	214.00	145.00	96.70	117.00
1951	153.00	153.00	256.00	3,233.00	1,712.00	1,114.00	633.00	388.00	341.00	349.00	338.00	511.00
1952	529.00	535.00	533.00	7,257.00	2,149.00	1,609.00	1,270.00	426.00	445.00	324.00	249.00	186.00
1953	138.00	183.00	686.00	692.00	1,253.00	3,281.00	1,539.00	899.00	569.00	374.00	477.00	412.00
1954	357.00	344.00	631.00	863.00	944.00	1,190.00	721.00	234.00	240.00	154.00	143.00	171.00
1955	222.00	187.00	277.00	863.00	375.00	322.00	705.00	456.00	455.00	402.00	299.00	174.00
1956	238.00	220.00	251.00	1,410.00	834.00	831.00	288.00	266.00	114.00	62.30	44.00	59.00
1957	87.20	104.00	459.00	902.00	962.00	1,112.00	899.00	574.00	627.00	451.00	468.00	419.00
1958	323.00	307.00	574.00	849.00	379.00	164.00	794.00	227.00	174.00	148.00	153.00	161.00
1959	245.00	243.00	364.00	408.00	428.00	687.00	617.00	216.00	165.00	144.00	124.00	206.00
1960	208.00	228.00	309.00	1,493.00	955.00	835.00	529.00	179.00	108.00	79.40	130.00	127.00

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Fargo, N.Dak.--Continued											
1961	141.00	169.00	422.00	322.00	428.00	425.00	177.00	81.50	52.60	102.00	104.00	72.00
1962	76.10	85.40	203.00	2,617.00	3,352.00	5,122.00	5,692.00	2,691.00	845.00	515.00	425.00	303.00
1963	289.00	189.00	420.00	778.00	630.00	2,396.00	529.00	191.00	149.00	211.00	173.00	150.00
1964	139.00	170.00	194.00	1,182.00	1,142.00	735.00	385.00	93.90	118.00	237.00	207.00	210.00
1965	194.00	185.00	207.00	3,740.00	1,648.00	2,787.00	1,515.00	536.00	508.00	825.00	567.00	512.00
1966	491.00	490.00	3,756.00	2,269.00	2,312.00	1,810.00	794.00	900.00	410.00	468.00	476.00	460.00
1967	428.00	384.00	903.00	2,248.00	1,556.00	2,081.00	1,218.00	259.00	85.60	172.00	161.00	166.00
1968	135.00	135.00	374.00	503.00	675.00	640.00	435.00	223.00	157.00	291.00	288.00	248.00
1969	232.00	318.00	481.00	9,924.00	3,574.00	1,483.00	630.00	209.00	49.20	86.00	120.00	112.00
1970	154.00	174.00	250.00	1,027.00	839.00	1,207.00	511.00	110.00	14.10	61.30	162.00	124.00
1971	138.00	125.00	566.00	663.00	377.00	369.00	706.00	141.00	246.00	263.00	607.00	569.00
1972	554.00	408.00	2,469.00	2,255.00	2,020.00	1,787.00	940.00	695.00	434.00	438.00	360.00	394.00
1973	384.00	441.00	978.00	541.00	338.00	283.00	155.00	116.00	120.00	389.00	570.00	557.00
1974	481.00	519.00	732.00	1,313.00	1,060.00	1,108.00	708.00	355.00	225.00	296.00	259.00	185.00
1975	188.00	268.00	389.00	3,201.00	1,463.00	2,430.00	5,378.00	708.00	434.00	358.00	350.00	216.00
1976	230.00	290.00	1,002.00	1,040.00	341.00	167.00	91.30	35.00	12.30	3.77	12.00	11.70
1977	14.80	19.00	85.20	194.00	77.10	91.10	74.80	18.50	178.00	333.00	311.00	382.00
1978	406.00	328.00	1,293.00	6,926.00	1,756.00	1,239.00	1,553.00	364.00	114.00	155.00	109.00	100.00
1979	97.90	93.00	266.00	6,768.00	2,576.00	1,938.00	1,461.00	1,012.00	635.00	413.00	358.00	308.00
1980	378.00	386.00	676.00	1,796.00	587.00	581.00	161.00	125.00	31.50	55.40	99.80	98.20
1981	85.80	140.00	245.00	254.00	346.00	231.00	222.00	272.00	44.50	131.00	185.00	190.00
1982	225.00	242.00	725.00	2,407.00	927.00	815.00	622.00	314.00	190.00	479.00	362.00	333.00
1983	295.00	301.00	702.00	632.00	395.00	227.00	578.00	304.00	362.00	311.00	284.00	233.00
1984	252.00	350.00	1,618.00	3,347.00	1,171.00	2,110.00	1,026.00	381.00	177.00	521.00	502.00	335.00

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River above Harvey, N.Dak.												
1931	0.64	2.55	6.08	11.40	4.22	5.83	1.55	1.08	0.91	1.03	1.97	1.72
1932	1.27	1.04	11.20	27.50	7.18	6.38	2.97	1.52	1.05	1.06	1.72	1.05
1933	.80	.78	20.70	20.00	8.82	3.40	1.96	.88	.60	.59	.86	.67
1934	.50	.68	3.24	10.00	2.80	1.26	.73	.48	.45	.85	.81	.49
1935	.45	.76	5.93	8.87	5.28	4.64	5.38	6.83	1.70	1.32	.90	.97
1936	.80	.73	2.65	15.40	9.97	2.74	1.13	.37	.42	.49	.62	.37
1937	.39	.27	1.82	9.72	5.08	5.13	1.83	1.11	1.06	.67	.82	.56
1938	.60	.64	4.67	3.31	1.94	.62	.96	.63	.01	.02	.02	.01
1939	.02	.02	4.94	8.32	1.54	1.07	.12	0	0	0	0	0
1940	0	0	0	12.60	4.52	.62	.02	.13	.01	0	0	0
1941	0	0	4.96	69.60	8.54	9.63	4.36	1.31	3.24	3.79	2.84	1.58
1942	.29	.38	1.95	53.80	17.40	11.90	4.07	3.61	3.33	1.82	1.74	.79
1943	.70	1.46	34.30	66.00	13.60	29.70	9.56	2.90	.58	.27	1.37	.88
1944	.28	.33	1.14	7.96	5.41	11.80	4.57	5.44	7.30	2.42	6.06	3.03
1945	.97	1.21	49.00	15.50	9.48	7.95	2.40	1.04	1.24	0	.26	.35
1946	.09	0	20.50	6.34	1.02	.17	1.99	.01	0	0	.04	.03
1947	0	0	21.20	13.80	3.42	6.30	6.03	.32	.15	.51	.60	.55
1948	.10	0	.14	186.00	25.90	2.87	1.05	.21	0	0	0	0
1949	0	0	.26	146.00	6.82	6.05	1.02	0	0	0	0	0
1950	0	0	3.03	287.00	178.00	27.20	4.37	.24	.11	.72	1.32	1.29
1951	1.57	.71	1.91	111.00	19.90	35.00	3.98	.90	2.50	1.00	1.08	1.36
1952	0	0	5.22	101.00	9.38	2.82	5.80	.03	0	0	0	0
1953	0	0	6.12	6.76	11.10	7.66	2.75	0	0	0	0	.07
1954	.04	7.90	4.57	7.47	2.84	76.30	23.90	4.80	5.06	2.95	2.35	1.57
1955	.19	0	16.00	28.70	9.65	12.20	2.02	.07	0	1.41	1.05	.26
1956	.11	0	11.00	69.30	19.10	19.20	3.49	.91	1.58	1.32	2.77	.38
1957	.15	0	5.39	4.25	4.27	2.39	1.58	1.05	2.11	2.56	2.46	1.10
1958	.64	3.57	7.15	4.97	2.38	2.07	6.94	.10	.44	1.07	1.50	.10
1959	0	0	6.50	2.99	2.58	1.13	.41	0	.19	5.95	.98	.90
1960	.32	0	30.60	5.76	6.69	3.40	.18	.92	.74	.55	.71	.17

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River above Harvey, N.Dak.--Continued											
1961	0.04	0.19	1.80	3.09	1.64	0.30	0.07	0.03	0.56	0.47	0.81	0.09
1962	0	0	14.20	3.21	6.54	5.56	5.78	.76	.68	1.10	1.53	.80
1963	.05	0	2.87	3.79	4.37	6.73	1.58	.98	.31	.85	.98	.22
1964	.01	.03	.08	10.00	3.42	8.30	2.55	.95	1.76	1.40	1.61	.10
1965	0	0	3.38	26.70	5.49	1.82	4.02	.99	2.55	2.25	1.53	1.69
1966	0	0	61.40	4.89	3.43	3.01	9.32	1.07	.46	1.06	1.73	.16
1967	0	0	36.20	28.90	28.70	2.49	.56	0	.17	1.31	1.58	.52
1968	.01	.05	10.30	4.07	5.75	1.65	1.11	2.01	2.02	1.54	1.94	.44
1969	0	0	0	101.00	15.20	2.52	3.04	1.33	.92	1.25	1.32	1.24
1970	.34	.20	.63	19.80	14.80	7.41	3.81	1.64	1.39	1.80	2.15	.79
1971	.16	.20	6.14	90.50	14.30	54.00	9.01	1.84	1.34	4.18	2.49	.91
1972	0	0	61.20	25.80	13.90	3.09	1.09	.81	.71	1.57	2.32	.74
1973	2.32	5.86	6.15	5.11	2.25	1.81	.78	.72	1.09	2.53	1.39	.17
1974	0	.90	15.60	22.40	54.40	17.50	.76	.37	.94	1.38	1.92	1.05
1975	.18	.43	13.20	72.50	50.20	14.60	18.70	1.04	1.75	2.10	1.92	.74
1976	.42	2.04	71.10	49.80	8.64	1.78	.42	.07	.06	.99	.26	.13
1977	0	0	3.73	2.66	1.59	.87	1.02	.80	4.79	2.89	1.32	.31
1978	.25	.34	34.80	15.90	7.76	3.71	2.94	.33	.60	1.21	1.26	1.02
1979	.30	.37	.69	74.30	41.70	9.32	13.60	4.67	1.08	1.31	1.83	1.43
1980	.94	.50	9.27	19.10	3.55	2.15	1.29	6.64	3.90	5.22	5.92	2.55
1981	0	12.90	36.90	13.90	7.02	17.10	5.22	1.61	3.57	2.06	1.86	1.43
1982	.15	19.10	123.00	98.70	25.80	17.60	43.40	5.35	.73	11.80	10.40	6.27
1983	4.10	26.80	111.00	54.70	28.60	8.43	3.48	1.60	1.66	1.45	2.48	.88
1984	3.19	6.68	44.80	93.40	62.10	18.10	3.34	3.24	4.29	4.37	3.36	.66

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Warwick, N.Dak.							
1931	3.15	12.60	30.00	56.00	20.80	28.70	7.67	5.33	4.50	5.09	9.73	8.48
1932	6.27	5.11	55.00	135.00	35.40	31.50	14.60	7.47	5.18	5.21	8.48	5.16
1933	3.93	3.86	102.00	98.80	43.50	16.80	9.68	4.35	2.95	2.92	4.23	3.29
1934	2.46	3.34	16.00	49.40	13.80	6.19	3.61	2.37	2.20	4.20	3.98	2.41
1935	2.24	3.76	29.20	43.70	26.00	22.90	26.50	33.70	8.40	6.51	4.45	4.79
1936	3.96	3.61	13.00	75.90	49.10	13.50	5.58	1.83	2.06	2.43	3.05	1.84
1937	1.91	1.34	8.99	47.90	25.10	25.30	9.02	5.45	5.23	3.32	4.05	2.78
1938	2.95	3.17	23.00	16.30	9.58	3.04	4.74	3.11	.05	.08	.08	.06
1939	.09	.12	24.40	41.10	7.60	5.26	.59	.01	0	.02	0	0
1940	0	0	0	62.00	22.30	3.06	.12	.62	.02	.02	0	.01
1941	0	0	24.50	343.00	42.10	47.60	21.50	6.48	16.00	18.70	14.00	7.78
1942	1.45	1.88	9.62	265.00	86.10	58.70	20.10	17.80	16.40	9.01	8.61	3.89
1943	3.44	7.20	169.00	326.00	67.40	147.00	47.20	14.30	2.88	1.31	6.77	4.32
1944	1.39	1.63	5.62	39.30	26.70	58.00	22.60	26.80	36.00	12.00	29.90	15.00
1945	4.79	5.98	242.00	76.60	46.80	39.30	11.80	5.13	6.10	5.60	7.66	5.06
1946	5.65	2.22	221.00	178.00	31.70	14.40	37.00	20.30	7.78	13.90	10.90	5.75
1947	4.63	2.67	91.00	249.00	39.90	38.50	17.50	8.68	3.22	11.20	9.34	7.24
1948	6.34	3.24	4.05	1,065.00	370.00	41.50	28.00	15.90	1.65	3.75	9.34	6.82
1949	3.36	2.78	13.30	683.00	83.80	44.30	33.30	14.70	1.71	7.90	8.87	4.05
1950	1.50	1.50	12.30	1,421.00	854.00	98.80	30.00	8.23	6.08	12.00	11.10	8.23
1951	10.60	6.68	21.70	440.00	90.50	70.10	21.50	2.68	11.60	7.77	8.87	6.74
1952	2.03	3.24	6.23	284.00	43.40	6.13	44.90	3.55	1.37	1.16	7.97	2.61
1953	2.35	2.57	13.30	38.50	60.30	61.20	64.40	3.06	2.07	1.55	2.83	3.45
1954	3.61	34.80	79.00	64.10	30.90	326.00	170.00	48.30	38.30	33.50	18.50	9.06
1955	3.14	2.43	40.40	333.00	65.40	77.50	23.60	4.48	2.11	2.62	2.37	2.07
1956	1.51	1.88	2.19	631.00	100.00	189.00	19.00	3.93	9.56	6.05	23.80	6.84
1957	2.62	1.30	43.30	51.30	36.40	21.10	24.50	25.80	63.00	31.10	18.10	10.10
1958	9.23	8.21	38.70	62.10	20.90	16.00	61.50	4.84	1.42	3.05	5.23	4.63
1959	3.62	2.96	49.04	35.70	24.40	9.42	3.07	1.61	1.51	8.68	11.44	4.60
1960	3.23	2.29	22.14	392.50	97.90	63.90	13.10	4.96	1.75	2.10	1.72	1.18

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Warwick, N.Dak.--Continued											
1961	1.14	1.43	23.64	32.00	14.20	2.25	1.95	0.59	1.42	2.13	2.82	2.52
1962	1.98	1.77	23.54	123.50	59.90	84.90	23.20	16.30	7.31	6.67	6.74	5.04
1963	2.56	1.99	17.54	32.50	22.90	23.50	7.45	4.07	2.42	1.74	2.30	1.47
1964	1.49	1.73	1.90	89.10	33.30	58.70	24.50	5.89	12.41	16.87	9.09	6.32
1965	2.46	3.53	12.74	271.50	39.20	17.50	123.50	57.70	24.91	43.57	13.34	10.02
1966	3.69	2.67	650.44	136.50	89.30	28.90	51.60	18.90	7.37	10.22	6.96	4.55
1967	4.06	5.21	197.44	212.50	140.50	30.00	10.90	1.93	2.28	3.83	4.28	2.95
1968	2.67	3.01	91.74	27.40	31.90	13.60	6.15	6.37	13.31	7.38	5.27	4.25
1969	3.00	2.64	2.81	1022.81	85.83	27.51	25.32	25.01	6.56	3.58	5.10	5.28
1970	4.06	4.04	15.04	179.81	108.83	59.51	14.52	28.61	5.51	4.41	8.54	4.69
1971	3.60	2.57	5.05	675.81	67.43	164.81	80.72	7.86	19.01	32.97	24.64	9.51
1972	4.53	3.56	326.44	151.81	78.93	35.11	4.00	2.97	2.63	4.34	9.27	3.84
1973	2.81	2.35	73.34	26.31	20.93	7.47	2.68	2.89	3.96	8.59	5.29	4.66
1974	2.67	2.95	15.74	464.81	489.83	89.91	10.87	1.91	1.60	4.30	12.24	6.12
1975	7.77	7.77	53.42	562.88	370.87	69.40	47.49	8.40	10.07	8.94	12.68	7.80
1976	5.21	11.00	297.00	281.20	65.78	19.75	5.36	2.83	3.01	3.13	2.19	2.68
1977	3.68	3.83	15.76	16.18	12.93	2.64	1.80	1.80	2.23	3.65	4.27	5.02
1978	4.68	2.73	30.81	348.32	21.81	15.62	14.21	12.51	2.83	3.05	9.29	4.70
1979	7.53	5.25	6.32	701.55	289.48	56.70	117.45	52.45	8.76	8.55	13.16	7.66
1980	4.69	4.44	26.33	176.03	21.79	36.05	5.90	21.85	42.16	41.73	50.33	19.63
1981	12.33	154.03	165.05	71.65	53.77	135.05	40.67	19.83	28.09	25.13	20.63	15.13
1982	6.24	4.34	154.41	609.42	134.50	92.55	159.95	42.99	11.63	73.59	34.30	29.99
1983	26.30	55.90	793.12	310.32	106.33	46.50	23.19	7.12	9.87	27.86	18.80	6.97
1984	4.30	26.60	248.21	268.41	191.39	45.64	6.11	4.15	3.43	9.69	8.64	5.91

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Cooperstown, N.Dak.												
1931	5.26	21.00	50.10	93.60	34.70	48.00	12.80	8.91	7.51	8.50	16.30	14.20
1932	10.50	8.54	92.00	226.00	59.10	52.60	24.40	12.50	8.66	8.71	14.20	8.62
1933	6.57	6.45	171.00	165.00	72.70	28.00	16.20	7.27	4.93	4.89	7.06	5.50
1934	4.11	5.58	26.70	82.50	23.10	10.30	6.04	3.96	3.67	7.02	6.65	4.03
1935	3.74	6.28	48.90	73.10	43.50	38.20	44.30	56.30	14.00	10.90	7.43	8.01
1936	6.61	6.04	21.80	127.00	82.10	22.60	9.32	3.06	3.44	4.06	5.09	3.07
1937	3.19	2.25	15.00	80.10	41.90	42.30	15.10	9.12	8.75	5.54	6.78	4.64
1938	4.93	5.30	38.50	27.30	16.00	5.07	7.92	5.20	.08	.13	.13	.10
1939	.15	.20	40.80	68.60	12.70	8.79	.99	.02	.01	.03	0	0
1940	0	0	0	104.00	37.30	5.12	.19	1.04	.04	.03	0	.01
1941	0	0	40.90	574.00	70.40	79.50	36.00	10.80	26.70	31.20	23.40	13.00
1942	2.43	3.14	16.10	444.00	144.00	98.10	33.50	29.80	27.50	15.00	14.40	6.50
1943	5.76	12.00	283.00	544.00	113.00	245.00	78.90	23.90	4.82	2.19	11.30	7.22
1944	2.32	2.73	9.39	65.60	44.60	96.90	37.70	44.80	60.20	20.00	50.00	25.00
1945	8.00	10.00	404.00	128.00	78.20	65.60	19.80	8.57	10.20	9.35	12.80	8.46
1946	9.44	3.71	370.00	297.00	52.90	24.10	61.90	34.00	13.00	23.30	18.20	9.61
1947	7.74	4.46	152.00	416.00	66.70	64.40	29.30	14.50	5.38	18.70	15.60	12.10
1948	10.60	5.41	6.77	1,780.00	619.00	69.30	46.80	26.60	2.76	6.26	15.60	11.40
1949	5.61	4.64	22.20	1,142.00	140.00	74.10	55.70	24.60	2.85	23.80	23.70	16.80
1950	12.90	8.61	53.70	2,293.00	1,953.00	273.00	80.40	24.60	25.40	29.00	23.90	23.20
1951	20.80	17.90	83.60	650.00	173.00	91.40	35.00	11.20	31.80	18.10	16.40	15.70
1952	11.60	10.60	44.30	447.00	80.00	32.00	85.60	12.10	6.26	3.64	11.30	7.47
1953	6.23	7.71	18.30	62.80	73.30	123.00	132.00	8.74	2.38	4.19	9.25	8.77
1954	7.68	48.20	122.00	117.00	51.36	313.03	213.25	65.70	47.42	46.00	34.50	17.80
1955	8.58	7.84	27.60	439.00	96.56	171.03	46.15	6.65	.98	3.49	6.60	5.53
1956	4.66	4.00	4.81	678.00	243.06	280.03	51.55	13.10	18.42	13.20	37.80	15.00
1957	9.87	7.43	75.40	109.00	75.16	45.33	47.55	36.90	155.12	86.70	61.80	31.50
1958	17.80	15.80	48.10	127.00	45.96	38.03	108.25	13.00	2.47	3.48	9.91	6.41
1959	3.72	1.95	37.34	130.50	42.66	24.83	11.15	1.55	.83	9.07	8.79	6.99
1960	5.50	4.21	53.24	616.50	101.56	121.53	32.55	8.90	5.07	3.42	9.40	6.31

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Cooperstown, N.Dak.--Continued												
1961	4.05	1.08	51.74	79.50	37.86	7.19	4.59	1.38	1.53	4.34	3.79	5.12
1962	4.51	2.83	25.14	361.50	108.56	189.53	49.85	27.10	12.73	9.59	19.94	11.92
1963	4.42	.47	33.24	95.10	39.56	30.53	28.85	3.37	3.50	1.40	4.08	3.85
1964	2.36	1.69	2.58	162.50	62.96	237.53	101.75	28.40	41.73	44.47	25.74	11.12
1965	9.54	7.96	10.44	926.50	146.56	100.13	91.85	153.70	55.83	96.37	42.24	22.32
1966	14.42	8.12	1,022.44	385.50	236.56	155.53	188.75	108.70	28.63	28.97	18.54	17.02
1967	11.62	12.27	237.44	891.50	314.56	95.83	39.75	8.72	6.04	13.57	15.14	10.24
1968	9.17	8.00	169.44	126.50	79.46	81.83	24.65	15.30	25.43	16.07	18.14	15.12
1969	9.19	8.90	8.28	1,867.81	264.89	98.44	89.57	40.11	33.03	27.97	27.14	22.92
1970	16.02	12.17	32.74	521.81	265.89	185.84	40.37	40.51	20.03	16.87	23.14	15.42
1971	9.95	9.33	44.24	992.81	170.89	219.84	160.37	27.11	33.33	52.07	52.84	24.32
1972	10.52	7.53	462.44	479.81	267.89	131.84	22.77	16.71	8.62	15.17	21.64	18.02
1973	12.22	9.27	143.44	74.31	48.99	31.94	7.74	3.06	18.13	42.67	18.24	13.72
1974	8.17	6.31	10.74	1,111.81	660.89	435.84	43.27	17.91	6.12	15.37	35.44	15.92
1975	14.12	16.02	105.82	716.88	671.87	169.90	97.41	19.93	13.01	23.42	23.18	17.52
1976	11.70	12.10	196.00	597.20	117.28	40.25	18.49	4.65	2.33	2.54	2.83	3.14
1977	3.46	3.88	22.26	59.58	39.64	11.64	10.60	1.81	4.09	11.66	12.58	9.51
1978	8.83	5.38	91.61	708.32	94.24	50.97	22.48	22.29	31.40	4.89	9.47	8.49
1979	7.25	6.99	6.59	1,322.55	949.49	128.50	187.51	69.69	21.98	12.14	24.16	15.94
1980	11.23	10.53	43.33	284.03	57.49	53.45	15.43	8.31	50.76	48.13	61.13	23.83
1981	15.53	74.73	304.05	128.05	73.77	149.05	87.47	29.83	26.19	40.63	32.63	21.13
1982	9.23	5.04	105.41	876.42	214.50	166.45	195.95	62.29	17.63	114.39	65.40	61.39
1983	28.90	26.90	1,094.12	543.32	177.34	162.31	122.86	116.71	99.00	50.46	46.40	37.10
1984	25.50	16.60	354.21	772.41	329.56	116.40	43.64	11.24	2.83	18.52	18.50	12.10

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for Baldhill Creek at the mouth							
1931	1.64	6.58	15.67	29.29	10.87	15.03	4.01	2.79	2.35	2.66	5.09	4.43
1932	3.28	2.67	28.78	70.79	18.50	16.45	7.64	3.91	2.71	2.72	4.43	2.70
1933	2.06	2.02	53.45	51.65	22.74	8.76	5.06	2.27	1.54	1.53	2.21	1.72
1934	1.28	1.75	8.36	25.82	7.22	3.24	1.89	1.24	1.15	2.20	2.08	1.26
1935	1.17	1.97	15.29	22.87	13.62	11.96	13.88	17.60	4.39	3.40	2.33	2.51
1936	2.07	1.89	6.82	39.70	25.70	7.07	2.92	.96	1.08	1.27	1.59	.96
1937	1.00	.70	4.70	25.05	13.10	13.23	4.72	2.85	2.74	1.73	2.12	1.45
1938	1.54	1.66	22.80	8.52	5.00	1.59	2.48	1.63	.02	.04	.04	.03
1939	.05	.06	12.70	21.40	3.97	2.75	.31	0	0	.01	0	0
1940	0	0	0	32.40	11.70	1.60	.06	.32	.01	.01	0	0
1941	0	0	12.80	179.00	22.00	24.80	11.20	3.38	8.35	9.76	7.32	4.06
1942	.76	.98	5.02	139.00	45.00	30.70	10.50	9.31	8.58	4.70	4.50	2.03
1943	1.80	3.76	88.40	170.00	35.20	76.60	24.60	7.47	1.50	.68	3.54	2.26
1944	.73	.85	2.93	20.50	13.90	30.30	11.80	14.00	18.80	.61	2.22	2.83
1945	1.13	1.13	20.80	18.90	6.14	6.52	3.17	8.14	.90	0	.85	.61
1946	.31	.64	19.80	39.70	8.13	6.05	0	5.95	3.45	5.77	3.07	.89
1947	3.57	1.96	37.30	101.00	9.64	14.60	2.93	0	0	2.46	0	1.32
1948	0	0	11.90	140.00	161.00	13.70	3.64	6.57	3.66	0	4.96	0
1949	.30	1.21	27.60	52.90	22.70	13.70	20.90	3.14	.33	4.43	4.12	2.38
1950	1.09	1.04	13.10	610.00	204.00	30.50	10.90	3.14	3.25	5.00	4.15	3.61
1951	2.66	2.25	20.60	100.00	17.40	9.84	4.55	1.37	4.12	3.77	3.02	2.18
1952	.89	1.29	10.70	58.60	7.97	3.33	11.70	1.49	.75	1.42	2.21	.84
1953	.27	.93	2.30	3.53	7.29	13.40	18.40	1.05	.27	1.55	1.85	1.03
1954	.41	6.37	30.40	8.60	5.08	35.10	30.40	8.80	6.24	6.61	5.65	2.57
1955	.51	.94	3.54	57.10	9.65	18.80	6.05	.77	.09	1.39	1.40	.57
1956	.16	.46	.57	133.00	13.70	12.00	3.68	1.98	2.08	1.66	5.16	1.98
1957	.77	0	8.88	10.90	10.10	6.02	9.77	6.54	66.20	33.70	23.20	8.39
1958	2.15	2.47	5.25	14.30	8.08	9.73	13.30	2.43	1.45	1.99	2.47	.17
1959	0	0	8.90	7.88	7.74	6.57	3.75	1.70	1.41	2.94	.43	.69
1960	.02	0	36.40	96.00	8.28	8.11	2.09	2.61	2.39	1.98	1.89	.23

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for Baldhill Creek at the mouth--Continued												
1961	0.16	0.04	11.10	8.45	6.10	1.03	0.98	1.02	2.19	1.88	1.59	0.64
1962	.11	.11	29.00	52.90	16.20	20.40	16.10	2.86	3.23	3.13	4.87	2.38
1963	.10	0	2.74	11.30	6.39	4.43	2.00	1.13	1.13	1.10	1.41	.83
1964	.25	.23	.67	15.40	6.79	19.90	13.30	5.18	5.12	5.00	3.23	1.10
1965	.49	.46	2.51	280.00	22.10	10.00	13.30	7.69	8.98	10.90	6.37	3.46
1966	.27	.10	185.00	32.50	29.70	25.80	22.30	6.75	3.25	4.06	3.78	2.19
1967	1.38	.93	109.00	113.00	46.10	20.00	8.26	4.03	1.64	3.63	2.47	1.67
1968	.63	.62	22.60	16.10	19.60	35.70	12.60	5.52	4.57	4.65	5.54	3.70
1969	.31	.69	2.41	516.00	32.20	23.30	13.20	1.98	3.96	5.53	6.23	4.74
1970	2.02	2.26	14.40	49.40	29.90	57.20	12.30	6.93	7.76	6.41	7.71	2.96
1971	.36	1.02	36.20	99.10	15.30	25.00	10.30	1.93	3.12	5.70	7.98	3.38
1972	1.56	.21	74.90	90.30	38.10	15.40	2.91	3.12	2.19	3.11	3.18	2.15
1973	.92	1.92	26.50	8.17	6.71	3.22	.70	1.07	3.36	4.13	3.34	1.93
1974	.44	.83	2.71	264.00	42.30	18.70	2.52	2.16	1.63	2.87	4.34	3.43
1975	1.75	.76	10.70	167.00	43.50	23.60	40.40	3.07	3.19	3.65	3.89	2.14
1976	1.15	4.14	86.90	38.10	8.58	2.73	1.32	.10	.15	1.41	2.26	.81
1977	.09	.46	6.49	7.70	3.52	1.76	1.84	.96	3.72	3.98	5.56	3.77
1978	.83	.20	67.60	94.70	13.60	3.79	.93	.92	.84	2.00	1.92	.86
1979	.16	.11	1.47	740.00	92.70	10.80	3.14	2.21	1.04	1.49	2.24	2.13
1980	1.05	.50	17.40	33.40	3.04	2.08	.27	2.24	1.27	1.98	1.89	1.16
1981	.90	2.62	3.29	2.76	1.93	2.52	.50	.64	.57	2.42	2.64	1.26
1982	.54	1.82	76.30	84.80	11.80	7.33	5.16	1.07	.69	14.80	5.23	6.11
1983	2.74	6.08	198.00	43.00	14.30	19.80	19.70	4.03	4.40	4.05	4.61	2.06
1984	2.16	4.84	162.00	68.30	26.80	6.10	.72	.09	.11	1.91	2.87	1.99

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River below Baldhill Dam, N.Dak.												
1931	7.91	31.60	75.40	141.00	52.30	72.30	19.30	13.40	11.30	12.80	24.50	21.30
1932	15.80	12.90	138.00	341.00	89.00	79.10	36.80	18.80	13.00	13.10	21.30	13.00
1933	9.90	9.70	257.00	248.00	109.00	42.20	24.30	10.90	7.42	7.36	10.60	8.28
1934	6.18	8.41	40.20	124.00	34.70	15.60	9.09	5.96	5.53	10.60	10.00	6.06
1935	5.62	9.46	73.60	110.00	65.50	57.50	66.80	84.70	21.10	16.40	11.20	12.00
1936	9.90	9.09	32.80	191.00	124.00	34.00	14.00	4.61	5.17	6.11	7.66	4.62
1937	4.80	3.38	22.60	121.00	63.00	63.70	22.70	13.70	13.20	8.34	10.20	6.98
1938	7.42	7.97	57.90	41.00	24.10	7.63	11.90	7.82	.12	.22	.21	.16
1939	.25	.33	61.30	103.00	19.10	13.20	1.49	.02	.01	.05	0	0
1940	0	0	0	156.00	56.10	7.69	.29	1.56	.06	.05	0	.02
1941	0	0	61.60	863.00	106.00	119.00	54.10	16.30	40.20	51.90	38.90	21.60
1942	4.03	5.22	24.20	667.00	216.00	148.00	50.40	44.80	41.30	25.00	23.90	10.80
1943	9.56	20.00	425.00	818.00	169.00	368.00	119.00	35.90	7.24	3.64	18.80	12.00
1944	3.86	4.53	14.10	98.70	67.10	146.00	56.70	67.40	90.50	21.30	54.70	31.00
1945	10.40	12.40	406.00	152.00	82.60	71.90	24.00	23.40	11.00	8.51	14.60	9.75
1946	10.10	5.06	373.00	345.00	63.50	33.40	41.80	42.20	18.40	35.50	24.70	11.50
1947	15.30	8.61	209.00	570.00	78.80	86.20	32.10	11.60	1.44	23.90	15.40	14.90
1948	8.19	4.98	29.00	1,880.00	869.00	88.90	49.30	36.70	9.50	.79	26.10	10.80
1949	6.25	7.20	73.00	1,135.00	170.00	93.20	90.50	23.91	1.55	19.20	26.93	13.01
1950	8.40	10.30	104.80	2,930.00	2,657.00	413.20	115.30	43.70	23.80	33.00	32.00	25.70
1951	18.40	19.00	160.50	744.00	204.70	94.50	45.30	18.50	34.60	27.60	23.40	16.20
1952	7.60	.30	93.40	578.10	67.60	12.60	121.50	.20	12.90	1.90	8.40	9.30
1953	7.20	31.50	38.80	71.30	109.50	199.20	133.80	6.90	0	3.00	3.30	12.30
1954	7.90	94.20	141.40	165.80	56.46	289.83	223.55	73.00	30.02	42.60	31.50	23.00
1955	6.30	11.20	83.20	499.70	83.66	205.03	60.15	7.40	1.12	8.80	1.00	1.70
1956	2.60	4.30	19.00	781.80	313.56	305.83	54.45	27.70	3.72	14.20	41.40	15.50
1957	1.80	.90	100.80	134.20	87.66	55.23	64.95	27.90	247.92	114.50	94.70	34.10
1958	10.60	21.20	55.30	148.20	68.06	60.63	113.25	17.40	3.92	.40	7.20	6.60
1959	3.72	2.07	75.74	136.60	59.96	36.63	14.95	3.30	2.23	17.17	19.34	10.02
1960	4.02	3.47	178.84	833.10	116.36	139.83	50.45	3.50	12.23	5.67	2.14	2.12

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River below Baldhill Dam, N.Dak.--Continued												
1961	0.62	0.67	174.84	119.00	48.56	7.83	11.45	2.40	20.93	6.27	3.84	2.32
1962	2.82	3.27	107.04	528.30	146.26	217.03	74.05	23.20	38.13	6.67	21.34	6.82
1963	4.52	.47	63.14	88.20	83.66	42.53	14.15	4.50	4.63	2.47	5.44	1.02
1964	2.62	3.17	13.04	200.30	81.06	312.93	129.85	48.10	41.73	48.47	28.34	13.52
1965	14.32	5.77	25.44	1,508.50	193.76	132.03	155.35	144.20	78.63	115.37	48.04	36.82
1966	6.52	8.27	1,473.44	504.90	287.76	209.53	236.15	128.70	31.13	24.47	36.64	21.02
1967	14.52	10.77	339.34	1,244.50	369.66	127.83	44.45	6.20	1.23	8.27	20.74	12.82
1968	7.22	.87	294.74	173.60	113.16	217.13	62.75	16.30	18.33	9.17	31.04	8.12
1969	9.52	9.57	10.64	2,576.81	340.39	121.04	92.77	41.21	25.73	24.87	38.64	24.02
1970	9.32	3.17	14.24	736.81	373.69	284.74	65.77	39.11	13.83	21.37	24.74	10.42
1971	4.62	10.37	95.74	1,065.81	200.39	225.44	162.17	38.01	24.83	75.17	76.84	33.22
1972	23.82	8.77	632.54	683.21	356.69	212.84	31.07	28.51	5.83	14.67	6.24	28.12
1973	11.12	16.77	214.44	88.21	44.09	33.24	2.37	4.21	6.33	61.57	24.14	3.52
1974	21.82	12.97	7.74	1,536.81	668.79	544.44	32.07	4.21	7.63	25.87	14.34	5.22
1975	13.62	33.92	85.92	1,016.88	745.77	243.70	131.21	13.33	16.21	11.02	18.08	5.32
1976	37.30	39.60	273.80	608.00	135.88	48.85	17.29	11.50	2.46	12.16	8.80	4.00
1977	3.56	3.50	48.96	45.18	33.04	19.84	7.70	19.93	4.67	17.26	26.18	28.16
1978	16.61	6.45	287.31	952.22	140.74	52.87	14.18	17.39	37.70	6.91	29.02	21.11
1979	13.84	14.09	20.63	2,348.55	1,264.49	162.40	162.51	75.79	20.08	40.74	7.56	11.44
1980	7.93	10.83	102.23	373.23	74.69	46.75	3.83	31.45	27.56	55.63	82.63	23.03
1981	10.33	35.53	341.85	152.15	93.57	144.05	82.87	36.73	36.49	28.83	33.63	15.73
1982	7.79	25.23	191.41	1,152.42	238.20	196.05	241.95	83.39	17.13	151.19	98.20	51.29
1983	56.10	56.90	1,517.12	684.32	220.04	210.91	138.26	89.51	107.50	49.86	31.70	13.60
1984	7.80	19.30	509.31	1,054.41	363.96	145.60	27.04	2.94	5.34	27.82	28.30	18.70

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at Valley City, N.Dak.												
1931	8.73	34.90	83.20	156.00	57.70	79.80	21.30	14.80	12.50	14.10	27.00	23.50
1932	17.40	14.20	153.00	376.00	98.20	87.30	40.60	20.70	14.40	14.50	23.50	14.30
1933	10.90	10.70	284.00	274.00	121.00	46.50	26.90	12.10	8.18	8.12	11.70	9.14
1934	6.82	9.28	44.40	137.00	38.30	17.20	10.00	6.58	6.10	11.70	11.00	6.69
1935	6.21	10.40	81.20	121.00	72.30	63.50	73.70	93.40	23.30	18.10	12.30	13.30
1936	11.00	10.00	36.20	211.00	136.00	37.50	15.50	5.09	5.71	6.74	8.46	5.10
1937	5.30	3.73	25.00	133.00	69.60	70.30	25.00	15.10	14.50	9.21	11.30	7.71
1938	8.18	8.80	63.90	45.30	26.60	8.43	13.20	8.64	.13	.22	.21	.16
1939	.25	.33	67.70	114.00	21.10	14.60	1.65	.03	.01	.05	0	0
1940	0	0	0	172.00	62.00	8.50	.32	1.72	.06	.05	0	.02
1941	0	0	68.00	953.00	117.00	132.00	59.80	18.00	44.40	51.90	38.90	21.60
1942	4.03	5.22	26.70	737.00	239.00	163.00	55.70	49.50	45.60	25.00	23.90	10.80
1943	9.56	20.00	470.00	904.00	187.00	407.00	131.00	39.70	8.00	3.64	18.80	12.00
1944	3.86	4.53	15.60	109.00	74.10	161.00	62.60	74.50	100.00	21.30	54.70	31.00
1945	10.40	12.40	448.00	168.00	91.20	79.40	26.50	25.80	12.10	8.51	14.60	9.75
1946	10.10	5.06	412.00	381.00	70.10	36.90	46.20	46.60	20.30	35.50	24.70	11.50
1947	15.30	8.61	231.00	630.00	87.10	95.20	35.50	12.80	1.59	23.90	15.40	14.90
1948	8.19	4.98	32.00	2,077.00	960.00	98.20	54.50	40.50	10.50	.79	26.10	10.80
1949	6.25	7.20	80.70	1,254.00	188.00	103.00	100.00	24.20	1.67	19.72	29.43	16.61
1950	8.80	9.26	131.90	2,946.00	2,672.00	490.20	123.30	41.90	22.59	33.10	36.20	25.00
1951	18.60	19.40	194.10	753.00	209.70	100.00	45.60	17.10	33.20	28.90	22.90	16.00
1952	6.40	.10	127.90	607.87	73.30	20.30	129.60	2.80	17.40	3.40	9.50	8.20
1953	6.20	44.10	48.74	72.42	119.00	233.80	142.80	7.44	0	3.00	3.50	9.80
1954	6.20	100.50	138.80	171.80	60.66	298.83	242.55	75.70	31.32	44.90	29.40	18.50
1955	6.30	12.60	98.69	504.70	88.96	223.03	66.15	11.90	2.60	8.17	0	.33
1956	1.62	3.81	22.70	764.80	324.56	317.83	56.65	29.30	2.44	13.64	45.50	14.40
1957	0	0	101.40	133.30	84.66	56.73	71.75	37.30	264.92	118.70	99.70	35.60
1958	8.30	26.20	53.80	157.00	71.06	63.24	113.75	16.30	2.52	0	2.20	3.30
1959	.52	.87	78.24	137.62	62.87	58.63	21.77	4.61	2.76	19.47	18.14	8.42
1960	1.22	1.27	237.34	860.10	121.16	146.83	50.15	9.90	13.63	4.87	0	.32

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at Valley City, N.Dak.--Continued												
1961	0.00	0.00	187.04	121.80	48.16	8.53	12.55	0.40	24.43	7.87	3.04	0.82
1962	1.62	2.27	162.14	544.30	157.26	243.03	157.05	33.40	44.03	9.07	20.74	6.62
1963	5.92	3.17	69.44	91.50	84.56	49.33	17.81	5.44	8.35	1.44	4.15	0
1964	1.98	2.57	12.92	217.03	84.77	302.26	133.24	52.35	41.01	52.43	29.05	14.98
1965	13.78	4.67	29.72	1,696.83	205.07	148.26	176.74	164.55	90.81	122.63	48.35	31.08
1966	5.78	20.37	1,636.72	591.23	318.07	231.86	233.54	136.05	36.01	25.03	32.05	20.38
1967	11.78	15.17	382.62	1,285.83	408.97	136.86	41.94	6.15	3.31	11.43	19.25	13.28
1968	5.48	0	319.32	189.93	129.47	259.46	67.54	17.95	20.41	8.03	38.05	9.08
1969	4.78	18.97	31.92	2,733.14	362.70	128.57	123.16	45.76	31.11	21.43	41.05	24.18
1970	10.88	1.97	12.52	791.14	364.00	312.07	67.96	39.46	13.31	25.23	28.55	10.68
1971	2.68	27.77	145.02	1,072.14	211.70	237.77	172.56	40.06	26.91	79.33	82.15	33.48
1972	19.08	7.27	709.82	765.54	343.00	186.17	39.36	33.56	11.21	21.73	9.15	30.58
1973	12.48	19.47	257.22	94.94	46.80	34.07	4.43	6.66	12.11	60.83	13.05	1.78
1974	16.08	33.37	35.02	1,625.14	713.10	545.77	34.76	7.36	8.61	28.93	19.95	8.58
1975	13.88	37.52	91.49	1,109.19	832.04	273.01	180.49	16.21	19.22	12.28	19.38	6.58
1976	38.58	41.01	281.18	656.32	147.19	51.88	22.27	15.22	7.26	13.44	10.12	5.28
1977	4.90	4.99	51.47	47.71	35.36	22.14	10.28	21.60	6.88	18.60	27.57	29.50
1978	16.61	6.45	301.31	1,019.22	152.79	56.89	18.23	19.47	41.50	6.91	29.02	21.11
1979	15.15	15.54	37.94	2,520.90	1,393.82	178.76	192.95	82.19	24.09	42.05	8.91	12.75
1980	9.21	12.25	111.41	389.56	76.90	49.90	8.85	33.91	42.99	56.91	83.96	24.31
1981	11.36	36.67	352.68	166.21	101.33	158.13	100.48	40.28	41.73	29.86	34.69	16.76
1982	9.12	26.70	209.74	1,238.79	261.65	214.43	185.44	72.83	19.37	152.52	99.57	52.62
1983	57.35	58.28	1,635.37	748.61	240.32	233.21	162.68	94.78	116.16	51.11	32.99	14.85
1984	9.10	20.74	534.61	1,142.76	398.33	157.97	35.38	7.99	10.73	29.12	29.65	20.00

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at Lisbon, N.Dak.							
1931	10.30	41.30	98.30	183.70	68.20	94.30	25.10	17.50	14.70	16.70	31.90	27.80
1932	20.50	16.80	180.00	444.00	116.00	103.00	47.90	24.50	17.00	17.10	27.80	16.90
1933	12.90	12.60	335.00	324.00	143.00	55.00	31.70	14.30	9.67	9.59	13.90	10.80
1934	8.06	11.00	52.50	162.00	45.30	20.30	11.80	7.77	7.21	13.80	13.00	7.91
1935	7.33	12.30	95.90	143.00	85.40	75.00	87.00	110.00	27.60	21.30	14.60	15.70
1936	13.00	11.80	42.80	249.00	161.00	44.30	18.30	6.01	6.74	7.96	9.99	6.03
1937	6.26	4.41	29.50	157.00	82.20	83.00	29.60	17.90	17.20	10.90	13.30	9.11
1938	9.67	10.40	75.50	53.50	31.40	31.70	8.14	10.20	.15	.26	.25	.19
1939	.30	.39	79.90	135.00	24.90	17.20	1.95	.03	.01	.06	0	0
1940	0	0	.10	203.10	73.30	10.00	.38	2.03	.07	.06	0	.02
1941	0	0	80.30	1,125.10	138.10	156.00	70.60	21.20	52.40	61.20	45.90	25.50
1942	4.76	6.16	31.60	870.10	282.10	192.00	65.70	58.40	53.80	29.50	28.20	12.70
1943	11.30	23.60	555.10	1,067.10	221.10	480.00	155.00	46.80	9.44	4.30	22.20	14.20
1944	4.56	5.35	18.50	129.10	87.50	190.00	73.90	87.90	118.00	25.10	64.60	36.60
1945	12.30	14.60	529.10	198.10	108.10	93.70	31.30	30.40	14.30	10.00	17.20	11.50
1946	11.90	5.97	486.10	450.10	82.80	43.50	54.50	55.00	24.00	41.90	29.10	13.60
1947	18.10	10.20	273.10	743.10	103.10	112.00	41.90	15.10	1.88	28.20	18.20	17.60
1948	9.67	5.88	37.90	2,451.10	1,133.10	116.00	64.30	47.80	12.40	.93	30.80	12.70
1949	7.38	8.50	95.30	1,480.10	222.10	122.00	118.00	24.75	1.89	20.26	34.43	20.51
1950	10.80	10.90	145.90	3,260.10	3,208.10	712.20	169.30	53.90	23.00	35.50	41.70	29.80
1951	23.30	23.70	207.40	853.10	268.80	116.70	54.10	21.10	38.20	38.10	25.50	18.60
1952	10.60	5.30	136.90	613.77	76.90	24.30	133.40	7.20	21.20	6.10	11.60	10.70
1953	10.40	50.60	52.14	73.09	123.31	253.96	168.21	10.14	2.81	6.50	7.10	16.80
1954	16.80	111.80	153.00	196.90	68.27	330.99	285.96	82.82	41.03	52.40	47.50	36.00
1955	21.50	18.60	102.99	550.80	101.77	269.19	108.56	16.02	3.62	8.40	0	1.46
1956	2.10	5.10	34.90	828.90	390.87	369.99	67.76	32.92	3.52	14.11	42.00	11.00
1957	0	0	124.30	159.50	90.97	57.29	78.16	44.12	299.53	124.70	108.70	32.70
1958	1.20	48.70	103.80	205.80	88.87	82.51	111.16	21.32	1.53	4.10	5.30	0
1959	0	.67	97.74	160.95	70.91	68.99	36.78	6.49	0	23.07	14.74	8.02
1960	0	3.07	337.14	1,002.20	139.47	158.99	61.26	11.22	12.34	7.57	0	1.32

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at Lisbon, N.Dak.--Continued												
1961	0.00	2.90	264.04	137.20	57.47	9.19	7.36	0.00	27.84	13.07	7.84	0.32
1962	1.02	3.27	286.24	697.40	220.57	275.19	643.46	89.72	63.94	21.67	35.14	14.12
1963	5.22	6.47	100.44	142.00	106.57	72.19	26.42	11.62	10.16	6.49	7.35	2.60
1964	4.28	12.97	22.82	270.53	103.58	261.42	199.65	59.87	47.22	49.53	32.25	15.28
1965	6.78	0	5.82	1,919.93	286.38	202.42	181.15	205.57	79.92	127.63	42.25	33.08
1966	7.78	20.87	1,711.82	874.33	370.38	245.02	215.95	142.07	41.22	43.93	32.65	17.98
1967	11.28	0	520.72	1,232.93	531.28	184.22	49.15	7.37	2.22	13.33	24.05	13.98
1968	2.38	0	381.92	200.03	147.78	322.62	84.95	19.07	23.82	9.73	32.05	7.58
1969	0	12.97	66.02	3,190.24	472.01	171.23	181.57	51.38	39.52	29.93	50.05	35.18
1970	22.88	17.97	100.62	841.24	447.31	400.23	104.27	43.98	19.82	27.83	34.25	13.48
1971	4.98	0	238.12	1,113.24	266.01	247.93	210.97	45.58	24.72	86.63	57.15	37.48
1972	38.08	40.67	803.92	817.64	312.31	230.33	55.47	38.98	8.42	26.43	5.75	28.88
1973	10.68	25.87	319.32	120.34	57.41	41.23	1.41	.38	18.62	65.23	14.85	1.98
1974	16.38	12.37	74.12	1,623.24	672.41	592.93	37.97	6.88	6.32	30.73	22.15	7.58
1975	14.18	35.12	100.78	1,087.49	887.41	531.23	714.78	54.53	26.56	21.18	30.08	29.78
1976	54.18	79.71	379.85	718.40	202.67	83.99	24.73	1.20	0	24.84	17.32	8.38
1977	10.00	12.79	92.55	74.49	93.51	32.67	20.27	22.96	23.37	31.50	35.47	32.60
1978	8.91	1.25	570.38	1,055.29	193.07	90.42	38.75	20.41	60.75	0	32.32	9.41
1979	15.45	15.64	73.97	2,341.93	1,908.90	213.80	170.32	99.05	31.74	21.95	32.91	31.13
1980	14.71	17.25	229.43	468.58	85.86	63.61	17.66	39.54	36.54	55.91	103.06	40.11
1981	18.14	56.25	328.40	169.33	89.84	122.28	127.16	41.79	21.37	17.94	67.78	26.43
1982	15.20	10.01	208.79	1,505.84	303.71	191.50	202.10	101.10	18.35	142.53	56.58	61.63
1983	64.43	58.37	1,496.48	814.73	227.46	261.32	241.02	70.74	120.65	52.19	30.07	16.93
1984	39.88	32.83	669.73	1,235.89	396.97	143.28	33.09	0	0	21.70	37.73	22.18

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Kindred, N.Dak.												
1931	12.50	50.00	119.00	223.00	82.70	114.00	30.50	21.20	17.90	20.20	38.70	33.70
1932	24.90	20.30	219.00	538.00	141.00	125.00	58.10	29.70	20.60	20.70	33.70	20.50
1933	15.60	15.30	407.00	393.00	173.00	66.70	38.50	17.30	11.70	11.60	16.80	13.10
1934	9.77	13.30	63.60	196.00	54.90	24.60	14.40	9.42	8.75	16.70	15.80	9.59
1935	8.89	15.00	116.00	174.00	104.00	91.00	106.00	134.00	33.40	25.90	17.70	19.10
1936	15.70	14.40	51.90	302.00	195.00	53.80	22.20	7.29	8.18	9.66	12.10	7.31
1937	7.59	5.35	35.80	191.00	99.70	101.00	35.90	21.70	20.80	13.20	16.10	11.00
1938	11.70	12.60	91.60	113.00	69.20	38.50	18.90	40.20	16.40	11.60	14.90	11.70
1939	11.10	9.87	103.00	253.00	60.30	54.30	26.10	11.00	8.85	12.10	16.80	14.90
1940	6.23	5.57	6.71	205.10	118.10	43.10	14.50	10.80	8.46	10.60	15.40	12.60
1941	12.30	12.30	31.70	1,014.10	225.10	214.00	110.00	47.10	51.80	72.00	63.90	50.10
1942	23.70	22.10	45.40	649.10	397.10	291.00	108.00	75.40	107.00	62.80	55.40	35.70
1943	32.40	35.70	263.10	1,618.10	363.10	752.00	266.00	129.00	61.50	40.00	58.00	41.00
1944	26.80	31.10	38.20	217.10	255.10	245.00	178.00	161.00	181.00	77.00	90.40	59.30
1945	43.50	45.90	540.10	446.10	184.10	156.00	77.10	61.80	36.80	36.30	36.90	25.90
1946	28.10	24.70	325.10	672.10	148.10	112.00	86.60	72.50	41.00	74.80	56.90	40.80
1947	37.10	39.50	70.00	1,247.10	234.10	226.00	111.00	56.50	31.50	33.30	63.30	46.40
1948	31.60	29.30	38.80	1,417.10	1,591.10	266.00	147.00	101.00	53.30	33.70	51.30	38.00
1949	27.30	21.80	116.10	1,131.10	507.10	190.00	136.00	114.57	32.44	51.50	41.63	38.91
1950	27.50	29.00	255.90	2,775.10	2,750.10	1,197.20	270.30	149.50	77.70	70.90	69.60	46.00
1951	42.70	45.40	208.30	880.10	414.80	188.70	125.40	53.80	76.90	39.10	95.10	48.70
1952	28.50	30.30	140.90	1,362.57	171.10	71.70	184.40	17.50	37.50	31.10	41.10	30.00
1953	17.80	53.40	158.64	168.63	236.11	410.96	279.21	59.14	21.31	24.30	31.10	23.90
1954	14.70	148.90	193.80	256.90	121.37	236.99	346.96	116.52	50.53	70.60	38.50	28.00
1955	2.80	28.50	146.49	602.80	126.97	239.19	129.56	106.82	27.02	36.78	20.12	11.66
1956	18.66	18.34	0	663.79	571.76	330.88	103.71	66.35	26.95	31.05	55.10	21.10
1957	.90	7.90	169.95	234.29	140.36	91.78	122.01	70.15	302.04	144.70	145.70	67.80
1958	27.00	42.10	197.65	284.89	136.06	129.50	145.31	49.05	19.64	21.31	16.60	2.30
1959	5.10	.97	116.19	226.04	108.00	89.08	72.63	30.12	20.36	43.07	32.64	23.92
1960	18.50	17.27	231.99	1,225.09	222.36	200.88	111.71	27.95	40.25	26.97	21.00	13.72

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River near Kindred, N.Dak.--Continued												
1961	17.62	24.80	300.89	187.99	109.26	43.68	30.21	19.89	40.15	33.87	22.44	12.22
1962	13.02	19.47	186.09	957.29	316.46	394.08	1,052.91	273.35	136.55	79.07	76.04	57.92
1963	21.72	12.47	154.19	288.09	189.56	165.58	67.17	45.35	36.57	31.89	27.65	11.70
1964	8.98	29.97	55.07	358.52	160.87	228.31	274.10	87.70	69.53	76.33	55.25	23.18
1965	20.48	19.90	0	1,794.82	455.27	310.31	173.60	282.80	112.93	192.63	71.35	65.08
1966	16.78	45.07	1,529.67	1,212.22	476.27	328.91	261.13	197.91	74.08	74.33	38.05	32.08
1967	35.18	0	596.57	1,190.82	642.17	305.11	99.03	29.91	21.58	33.33	33.05	19.38
1968	18.88	8.70	415.77	279.92	221.67	334.51	139.33	46.81	44.28	33.33	48.85	18.28
1969	21.30	0	109.87	3,107.13	994.90	265.12	276.75	107.12	71.38	63.53	63.95	44.58
1970	19.68	4.67	88.47	911.13	468.20	474.12	204.25	79.62	44.88	52.63	60.45	19.58
1971	22.78	0	276.97	1,045.13	469.90	309.82	300.15	81.32	69.98	129.13	86.15	43.48
1972	65.08	71.07	888.77	853.53	492.20	361.22	138.85	90.92	44.38	65.13	33.05	36.28
1973	16.08	49.77	464.17	215.03	103.60	78.42	29.82	21.32	38.98	93.73	32.45	17.38
1974	2.58	0	100.97	1,556.13	832.30	718.82	93.35	46.32	31.78	58.63	41.55	11.88
1975	33.03	48.15	118.85	1,114.84	1,110.52	654.32	1,483.28	152.51	115.58	86.83	84.18	53.83
1976	76.48	193.71	525.85	741.40	312.94	130.10	64.86	26.52	7.60	19.64	32.02	29.78
1977	28.31	37.40	152.67	143.68	128.76	70.80	42.09	38.33	39.85	65.21	54.88	42.91
1978	6.51	3.45	560.34	1,130.28	288.09	155.88	94.65	42.59	124.59	21.81	64.52	34.31
1979	28.95	10.34	0	2,371.69	2,227.42	363.59	242.62	182.25	77.78	27.05	84.91	74.23
1980	41.41	44.05	213.70	602.86	129.26	117.49	52.67	71.22	22.05	61.91	130.06	69.81
1981	39.24	76.55	365.51	228.06	130.35	142.75	180.28	71.91	31.56	36.94	93.78	46.83
1982	28.40	25.92	164.72	1,517.80	379.18	261.33	212.69	143.39	39.89	142.53	43.59	102.63
1983	76.43	67.97	1,448.22	958.49	306.40	261.03	339.20	100.66	137.27	47.40	42.17	33.93
1984	68.88	53.13	651.73	1,346.89	471.50	241.65	91.54	22.01	24.45	41.23	67.06	33.78

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at West Fargo, N.Dak.												
1931	12.80	51.20	122.00	228.00	84.60	117.00	31.20	21.70	18.30	20.70	39.60	34.50
1932	25.50	20.80	224.00	551.00	144.00	128.00	59.50	30.40	21.10	21.20	34.50	21.00
1933	16.00	15.70	416.00	402.00	177.00	68.20	39.40	17.70	12.00	11.90	17.20	13.40
1934	10.00	13.60	65.10	201.00	56.20	25.20	14.70	9.64	8.95	17.10	16.20	9.81
1935	9.10	15.30	119.00	178.00	106.00	93.10	108.00	137.00	34.20	26.50	18.10	19.50
1936	16.10	14.70	53.10	309.00	200.00	55.00	22.70	7.46	8.37	9.88	12.40	7.48
1937	7.77	5.47	36.60	195.00	102.00	103.00	36.70	22.20	21.30	13.50	16.50	11.30
1938	12.00	12.90	93.70	116.00	70.80	39.40	19.30	41.10	16.80	11.90	15.20	12.00
1939	11.40	10.10	105.00	259.00	61.70	55.60	26.70	11.30	9.06	12.40	17.20	15.20
1940	6.37	5.70	6.86	210.10	121.10	44.10	14.80	11.00	8.66	10.80	15.80	12.90
1941	12.60	12.60	32.40	1,038.10	230.10	219.00	113.00	48.20	53.00	73.70	65.40	51.30
1942	24.20	22.60	46.50	664.10	406.10	298.00	110.00	77.20	109.00	64.30	56.70	36.50
1943	33.20	36.50	269.10	1,656.10	371.10	769.00	272.00	132.00	62.90	40.90	59.30	42.00
1944	27.40	31.80	39.10	222.10	261.10	251.00	182.00	165.00	185.00	78.80	92.50	60.70
1945	44.50	47.00	553.10	456.10	188.10	160.00	78.90	63.20	37.70	37.10	37.80	26.50
1946	28.80	25.30	333.10	688.10	151.10	115.00	88.60	74.20	42.00	76.50	58.20	41.70
1947	38.00	40.40	71.60	1,276.10	239.10	231.00	114.00	57.80	32.20	34.10	64.80	47.50
1948	32.30	30.00	39.70	1,450.10	1,628.10	272.00	150.00	103.00	54.50	34.50	52.50	38.90
1949	27.90	22.30	119.10	1,157.10	519.10	194.00	139.00	106.77	27.74	50.00	44.23	39.81
1950	27.20	27.60	185.90	2,742.10	2,351.10	1,044.20	313.30	164.50	82.20	72.50	70.60	52.80
1951	42.70	45.40	188.70	906.10	437.80	196.70	131.40	56.60	74.50	40.40	100.70	56.50
1952	28.50	29.20	146.80	1,546.57	179.10	73.10	332.50	22.10	36.40	31.90	44.60	29.70
1953	16.60	50.80	159.64	177.33	255.11	596.96	297.21	64.84	22.51	26.30	38.10	29.80
1954	20.50	149.90	204.80	273.90	137.37	223.99	351.96	124.52	52.43	67.50	28.30	12.90
1955	3.00	29.80	133.59	627.80	129.97	249.19	132.56	129.82	32.62	44.88	22.02	13.46
1956	17.86	14.94	0	680.79	576.76	336.88	129.41	70.55	29.65	33.55	50.90	17.70
1957	0	0	176.95	260.29	148.66	107.98	132.11	76.55	267.04	152.70	145.70	82.80
1958	41.50	48.50	189.65	302.89	148.96	134.20	171.31	64.05	28.24	21.40	18.50	4.70
1959	5.90	3.17	123.99	249.64	108.30	122.68	88.33	30.32	28.76	42.67	29.94	24.72
1960	20.70	24.57	221.39	1,237.09	231.36	194.88	112.31	27.15	45.15	25.07	20.40	15.02

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at West Fargo, N.Dak.--Continued												
1961	24.82	26.90	304.89	204.09	119.56	42.88	32.71	18.39	39.85	36.67	22.14	12.62
1962	12.22	23.77	105.49	1,002.29	328.46	418.08	1,084.91	273.35	127.55	70.57	71.14	52.92
1963	24.12	15.37	141.19	311.09	196.56	157.58	70.87	46.55	36.37	30.59	27.25	12.30
1964	10.18	36.27	59.47	390.52	171.57	210.31	279.10	94.50	71.93	74.53	56.95	23.78
1965	24.68	24.50	0	1,695.82	564.27	322.31	152.60	298.80	114.63	200.63	86.35	69.08
1966	21.78	44.07	1,295.67	1,369.22	535.27	357.91	286.13	200.91	78.08	84.83	39.55	34.88
1967	39.28	7.20	520.57	1,266.82	695.17	354.11	118.83	44.81	31.98	30.53	36.95	23.98
1968	20.58	16.50	417.77	306.92	206.67	337.51	154.43	50.31	50.08	37.13	49.15	22.68
1969	25.50	0	131.87	2,432.13	1,153.90	314.12	294.75	122.22	75.08	71.73	65.05	38.98
1970	26.78	3.57	67.47	951.13	551.20	552.12	243.25	86.42	43.98	50.83	60.85	21.08
1971	20.98	0.10	240.97	1,013.13	565.90	317.82	314.15	85.22	71.78	116.13	81.15	46.48
1972	52.08	71.07	851.77	907.53	537.20	439.22	131.85	99.12	44.78	59.83	24.05	36.28
1973	16.28	49.37	423.17	214.03	105.70	81.82	31.92	22.92	42.48	100.03	33.85	26.78
1974	0	0	103.97	1,562.13	848.30	785.82	124.05	55.62	40.08	56.33	41.05	9.98
1975	30.44	56.27	136.55	1,087.94	1,094.57	609.37	1,375.29	175.52	109.60	87.84	84.20	49.84
1976	68.48	183.71	540.99	774.54	362.01	140.56	66.32	21.26	1.78	33.84	30.72	22.73
1977	23.71	37.20	151.37	164.01	144.77	54.10	43.64	37.96	35.67	67.81	53.48	44.01
1978	0.01	0	569.34	1,352.28	328.11	155.89	103.83	48.05	122.62	19.81	59.62	31.61
1979	27.65	9.44	0	2,145.69	1,987.43	410.59	233.65	193.27	79.80	20.85	93.91	76.63
1980	44.21	51.45	167.70	659.86	133.66	119.29	57.70	70.14	18.06	64.91	135.06	74.91
1981	40.34	73.15	357.51	247.06	137.36	150.75	189.31	76.03	31.37	38.94	88.78	47.73
1982	25.40	25.62	154.72	1,529.80	396.19	272.34	213.75	149.44	44.12	165.53	95.59	124.63
1983	84.43	73.17	1,350.22	1,112.49	319.40	306.03	447.23	115.59	129.78	70.40	89.17	21.93
1984	71.88	69.83	528.73	1,528.89	565.51	296.65	101.09	21.75	17.19	32.23	75.06	46.18

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
				Estimated unregulated streamflow, in cubic feet per second, for the Maple River at the mouth								
1931	0.01	0.27	11.77	62.09	5.57	11.66	0.75	1.17	0.27	0.43	1.55	1.13
1932	.08	6.19	335.81	213.79	32.18	13.71	2.84	.23	.31	.76	2.61	.44
1933	.02	.12	180.32	104.09	20.84	4.44	1.20	.16	.06	.06	.75	.18
1934	0	.09	2.90	51.40	3.47	2.63	.15	1.28	2.56	1.00	1.55	.53
1935	.15	.06	79.15	36.17	24.40	7.76	9.86	.86	.32	.43	2.25	.38
1936	.02	.04	.86	173.84	18.14	3.02	.38	.08	.08	.14	1.08	.32
1937	.08	.04	.41	49.13	10.55	9.30	1.04	3.51	1.80	.14	1.08	.32
1938	.01	.02	38.01	22.57	7.90	1.66	.27	1.05	.14	.06	.59	.15
1939	.01	.04	114.46	75.04	2.06	3.08	.54	.05	.03	.02	.75	.24
1940	.02	.01	.02	146.85	12.42	2.03	.15	4.47	.01	.05	.64	.17
1941	.01	.08	25.91	421.11	18.03	35.96	10.80	1.10	2.32	8.66	8.77	2.43
1942	.06	.02	9.21	227.83	81.85	62.41	10.25	3.33	2.51	1.32	3.28	1.26
1943	.16	.10	261.30	117.69	38.12	86.81	67.70	1.92	.38	.32	2.28	1.66
1944	.09	.06	1.82	63.81	60.79	25.05	13.93	13.93	10.74	5.46	15.66	5.23
1945	.36	0	100.63	93.29	27.21	17.82	3.89	3.64	.51	1.43	2.54	.85
1946	.11	.03	125.25	75.37	9.52	10.12	4.76	.04	.14	6.44	5.92	1.38
1947	.14	0	109.06	1,021.46	64.03	381.16	19.33	1.10	4.36	2.57	7.00	6.06
1948	2.79	.35	6.83	559.32	55.39	21.06	14.90	9.87	1.67	.75	6.69	1.89
1949	.04	0	9.67	225.67	16.63	8.71	7.84	.25	0	.51	2.95	1.08
1950	.04	0	92.97	1,000.94	669.46	82.82	70.40	6.98	2.66	4.63	3.83	1.47
1951	.77	.22	7.96	252.67	17.38	12.53	12.31	6.50	11.66	4.98	6.59	6.82
1952	1.57	.39	.26	978.27	27.75	7.20	52.58	.59	.01	0	1.89	2.15
1953	1.53	1.59	26.99	22.68	95.56	774.19	68.46	55.18	1.92	.86	6.37	5.58
1954	2.68	3.85	41.46	40.06	15.22	7.04	13.93	2.76	3.40	.85	3.64	3.29
1955	1.60	.27	.19	127.41	6.80	14.47	68.24	10.23	.30	.67	2.15	.68
1956	.02	0	0	123.09	29.48	14.68	3.13	.53	.26	.02	8.01	2.04
1957	.54	.16	7.67	29.26	14.58	58.63	14.90	16.41	27.53	11.12	20.95	7.91
1958	2.54	.64	34.34	80.77	18.25	16.95	45.78	3.34	5.52	2.05	2.66	.33
1959	0	0	11.01	15.01	9.02	122.01	22.68	1.19	0	.83	1.99	1.19
1960	.89	.43	75.91	388.72	17.06	6.28	2.17	0	0	0	0	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Maple River at the mouth--Continued							
1961	0.00	0.00	32.50	19.44	18.68	1.85	0.00	0.00	4.30	24.62	3.65	2.21
1962	.48	.18	.98	748.28	229.99	183.56	821.70	288.30	71.05	32.93	30.67	13.17
1963	.82	0	16.74	172.76	35.85	37.68	13.61	7.20	6.08	3.40	5.53	1.14
1964	.11	.11	6.34	119.85	42.22	53.12	18.46	9.34	4.32	4.32	7.22	1.49
1965	1.30	.60	.32	1,240.65	99.88	45.78	69.75	62.84	43.30	41.46	22.89	11.77
1966	3.31	1.18	1,122.96	493.45	161.97	46.75	24.40	22.78	9.34	6.83	6.50	2.03
1967	.89	.92	84.98	409.23	182.48	31.10	7.07	1.32	.70	3.21	5.67	2.66
1968	.29	.18	50.32	66.41	33.26	125.25	44.49	12.74	6.66	5.78	7.46	3.25
1969	.05	0	0	1,844.24	163.04	38.44	402.75	38.33	23.75	16.95	14.36	7.67
1970	4.08	2.30	44.59	563.64	462.14	516.13	35.52	7.61	29.59	9.72	13.28	2.28
1971	.53	0	222.43	140.37	29.69	41.89	59.06	6.26	29.91	53.02	39.09	12.09
1972	3.85	2.09	516.13	293.70	404.91	116.61	45.03	56.26	31.21	7.74	15.55	7.23
1973	4.64	5.24	434.07	86.27	25.59	8.74	1.12	2.08	13.71	9.89	8.24	4.11
1974	.25	.05	.36	602.51	185.72	53.12	14.58	17.28	7.71	2.71	16.95	4.89
1975	1.25	0	1.01	1,409.10	354.16	373.60	2,564.45	54.31	29.37	1.43	8.27	3.70
1976	5.82	1.39	287.22	206.24	27.64	10.13	3.03	.04	.02	.37	.87	.57
1977	.24	.06	2.06	21.38	13.17	4.84	1.34	.12	1.77	6.07	14.04	3.25
1978	.44	.53	375.76	728.84	79.47	16.95	9.11	1.17	5.24	1.49	3.68	2.03
1979	.36	.53	2.92	1,128.36	336.89	107.33	39.09	15.55	3.00	6.18	10.02	4.20
1980	.42	1.30	61.65	194.36	13.28	7.32	3.40	1.32	2.05	1.11	5.84	4.92
1981	.24	1.34	9.88	62.84	10.54	16.30	30.99	8.04	2.55	6.99	10.91	1.48
1982	.06	1.14	92.00	631.66	67.05	45.89	32.39	1.43	.35	89.84	18.14	12.74
1983	14.90	2.30	531.25	207.32	60.47	67.81	167.36	30.99	48.70	37.90	20.41	16.95
1984	13.07	2.01	509.65	337.97	83.47	49.89	7.42	.04	1.44	8.43	8.09	5.33

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Rush River at the mouth							
1931	0.00	0.18	10.50	4.33	0.89	0.42	0.11	0.05	0.02	0.05	0.07	0.05
1932	.03	2.29	65.40	41.30	5.14	1.59	.05	.02	.02	.05	.02	0
1933	0	0	15.50	17.90	3.32	.65	.03	.02	.02	.07	.07	.05
1934	.03	.07	5.15	5.38	.55	.24	.07	.08	.19	.11	.02	.02
1935	.03	.07	24.80	5.20	3.91	16.70	.49	.08	.02	.08	.02	0
1936	0	0	1.20	32.60	2.90	.24	.03	0	0	.02	.02	0
1937	.02	0	.73	2.45	1.69	1.15	.08	.28	.07	.03	.02	0
1938	0	.02	15.20	1.00	1.26	2.77	.11	.02	.02	.02	.02	.02
1939	.02	0	31.80	6.13	.32	1.05	.02	0	0	.02	.02	.02
1940	0	0	.15	26.60	1.99	.13	.02	.36	.02	.03	.05	.02
1941	.03	.03	11.70	91.70	2.88	11.00	.07	.07	.11	.19	.13	.10
1942	0	0	5.83	44.60	13.00	4.85	.39	.29	6.55	1.60	1.09	.10
1943	.03	.02	55.30	20.70	6.06	18.00	10.10	3.35	.50	.24	.37	.05
1944	.02	.03	1.98	10.90	3.34	3.00	30.00	5.33	1.28	5.04	7.16	.28
1945	.15	.08	31.70	6.63	3.61	2.30	.31	.15	.75	.70	.24	.10
1946	.05	.03	54.40	8.51	3.24	1.07	11.60	0	0	.49	1.38	.28
1947	0	0	49.80	282.00	12.70	62.90	2.48	0	0	.06	.16	.21
1948	.16	0	0	224.00	8.91	2.43	.83	.18	0	0	.29	.05
1949	0	0	24.60	65.80	4.18	1.77	3.21	.16	0	0	.06	0
1950	0	0	40.00	331.00	132.00	27.70	4.21	.04	0	.24	.24	0
1951	0	0	48.30	45.70	3.57	4.96	1.02	0	.42	.02	1.18	.45
1952	0	0	0	123.00	2.72	.13	1.83	.01	0	0	0	0
1953	0	0	8.59	3.61	9.17	79.30	13.10	1.47	0	0	0	0
1954	0	.26	9.68	14.70	3.39	2.85	.06	0	0	0	0	0
1955	0	0	9.93	18.60	.19	2.24	0	2.80	0	0	0	0
1956	0	0	0	41.80	4.52	14.30	.11	0	0	0	0	0
1957	0	0	6.11	2.79	3.52	26.90	10.80	4.28	2.80	1.46	4.46	.10
1958	0	1.91	3.06	5.51	3.03	5.01	15.80	0	0	0	0	0
1959	0	0	26.40	2.33	1.99	7.29	.31	0	0	0	0	0
1960	0	0	44.60	79.40	4.20	1.54	18.60	.01	0	0	0	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Rush River at the mouth--Continued							
1961	0.00	0.00	12.20	4.76	3.48	0.24	0.00	0.00	0.00	6.87	0.21	0.00
1962	0	0	18.30	151.00	27.20	13.10	62.60	4.47	2.43	.83	4.26	2.01
1963	0	0	3.89	16.50	5.54	6.27	.04	0	0	0	0	0
1964	0	0	0	35.30	7.91	16.50	.70	.05	.16	.19	1.07	.16
1965	0	0	0	177.00	24.60	7.28	9.69	.16	.96	6.81	1.91	.57
1966	0	0	95.50	78.10	22.90	7.46	3.95	3.50	.31	.02	.02	0
1967	0	0	30.80	81.50	15.90	4.44	1.90	0	0	0	0	0
1968	0	0	16.50	15.80	10.90	50.10	2.95	0	0	.15	.76	.28
1969	0	0	0	386.00	13.60	8.82	36.80	1.10	.55	1.20	2.72	.52
1970	.05	.01	52.30	183.00	39.40	50.70	2.48	.06	.76	.39	1.77	.19
1971	0	0	33.20	29.80	11.30	4.26	.78	0	0	.96	3.48	.57
1972	.02	0	33.90	62.60	22.50	3.00	1.80	.52	.03	.39	1.59	.07
1973	0	0	54.80	4.89	2.25	.32	0	.07	12.80	4.26	2.69	.37
1974	0	0	0	222.00	41.70	17.70	6.19	.73	.02	0	2.35	.13
1975	0	0	.18	464.00	71.00	65.20	64.00	.14	0	.12	.50	.06
1976	0	3.58	57.40	22.20	2.37	.04	0	0	0	0	0	0
1977	0	0	3.81	4.86	3.81	.63	0	0	0	2.16	.14	0
1978	0	0	133.00	70.50	11.90	7.80	.63	.11	.14	0	0	0
1979	0	0	0	619.00	32.40	14.50	1.90	.11	0	.01	.23	.29
1980	0	0	18.00	25.90	1.41	.49	0	.79	.88	0	.19	.08
1981	0	.60	2.80	1.82	4.76	5.49	.26	0	0	0	0	0
1982	0	0	5.75	229.00	28.70	2.69	0	0	0	18.50	5.67	1.65
1983	0	.58	58.00	29.70	11.10	58.80	17.20	.03	0	0	0	0
1984	0	0	220.00	85.10	7.76	35.00	1.88	0	0	0	0	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at the mouth							
1931	12.81	51.65	144.27	294.42	91.06	129.08	32.06	22.92	18.59	21.18	41.22	35.68
1932	25.61	29.28	625.21	806.09	181.32	143.30	62.39	30.65	21.43	22.01	37.13	21.44
1933	16.02	15.82	611.82	523.99	201.16	73.29	40.63	17.88	12.08	12.03	18.02	13.63
1934	10.03	13.76	73.15	257.78	60.22	28.07	14.92	11.00	11.70	18.21	17.77	10.36
1935	9.28	15.43	222.95	219.37	134.31	117.56	118.35	137.94	34.54	27.01	20.37	19.88
1936	16.12	14.74	55.16	515.44	221.04	58.26	23.11	7.54	8.45	10.04	13.50	7.80
1937	7.87	5.51	37.74	246.58	114.24	113.45	37.82	25.99	23.17	13.67	17.60	11.62
1938	12.01	12.94	146.91	139.57	79.96	43.83	19.68	42.17	16.96	11.98	15.81	12.17
1939	11.43	10.14	251.26	340.17	64.08	59.73	27.26	11.35	9.09	12.44	17.97	15.46
1940	6.39	5.71	7.03	383.55	135.51	46.26	14.97	15.83	8.69	10.88	16.49	13.09
1941	12.64	12.71	70.01	1,550.91	251.01	265.96	123.87	49.37	55.43	82.55	74.30	53.83
1942	24.26	22.62	61.54	936.53	500.95	365.26	120.64	80.82	118.06	67.22	61.07	37.86
1943	33.39	36.62	585.70	1,794.49	415.28	873.81	349.80	137.27	63.78	41.46	61.95	43.71
1944	27.51	31.89	42.90	296.81	325.23	279.05	225.93	184.26	197.02	89.30	115.32	66.21
1945	45.01	47.08	685.43	556.02	218.92	180.12	83.10	66.99	38.96	39.23	40.58	27.45
1946	28.96	25.36	512.75	771.98	163.86	126.19	104.96	74.24	42.14	83.43	65.50	43.36
1947	38.14	40.40	230.46	2,579.56	315.83	675.06	135.81	58.90	36.56	36.73	71.96	53.77
1948	35.25	30.35	46.53	2,233.42	1,692.40	295.49	165.73	113.05	56.17	35.25	59.48	40.84
1949	27.94	22.30	153.37	1,448.57	539.91	204.48	150.05	107.18	27.74	50.51	47.24	40.89
1950	27.24	27.60	318.87	4,074.04	3,152.56	1,154.72	387.91	171.52	84.86	77.37	74.67	54.27
1951	43.47	45.62	244.96	1,204.47	458.75	214.19	144.73	63.10	86.58	45.40	108.47	63.77
1952	30.07	29.59	147.06	2,647.84	209.57	80.43	386.91	22.70	36.41	31.90	46.49	31.85
1953	18.13	52.39	195.22	203.62	359.84	1,450.45	378.77	121.49	24.43	27.16	44.47	35.38
1954	23.18	154.01	255.94	328.66	155.98	233.88	365.95	127.28	55.83	68.35	31.94	16.19
1955	4.60	30.07	143.71	773.81	136.96	265.90	200.80	142.85	32.92	45.55	24.17	14.14
1956	17.88	14.94	0	845.68	610.76	365.86	132.65	71.08	29.91	33.57	58.91	19.74
1957	.54	.16	190.73	292.34	166.76	193.51	157.81	97.24	297.37	165.28	171.11	90.81
1958	44.04	51.05	227.05	389.17	170.24	156.16	232.89	67.39	33.76	23.45	21.16	5.03
1959	5.90	3.17	161.40	266.98	119.31	251.98	111.32	31.51	28.76	43.50	31.93	25.91
1960	21.59	25.00	341.90	1,705.21	252.62	202.70	133.08	27.16	45.15	25.07	20.40	15.02

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sheyenne River at the mouth--Continued												
1961	24.82	26.90	349.59	228.29	141.72	44.97	32.71	18.39	44.15	68.16	26.00	14.83
1962	12.70	23.95	124.77	1,901.57	585.65	614.74	1,969.21	566.12	201.03	104.33	106.07	68.10
1963	24.94	15.37	161.82	500.35	237.96	201.54	84.56	53.78	42.47	33.99	32.78	13.44
1964	10.29	36.38	65.81	545.67	221.71	279.94	298.30	103.92	76.43	79.04	65.24	25.43
1965	25.98	25.10	.32	3,113.47	688.76	375.38	232.08	361.83	158.91	248.90	111.15	81.42
1966	25.09	45.25	2,514.13	1,940.77	720.15	412.13	314.52	227.22	87.75	91.68	46.07	36.91
1967	40.17	8.12	636.35	1,757.55	893.56	389.66	127.84	46.16	32.70	33.74	42.62	26.64
1968	20.87	16.68	484.59	389.13	250.84	512.87	201.91	63.08	56.76	43.06	57.37	26.21
1969	25.55	0	131.87	4,662.37	1,330.55	361.39	734.34	161.68	99.40	89.88	82.13	47.17
1970	30.91	5.88	164.36	1,697.77	1,052.75	1,118.96	281.29	94.12	74.35	60.94	75.90	23.55
1971	21.51	.10	496.60	1,183.30	606.90	363.98	374.03	91.51	101.71	170.11	123.72	59.14
1972	55.95	73.16	1,401.80	1,263.83	964.62	558.84	178.72	155.93	76.04	67.96	41.19	43.58
1973	20.92	54.61	912.04	305.19	133.55	90.89	33.08	25.10	69.01	114.18	44.78	31.26
1974	.25	.05	104.33	2,386.64	1,075.73	856.65	144.86	73.66	47.83	59.04	60.35	15.00
1975	31.69	56.27	137.74	2,961.04	1,519.74	1,048.18	4,003.78	230.00	138.99	89.39	92.97	53.60
1976	74.30	188.68	885.61	1,002.98	392.03	150.74	69.42	21.35	1.83	34.21	31.59	23.30
1977	23.95	37.26	157.24	190.25	161.76	59.57	45.02	38.11	37.46	76.04	67.66	47.26
1978	.45	.53	1,078.10	2,151.62	419.48	180.64	113.58	49.34	128.01	21.30	63.30	33.64
1979	28.01	9.97	2.92	3,893.05	2,356.72	532.42	274.64	208.93	82.80	27.04	104.16	81.12
1980	44.63	52.75	247.35	880.12	148.36	127.10	61.14	72.28	21.01	66.02	141.09	79.91
1981	40.58	75.09	370.19	311.72	152.68	172.55	220.67	84.15	33.97	45.93	99.69	49.21
1982	25.46	26.76	252.47	2,390.46	492.04	320.96	246.65	151.24	44.68	273.87	119.40	139.02
1983	99.33	76.05	1,939.47	1,349.51	391.09	432.69	632.43	147.07	178.75	108.30	109.58	38.88
1984	84.95	71.84	1,258.38	1,951.96	656.84	381.58	110.93	22.17	18.86	40.66	83.15	51.51

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
				Estimated unregulated streamflow, in cubic feet per second, for the Buffalo River at the mouth								
1931	5.77	19.00	81.00	38.30	31.10	29.90	19.90	14.50	7.07	15.20	20.60	16.00
1932	12.40	13.20	62.00	141.00	58.80	36.20	7.62	3.26	6.56	14.50	11.10	6.73
1933	5.29	5.03	104.00	136.00	69.70	27.60	10.30	8.32	8.90	17.50	20.10	17.20
1934	12.60	17.20	44.10	161.00	32.60	17.30	4.68	1.66	6.56	22.20	12.10	11.00
1935	10.50	17.20	142.00	87.90	69.00	49.10	46.00	18.20	9.91	19.20	11.40	7.20
1936	3.40	1.14	74.40	662.00	112.00	20.10	2.55	0	.90	7.31	10.00	6.87
1937	6.87	5.72	3.43	157.00	120.00	53.70	16.10	19.70	16.90	13.00	12.20	5.43
1938	4.97	6.25	121.00	58.60	283.00	97.70	19.60	8.01	8.27	8.58	12.90	9.12
1939	6.64	4.77	247.00	309.00	36.80	21.50	8.97	1.99	2.00	6.27	12.00	9.34
1940	1.00	.87	2.59	262.00	73.30	20.60	7.16	12.70	6.61	10.30	17.00	10.80
1941	10.80	11.30	70.50	402.00	53.40	70.40	14.10	8.47	21.90	29.20	27.30	12.80
1942	2.56	1.78	33.30	99.70	339.00	239.00	41.00	35.90	175.00	85.60	66.40	24.30
1943	12.20	9.30	84.90	1,325.00	268.00	497.00	283.00	125.00	47.80	32.60	42.00	17.70
1944	9.90	11.20	26.80	245.00	263.00	301.00	541.00	812.00	592.00	153.00	148.00	73.00
1945	24.70	18.20	985.00	667.00	281.00	153.00	35.60	25.40	58.00	56.20	35.50	23.60
1946	15.00	10.90	505.00	263.00	116.00	99.40	308.00	60.80	36.80	87.40	75.50	47.40
1947	34.40	24.60	146.00	1,206.00	307.00	314.00	77.50	21.10	22.90	31.00	29.40	25.90
1948	19.50	18.50	50.80	707.00	113.00	71.10	39.70	27.00	16.70	15.60	20.10	16.00
1949	12.50	11.30	20.80	246.00	124.00	42.10	116.00	63.00	19.50	28.50	33.10	24.60
1950	10.90	7.07	231.00	1,804.00	975.00	192.00	60.80	18.40	14.50	22.50	19.80	17.80
1951	15.40	15.80	22.00	915.00	165.00	198.00	59.00	37.60	44.30	65.40	50.90	44.20
1952	31.20	30.60	33.00	1,469.00	137.00	37.40	581.00	265.00	105.00	41.00	45.90	26.40
1953	18.00	19.90	231.00	338.00	286.00	1,094.00	152.00	236.00	61.20	34.00	35.60	29.90
1954	25.30	36.50	113.00	410.00	301.00	164.00	52.10	23.20	29.50	44.60	37.30	21.30
1955	14.90	15.20	16.60	421.00	102.00	114.00	533.00	498.00	64.00	51.40	35.00	23.90
1956	19.20	23.00	28.60	1,183.00	253.00	112.00	29.70	27.10	16.10	22.50	44.50	20.60
1957	15.90	16.20	214.00	396.00	166.00	240.00	227.00	74.60	384.00	213.00	183.00	58.80
1958	36.20	30.40	69.50	133.00	89.00	160.00	747.00	61.60	91.30	58.50	97.30	44.60
1959	19.30	15.60	134.00	243.00	196.00	445.00	444.00	100.00	62.00	59.50	46.30	40.00
1960	39.20	30.80	71.30	958.00	407.00	144.00	118.00	48.10	50.60	31.40	35.40	23.70

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Buffalo River at the mouth--Continued												
1961	20.00	18.90	164.00	187.00	283.00	59.40	22.20	10.30	18.50	30.00	25.30	17.30
1962	11.30	13.00	17.20	771.21	1,037.22	2,446.21	644.29	175.27	75.14	64.41	77.90	40.50
1963	11.00	7.13	108.00	265.30	181.31	563.30	34.48	81.16	117.31	44.00	39.00	23.60
1964	19.20	20.70	50.90	977.30	399.31	136.30	50.18	21.46	33.51	40.10	39.60	16.70
1965	18.10	18.80	19.50	1,593.30	354.31	299.30	89.18	46.46	64.11	127.30	83.80	74.70
1966	41.80	33.30	1,497.00	731.30	465.31	120.30	94.78	213.36	56.51	66.50	49.50	38.80
1967	41.50	45.70	223.00	974.30	322.31	375.30	96.58	23.86	18.61	23.50	22.70	21.70
1968	12.00	11.80	106.00	193.30	148.36	124.32	87.06	26.16	37.72	65.60	61.00	31.40
1969	19.80	17.20	20.50	2,177.30	224.36	73.32	113.66	36.86	20.12	40.60	46.50	28.90
1970	21.90	21.10	49.00	503.30	296.36	280.32	59.46	10.96	11.22	23.50	39.50	21.20
1971	14.30	15.80	95.70	292.30	96.96	68.22	133.67	24.86	140.42	213.30	349.00	111.00
1972	39.90	34.80	817.00	713.30	481.36	154.32	51.97	53.86	34.22	32.60	48.70	28.60
1973	18.00	18.00	140.00	112.30	76.76	41.72	26.87	27.46	151.42	211.30	94.40	64.50
1974	34.90	37.30	59.50	886.30	522.37	213.32	79.63	63.51	34.44	38.10	53.30	31.40
1975	23.10	21.70	30.90	1,088.30	451.37	921.32	3,220.73	90.91	36.34	55.20	67.20	38.00
1976	28.90	32.60	222.00	351.30	76.52	27.54	12.52	2.80	3.46	9.93	14.30	9.68
1977	10.13	10.73	47.43	102.33	40.88	42.72	34.45	7.61	42.86	111.33	77.73	76.53
1978	58.63	35.13	445.03	2,270.33	214.60	70.53	43.28	16.71	11.81	14.93	22.13	20.73
1979	16.43	14.93	20.53	1,528.33	370.60	140.43	216.78	62.81	20.21	21.73	68.83	38.63
1980	24.73	27.23	77.53	569.33	67.40	39.23	16.58	13.31	35.01	39.73	42.33	27.83
1981	20.04	33.24	70.54	95.56	174.46	53.77	47.93	71.68	43.70	90.96	82.74	38.04
1982	15.24	16.54	272.04	818.23	174.57	63.85	91.09	32.39	21.24	151.23	67.34	51.44
1983	29.13	30.43	232.03	167.36	119.96	87.28	926.52	123.61	70.04	89.16	81.23	52.63
1984	33.03	69.93	707.03	612.27	144.50	645.36	64.68	16.33	13.16	173.27	80.63	47.53

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Elm River at the mouth							
1931	0.00	0.10	1.30	0.62	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00
1932	0	1.41	171.00	58.60	1.56	.60	0	0	0	0	.03	0
1933	0	0	48.10	10.90	.44	.16	.05	0	0	0	0	0
1934	0	0	.21	.96	.03	.03	0	0	.03	0	0	0
1935	0	0	8.28	.91	.70	21.50	.55	0	0	0	0	0
1936	0	0	0	36.40	.29	.03	0	0	0	0	0	0
1937	0	0	0	.21	.23	.36	.03	.05	.03	0	0	0
1938	0	0	1.77	.03	.13	0	0	.05	0	0	0	0
1939	0	0	17.90	1.25	0	.31	0	0	0	0	0	0
1940	0	0	0	24.20	.31	0	0	.10	0	0	0	0
1941	0	0	.81	290.00	.29	11.50	.18	0	.03	.16	.10	.03
1942	0	0	.08	68.20	23.20	3.25	.16	.05	.03	0	0	0
1943	0	0	101.00	14.60	2.53	24.10	1.61	.03	0	0	0	0
1944	0	0	0	4.01	.44	1.56	.13	4.89	.60	.03	.68	.13
1945	0	0	17.70	1.48	.57	1.04	.16	0	0	.03	0	0
1946	0	0	95.90	2.45	.42	.31	.31	0	0	0	0	0
1947	0	0	28.00	166.00	3.59	8.38	.34	.03	0	0	.03	0
1948	0	0	0	4,032.00	103.00	1.85	.89	.36	0	0	.05	0
1949	0	0	0	289.00	3.49	67.80	1.22	.57	0	.05	.18	.10
1950	.03	.03	3.10	5,665.00	9,849.00	50.00	10.30	.55	.21	.16	.23	.21
1951	.16	.13	15.30	86.90	1.56	.75	.05	0	.08	.03	.08	.03
1952	.08	.03	.23	113.00	.16	0	47.20	.31	0	0	.03	.03
1953	.03	.03	1.12	.42	1.74	50.70	29.60	.03	.03	0	.03	.05
1954	.03	.94	5.39	3.49	.65	5.41	.10	0	0	0	0	0
1955	0	0	0	47.10	.16	11.60	.13	.03	0	0	0	0
1956	0	0	0	26.60	5.41	5.39	0	0	0	0	0	0
1957	0	0	.70	.31	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	1.85	.49	0	0	0	0	0	0	0	0
1960	0	0	13.40	122.00	.39	.03	0	0	0	0	0	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Elm River at the mouth--Continued												
1961	0.00	0.00	4.87	0.55	0.14	0.00	0.00	0.00	0.00	0.73	0.00	0.00
1962	0	0	0	238.00	29.70	23.30	97.90	3.72	13.50	2.89	1.54	1.30
1963	.07	0	4.48	23.00	2.39	1.28	0	0	0	0	0	0
1964	.08	.15	.05	22.35	.65	190.05	2.99	.18	.31	2.44	.26	.10
1965	.10	.08	.05	3,144.95	150.05	14.65	13.85	1.92	4.32	7.91	2.60	1.14
1966	.49	.23	3,902.05	241.05	136.05	22.55	38.85	47.95	1.27	.41	.47	.13
1967	.15	.13	187.05	1,016.05	387.05	27.35	1.09	.08	.05	.08	.10	.10
1968	.13	.08	27.05	2.55	2.89	355.05	8.90	1.35	.65	.28	.57	.28
1969	.13	.10	.08	2,961.15	79.35	18.85	16.15	.86	3.38	2.60	.91	.83
1970	.47	.49	.26	1,623.05	245.05	176.05	4.84	.34	.36	.10	.70	.28
1971	.10	.15	10.85	260.05	13.65	14.45	11.75	.23	.13	3.10	6.84	.99
1972	.26	.15	455.05	652.05	142.05	26.95	.54	.23	.08	.05	.23	.13
1973	.10	.21	175.05	2.39	.65	.60	.10	.08	.13	.41	.34	.15
1974	.05	.10	.05	1,306.05	202.05	89.25	4.66	5.41	.21	.05	.18	.26
1975	.23	.21	1.01	959.05	150.05	23.15	10.55	.08	.08	.05	.15	.10
1976	.11	.16	123.06	54.16	1.08	.24	.06	.06	.06	.09	.06	.06
1977	.04	.04	.04	.30	.17	.14	.12	.04	.07	.12	.64	.22
1978	.13	.08	217.05	1,051.05	21.35	3.98	.44	.05	.18	.05	.05	.05
1979	.06	.06	.03	10,193.03	419.03	15.33	6.25	.86	.08	.11	.21	.32
1980	.14	.14	4.93	47.14	.17	.07	.04	.04	.07	.04	.04	.04
1981	.04	.06	.06	.07	.04	.04	.04	.04	.04	.14	.27	.51
1982	.10	.08	12.30	625.00	37.70	6.12	7.37	0	0	12.00	1.48	1.67
1983	.38	.33	341.07	178.07	23.57	289.07	53.47	10.47	6.29	2.44	2.31	.93
1984	.34	.26	383.05	142.05	21.65	245.05	1.43	.05	.13	.18	.13	.05

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Wild Rice River at the mouth							
1931	3.51	21.20	121.00	61.50	50.90	51.70	31.40	15.80	5.25	13.90	13.80	8.88
1932	10.70	11.60	83.40	225.00	103.00	63.30	12.30	1.96	4.76	13.10	4.65	1.28
1933	3.62	3.40	160.00	217.00	124.00	47.30	16.50	6.46	7.04	16.70	13.30	10.50
1934	10.90	16.70	53.40	257.00	53.60	28.90	7.64	.82	4.76	22.50	5.47	3.86
1935	8.66	16.70	239.00	141.00	122.00	87.50	71.00	20.40	8.06	18.80	4.93	1.48
1936	2.06	.52	105.00	20.10	210.00	34.00	1.43	1.51	.38	5.48	3.90	1.33
1937	5.05	4.01	2.09	250.00	226.00	96.20	25.50	22.30	16.00	11.40	5.56	.79
1938	3.35	4.49	196.00	93.80	581.00	182.00	30.80	6.16	6.41	6.71	6.12	2.52
1939	4.85	3.18	485.00	492.00	61.30	36.50	14.40	1.04	1.05	4.51	5.37	2.65
1940	.43	.36	1.45	417.00	131.00	34.80	11.60	11.10	4.83	8.47	9.92	3.71
1941	9.00	9.50	98.20	639.00	92.40	128.00	22.40	6.60	22.10	31.90	22.70	5.39
1942	1.44	.91	37.80	159.00	709.00	470.00	63.40	44.00	313.00	126.00	107.00	22.50
1943	10.60	7.43	124.00	34.60	547.00	1,020.00	417.00	203.00	59.90	36.80	48.10	11.10
1944	8.05	9.39	28.60	312.00	518.00	682.00	1,157.00	990.00	786.00	308.00	235.00	143.00
1945	78.40	65.40	1,111.00	1,496.00	692.00	252.00	103.00	96.80	154.00	232.00	145.00	73.80
1946	36.30	23.60	768.00	908.00	439.00	273.00	207.00	31.10	36.90	198.00	117.00	72.50
1947	56.20	48.20	183.00	1,845.00	684.00	758.00	101.00	14.00	6.18	13.70	9.99	6.85
1948	4.22	3.51	3.34	863.00	162.00	39.90	19.00	4.05	.19	.45	3.42	1.78
1949	.82	.41	.47	234.00	102.00	210.00	441.00	284.00	57.10	42.50	45.40	32.40
1950	13.80	13.00	87.20	1,792.00	1,685.00	498.00	266.00	7.73	4.70	6.38	4.90	3.67
1951	3.12	2.90	8.41	824.00	203.00	74.00	9.10	8.00	17.10	17.10	26.00	157.00
1952	102.00	85.70	83.30	1,278.00	305.00	9.44	282.00	152.00	59.90	32.70	44.00	50.00
1953	38.10	37.70	204.00	516.00	454.00	917.00	576.00	243.00	92.10	50.90	53.90	60.60
1954	63.40	75.10	132.00	750.00	615.00	337.00	123.00	34.80	30.00	43.70	52.00	30.80
1955	22.60	32.00	34.00	628.00	292.00	269.00	144.00	176.00	15.20	23.80	19.60	15.10
1956	14.00	19.00	24.20	1,212.00	431.00	232.00	42.60	23.70	19.80	17.40	45.10	19.10
1957	14.80	14.80	166.00	440.00	332.00	341.00	376.00	112.00	357.00	220.00	218.00	80.60
1958	50.60	44.30	113.00	178.00	104.00	166.00	229.00	45.10	38.60	36.90	73.10	45.30
1959	23.00	20.00	123.00	311.00	310.00	276.00	219.00	91.20	39.10	55.50	56.90	48.30
1960	58.00	48.40	98.40	925.00	420.00	442.00	219.00	105.00	172.00	100.00	84.10	58.80

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Wild Rice River at the mouth--Continued												
1961	41.20	37.30	214.00	313.00	619.00	189.00	56.10	25.60	35.90	46.90	42.10	27.90
1962	26.80	23.20	34.30	636.00	983.00	1,831.00	808.00	211.00	118.00	86.80	98.10	53.90
1963	10.70	5.91	115.00	489.00	381.00	828.00	134.00	56.70	64.40	28.80	32.90	20.00
1964	20.10	25.00	29.30	1,215.00	657.00	498.00	180.00	52.60	42.40	93.50	67.20	29.70
1965	30.60	32.40	24.10	2,329.00	774.00	755.00	251.00	70.80	78.30	173.00	97.40	122.00
1966	88.20	57.90	1,531.00	2,011.00	1,018.00	297.00	128.00	226.00	107.00	82.00	69.80	56.70
1967	63.30	71.00	319.00	1,619.00	663.00	538.00	261.00	45.20	17.70	26.50	24.90	50.80
1968	33.30	22.50	214.00	399.00	328.00	251.00	194.00	69.90	89.80	140.00	109.00	64.00
1969	57.60	63.60	73.30	2,555.00	562.00	315.00	173.00	52.70	38.70	156.00	175.00	112.00
1970	70.40	55.70	60.60	1,475.00	1,104.00	1,364.00	218.00	38.60	24.50	36.50	81.10	47.00
1971	35.90	38.80	201.00	820.00	342.00	167.00	77.90	37.20	125.00	767.00	808.00	165.00
1972	94.00	72.20	1,021.00	1,794.00	923.00	338.00	157.00	123.00	64.40	78.40	81.50	39.00
1973	40.80	44.70	420.00	253.00	211.00	146.00	84.60	85.60	850.00	659.00	299.00	148.00
1974	83.40	83.00	90.00	2,418.00	1,686.00	566.00	184.00	129.00	44.40	68.60	163.00	71.50
1975	63.50	67.60	103.00	2,222.00	1,192.00	908.00	3,234.00	221.00	84.70	72.10	119.00	70.40
1976	65.90	76.00	484.00	856.00	201.00	84.80	42.50	8.36	.74	7.92	10.60	1.11
1977	.10	.23	29.70	172.00	57.91	37.80	13.13	1.12	26.31	86.10	118.00	156.00
1978	83.80	53.10	148.00	3,363.00	421.01	171.00	75.43	65.42	95.31	50.90	40.70	33.10
1979	30.70	30.10	63.00	3,155.00	1,169.01	431.00	622.03	82.02	47.61	42.10	124.00	62.50
1980	48.10	49.70	73.20	694.00	159.01	48.30	12.33	6.25	12.71	27.50	30.10	15.90
1981	9.22	12.70	54.00	109.00	185.01	150.00	183.03	153.02	174.01	297.00	219.00	101.00
1982	64.30	61.90	226.00	1,688.00	631.01	227.00	117.03	40.22	19.71	273.00	171.00	68.80
1983	48.40	47.80	745.00	369.00	180.04	435.01	800.19	174.14	104.08	179.00	164.00	95.20
1984	66.40	128.00	816.00	913.00	255.04	1,602.01	123.19	23.84	15.08	97.40	116.00	76.00

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Halstad, Minn.												
1931	42.40	77.60	215.00	599.00	349.00	220.00	81.50	64.10	13.60	28.10	117.00	67.00
1932	69.30	91.30	589.00	2,078.00	511.00	177.00	48.70	13.40	9.44	7.60	41.20	9.61
1933	8.24	.69	453.00	1,210.00	432.00	190.00	29.60	7.28	6.46	6.55	19.90	45.40
1934	29.20	43.80	186.00	836.00	219.00	63.10	40.90	6.29	3.99	8.74	17.30	3.60
1935	5.60	26.80	437.00	826.00	478.00	226.00	267.00	93.50	50.70	25.80	16.40	3.71
1936	29.00	14.50	22.50	2,899.00	803.00	194.00	58.30	8.67	11.80	10.50	6.26	18.00
1937	10.10	3.01	14.20	1,156.00	883.00	517.00	313.00	147.00	277.00	95.00	202.00	12.70
1938	12.10	33.10	666.00	525.00	2,311.00	969.00	281.00	58.00	58.40	61.00	88.30	67.50
1939	166.00	173.00	204.00	1,663.00	508.00	314.00	146.00	40.20	64.00	97.80	82.50	47.30
1940	2.80	20.40	94.40	2,157.00	1,041.00	448.00	88.40	13.20	46.50	70.70	138.00	105.00
1941	80.90	156.00	200.00	3,642.00	1,146.00	2,406.00	415.00	75.60	628.00	684.00	349.00	226.00
1942	195.00	191.00	848.00	1,738.00	2,957.00	2,595.00	738.00	896.00	1,333.00	593.00	865.00	576.00
1943	508.00	424.00	530.00	12,280.00	3,210.00	5,930.00	3,134.00	1,280.00	634.00	510.00	774.00	540.00
1944	335.00	270.00	296.00	1,800.00	2,362.00	3,417.00	4,136.00	3,003.00	2,624.00	1,000.00	1,269.00	851.00
1945	669.00	580.00	5,847.00	5,144.00	2,300.00	1,657.00	727.00	350.00	508.00	671.00	576.00	431.00
1946	312.00	196.00	3,981.00	3,783.00	1,412.00	879.00	1,039.00	1,099.00	443.00	691.00	1,011.00	824.00
1947	645.00	514.00	705.00	11,890.00	3,104.00	3,454.00	1,484.00	362.00	533.00	626.00	501.00	373.00
1948	239.00	181.00	515.00	8,100.00	3,479.00	1,190.00	558.00	468.00	318.00	200.00	305.00	159.00
1949	119.00	155.00	319.00	3,233.00	1,161.00	738.00	1,557.00	733.17	632.44	409.70	254.93	215.71
1950	154.80	228.10	578.90	13,700.10	11,227.10	3,814.20	2,328.30	1,332.50	940.30	1,182.90	294.50	258.40
1951	252.70	251.40	1,355.00	6,584.10	2,518.80	1,667.70	1,042.40	755.80	554.70	475.60	731.40	853.30
1952	790.00	738.30	1,130.80	13,405.57	2,980.10	1,787.30	2,934.50	802.60	471.30	297.30	575.60	372.50
1953	219.10	306.80	1,045.64	1,830.33	2,097.11	7,805.96	2,945.21	1,571.24	445.31	289.70	913.40	688.00
1954	510.60	558.90	904.80	2,601.90	2,008.37	1,943.99	1,332.96	539.12	218.13	219.20	314.50	273.00
1955	287.00	284.20	397.49	2,619.80	905.97	927.19	1,483.56	1,200.82	271.92	266.88	658.42	352.06
1956	387.96	348.64	213.00	4,587.79	2,148.76	1,594.88	546.41	400.05	559.95	166.45	170.50	111.90
1957	115.00	139.90	862.95	1,944.29	1,643.96	2,128.98	1,790.11	883.05	1,938.04	1,441.70	891.70	677.80
1958	444.50	424.10	1,016.65	1,553.89	808.36	670.80	2,079.31	440.35	352.14	107.00	378.80	300.50
1959	363.00	351.17	500.19	1,312.64	979.30	1,930.78	1,476.53	461.02	319.26	168.07	349.04	392.02
1960	324.50	344.17	417.99	5,453.09	2,165.36	1,669.88	1,059.01	377.45	401.95	97.27	332.90	233.22

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Halstad, Minn.--Continued											
1961	196.72	242.50	1,035.89	1,030.09	1,170.26	748.28	313.21	191.69	195.65	288.97	217.34	133.32
1962	125.82	152.47	289.09	6,537.50	5,349.68	10,309.29	9,366.20	3,865.62	1,349.79	813.58	753.54	508.92
1963	351.72	257.47	721.19	2,268.39	1,395.88	3,949.89	940.89	444.14	390.80	323.09	300.45	213.00
1964	203.53	212.82	306.92	4,122.87	2,523.44	1,837.67	971.57	297.64	253.41	402.38	362.40	226.53
1965	244.93	224.95	223.75	12,487.17	3,561.64	4,177.67	2,167.07	1,057.24	765.01	1,365.98	822.40	758.13
1966	648.83	681.12	9,837.72	9,419.57	4,619.64	2,684.27	1,446.60	1,567.35	737.46	694.58	701.20	588.53
1967	555.73	431.55	1,695.62	7,468.17	3,572.54	3,322.47	1,749.30	432.95	157.26	273.38	287.00	262.43
1968	219.03	193.75	1,192.82	1,525.27	1,434.09	1,665.89	1,017.18	405.05	326.27	498.68	523.20	423.53
1969	290.35	354.05	765.92	20,723.48	6,745.32	2,396.50	2,051.50	590.36	233.87	388.18	475.60	311.73
1970	294.43	280.02	445.52	6,163.48	3,411.62	4,970.50	1,222.00	295.76	183.87	199.68	413.60	224.33
1971	176.43	163.45	1,439.02	3,467.48	1,526.32	942.20	1,311.91	362.66	683.57	1,632.38	1,721.20	1,042.53
1972	863.13	790.12	6,390.82	7,059.88	4,424.62	3,328.60	1,494.61	1,125.56	661.47	634.88	576.50	426.43
1973	392.23	534.52	3,074.22	1,441.38	834.52	628.80	312.28	256.26	1,279.87	1,429.18	982.10	915.33
1974	729.35	608.05	1,096.02	7,888.48	5,004.73	3,052.20	1,458.87	813.81	370.49	503.58	589.50	340.43
1975	290.19	425.92	745.60	11,603.29	6,115.00	4,603.75	20,078.11	1,456.21	760.11	667.19	730.25	422.89
1976	460.54	588.77	2,793.05	3,902.90	1,212.50	462.97	246.97	80.28	33.39	68.10	104.18	64.84
1977	47.48	66.77	398.74	786.38	476.41	256.36	255.00	76.79	220.90	653.98	587.95	715.38
1978	659.69	388.08	1,773.42	16,990.66	2,963.78	1,976.37	2,020.74	601.07	321.61	242.69	261.80	242.99
1979	162.41	133.20	341.06	17,905.05	8,916.07	2,820.05	2,513.49	1,430.73	844.45	583.61	666.97	526.49
1980	497.88	454.42	794.77	4,103.23	1,048.42	805.66	283.79	257.84	140.04	196.28	356.13	224.88
1981	142.42	230.23	863.59	722.26	948.89	578.07	682.22	556.65	287.77	494.14	655.86	491.31
1982	312.24	350.46	1,193.76	9,562.03	2,330.88	1,387.73	1,075.34	540.36	290.20	1,216.76	776.63	620.67
1983	348.53	297.07	3,957.32	2,951.92	1,077.59	1,601.74	3,473.65	835.77	778.34	682.83	670.27	482.03
1984	436.96	550.91	4,445.81	9,377.21	2,189.20	5,395.11	1,510.15	565.35	256.91	1,276.55	1,209.34	787.06

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Goose River at the mouth							
1931	0.13	1.76	12.00	28.70	3.81	4.54	1.36	1.42	0.35	0.32	0.21	0.21
1932	.21	21.40	291.00	256.00	29.30	13.50	1.05	.31	.42	.57	.90	.33
1933	.20	.17	150.00	113.00	17.70	6.43	1.18	.22	.11	.10	.21	.13
1934	.09	.13	3.31	35.40	2.19	2.94	1.33	1.55	2.97	.75	.21	.21
1935	.21	.32	74.90	34.30	21.30	92.10	12.80	1.07	.43	.32	.43	.21
1936	.21	.21	1.07	203.00	15.10	2.97	.62	.11	.11	.11	.11	.11
1937	.11	.21	.54	16.50	8.02	10.30	2.60	3.99	2.14	.11	.11	.11
1938	.11	.11	37.60	6.97	5.73	1.45	.01	0	0	0	0	0
1939	0	0	106.00	40.10	1.20	9.66	.13	0	0	0	0	0
1940	0	0	0	167.00	9.69	1.74	0	5.02	.01	0	0	0
1941	0	0	26.20	553.00	15.00	65.70	7.42	1.35	2.71	6.49	5.61	2.49
1942	.08	0	9.90	275.00	86.80	33.60	6.48	3.80	2.91	.98	.88	.79
1943	.48	.34	230.00	131.00	35.60	97.80	23.00	2.27	.49	.25	.44	.32
1944	.18	.13	2.16	70.10	17.80	22.70	6.12	41.70	13.60	3.07	14.50	5.99
1945	.71	.69	105.00	43.40	19.50	18.30	6.40	1.39	1.17	1.78	.57	.55
1946	.50	.60	225.00	55.20	17.10	9.75	9.47	.58	.90	1.46	1.56	.72
1947	.24	.15	130.00	423.00	41.00	55.70	9.82	2.08	.95	.82	2.34	1.56
1948	.48	.11	.57	1,970.00	158.00	24.80	16.70	10.60	1.02	.48	4.05	1.72
1949	.49	.28	1.22	552.00	40.60	170.00	19.90	13.40	1.19	3.46	7.08	5.31
1950	2.88	2.54	48.30	2,321.00	2,435.00	145.00	62.00	12.80	7.69	6.51	8.43	7.87
1951	6.71	6.22	98.60	309.00	29.30	15.40	3.86	1.69	4.59	2.83	4.74	1.99
1952	0	1.97	15.20	351.00	12.00	1.53	140.00	9.77	1.51	1.16	2.19	2.92
1953	2.01	2.06	30.40	23.30	30.60	146.00	109.00	2.32	3.06	.81	2.62	3.17
1954	2.73	17.20	61.90	65.50	20.70	44.10	5.02	.75	.37	.21	.28	.32
1955	.61	.75	1.05	230.00	6.80	66.00	6.06	2.76	.17	.21	.51	.69
1956	.98	.90	1.12	302.36	59.66	61.66	6.84	1.42	1.40	.77	2.31	1.89
1957	1.42	1.15	19.96	19.46	8.79	11.56	6.03	.48	57.06	18.06	16.16	4.86
1958	1.39	1.23	2.04	17.26	5.57	3.73	31.36	4.13	.85	.70	.41	.36
1959	.36	.36	36.36	40.16	7.53	7.65	.87	1.78	.67	.72	1.08	1.33
1960	1.30	1.22	77.26	467.36	16.46	13.96	11.26	4.78	2.08	.64	1.48	1.41

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Goose River at the mouth--Continued											
1961	1.18	1.24	58.56	29.16	21.36	4.07	0.53	0.45	0.79	2.98	1.10	1.01
1962	.97	.92	1.27	739.36	192.36	156.36	51.76	12.16	132.36	18.06	15.76	10.10
1963	2.84	.68	31.76	95.66	20.06	11.56	12.96	2.59	.73	1.28	.96	.49
1964	.36	.36	1.99	161.36	20.36	295.51	32.62	6.42	9.45	28.86	8.30	4.34
1965	3.57	2.33	1.84	1,747.36	184.56	75.21	73.52	25.74	39.30	54.06	29.76	19.06
1966	11.96	7.70	1,184.36	506.36	177.56	94.81	126.82	141.74	20.50	10.56	11.56	5.14
1967	5.46	4.53	303.36	1,013.36	431.56	105.51	19.12	3.07	1.71	2.46	4.36	3.97
1968	4.88	2.91	127.36	56.26	37.96	412.51	58.12	21.34	14.30	8.41	12.96	8.79
1969	4.61	4.17	6.56	1,697.36	142.56	86.21	79.62	16.64	34.60	29.76	16.96	15.86
1970	11.36	12.06	14.56	1,269.36	338.56	284.51	42.12	9.92	10.12	4.17	14.66	8.43
1971	4.18	5.67	84.86	524.36	70.66	74.81	67.22	7.84	4.96	32.66	50.16	17.56
1972	8.27	5.64	452.36	818.36	253.56	104.51	12.92	8.01	3.50	1.53	7.59	4.60
1973	4.29	6.75	294.36	54.46	20.36	13.61	4.69	2.65	5.32	10.96	9.63	5.47
1974	1.78	3.64	2.97	1,143.36	305.56	197.51	41.32	44.54	7.09	2.10	6.66	8.33
1975	7.76	6.98	28.96	985.36	260.56	96.21	63.52	3.78	2.98	1.43	5.38	4.19
1976	4.70	5.98	252.57	246.57	25.27	7.54	2.28	.99	.77	.57	.57	.82
1977	.78	.78	2.88	19.26	10.88	5.89	5.01	.67	2.59	5.01	14.06	7.56
1978	4.65	2.51	324.30	1,030.30	84.28	37.43	11.30	2.00	6.28	1.41	1.39	2.03
1979	2.32	2.69	3.86	3,081.50	451.57	77.23	48.28	16.97	3.95	5.12	7.71	9.54
1980	5.82	5.51	59.65	230.45	10.86	3.29	.98	2.07	2.88	1.28	3.05	3.02
1981	2.86	5.74	11.15	7.63	8.68	16.00	9.35	9.71	3.75	5.78	8.94	12.35
1982	6.50	5.38	87.20	875.90	70.01	21.41	22.64	3.78	2.01	68.20	23.10	24.40
1983	10.60	9.57	449.01	248.01	62.36	140.10	69.44	32.95	48.95	29.41	28.51	17.41
1984	10.02	8.57	432.01	431.01	89.93	124.05	6.11	1.55	1.28	7.33	5.83	1.73

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Marsh River at the mouth							
1931	0.01	0.50	6.57	9.58	0.27	5.34	0.21	0.10	0.02	0.11	0.23	0.13
1932	.07	.08	199.00	7.14	1.27	6.59	.02	0	.02	.10	.06	.02
1933	.01	.01	11.50	6.64	1.93	1.50	.05	.03	.03	.16	.22	.15
1934	.07	.16	1.63	9.62	.30	.15	.01	0	.02	.27	.07	.06
1935	.05	.16	37.60	2.55	1.89	3.12	1.39	.17	.04	.19	.06	.02
1936	0	0	5.44	210.00	6.28	.91	0	.01	0	.02	.04	.02
1937	.02	.01	.09	9.03	7.39	3.96	.13	.20	.15	.08	.07	.01
1938	.01	.02	16.10	1.05	60.70	.41	.20	.03	.03	.03	.08	.04
1939	.02	.01	57.50	39.70	.40	.93	.03	0	0	.02	.07	.04
1940	0	0	0	27.70	2.19	.54	.02	.08	.02	.05	.15	.05
1941	.05	.06	10.30	70.30	1.01	23.20	.10	.03	.26	.50	.43	.08
1942	0	0	3.13	3.36	94.80	47.90	1.07	.80	28.70	5.68	3.20	.33
1943	.07	.04	149.00	950.00	53.10	443.00	84.80	13.30	1.52	.64	1.14	.16
1944	.04	.06	.14	83.30	43.50	113.00	328.00	164.00	144.00	19.00	11.80	3.56
1945	.82	.35	437.00	629.00	185.00	22.40	7.24	2.61	1.83	1.29	.82	.08
1946	0	0	364.00	280.00	60.70	13.00	12.80	.06	.45	3.99	1.68	.51
1947	0	0	22.00	1,273.00	424.00	608.00	130.00	65.90	56.00	73.00	55.80	47.50
1948	35.40	25.10	28.90	656.00	266.00	102.00	76.00	40.60	11.70	10.80	19.80	17.80
1949	18.20	14.90	18.10	217.00	198.00	412.00	585.00	363.00	74.20	60.50	74.30	58.60
1950	27.20	23.80	51.90	1,537.00	2,617.00	1,030.00	820.00	134.00	50.80	118.00	85.70	77.10
1951	64.50	62.10	107.00	1,190.00	714.00	301.00	102.00	60.70	122.00	130.00	102.00	13.10
1952	12.40	10.80	14.80	391.00	125.00	90.30	202.00	54.30	3.80	1.30	.88	.68
1953	.17	.13	52.10	46.50	38.50	100.00	119.00	6.61	1.64	.04	.23	.74
1954	.21	.05	6.64	135.00	60.20	22.40	2.21	.11	0	0	.05	.11
1955	0	0	.48	69.50	9.39	14.90	17.60	11.20	0	0	0	0
1956	0	0	.01	317.00	37.50	23.60	1.02	.04	.09	0	0	0
1957	0	0	40.50	35.50	10.30	41.60	17.20	.91	5.17	3.01	7.03	.95
1958	0	.34	1.33	4.13	1.35	3.00	15.50	.25	0	0	0	0
1959	0	.01	18.30	19.90	6.75	4.96	1.27	0	0	0	0	0
1960	0	0	23.70	109.00	10.60	12.60	8.27	.28	3.47	0	.12	0

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Marsh River at the mouth--Continued							
1961	0.00	0.00	35.60	12.90	25.00	3.03	0.00	0.00	0.01	0.39	0.00	0.00
1962	0	0	.26	97.90	199.00	347.00	264.00	8.75	1.50	.69	1.60	.71
1963	.15	0	20.60	33.70	11.60	32.70	.45	0	0	0	0	0
1964	0	0	0	103.00	23.20	18.60	3.26	.06	.17	.08	.12	0
1965	0	0	0	573.00	25.90	29.70	21.00	3.63	3.76	26.90	5.43	2.72
1966	.15	.07	389.00	292.00	50.40	9.99	2.38	1.70	2.32	.21	.03	0
1967	0	0	60.10	144.00	30.10	9.92	1.17	0	0	0	0	0
1968	0	0	19.90	11.80	5.42	15.70	1.06	0	0	0	0	0
1969	0	0	0	608.00	31.40	24.70	42.80	3.19	2.34	2.85	2.29	.77
1970	.18	.17	1.47	350.00	58.00	138.00	2.33	.05	.14	.25	.56	.02
1971	0	0	46.70	101.00	5.39	2.76	.46	0	0	60.70	60.20	4.57
1972	.50	0	318.00	321.00	52.90	4.71	5.26	2.43	.59	.84	0	.28
1973	.10	.08	84.10	10.30	4.21	.74	0	0	25.60	30.70	5.38	1.41
1974	.29	.17	.17	775.00	150.00	20.70	1.25	3.88	.08	.23	6.35	.59
1975	.23	.12	.13	553.00	86.00	17.00	230.00	.89	.01	0	.87	.01
1976	0	0	68.10	71.00	2.44	4.06	.01	0	0	0	0	0
1977	0	0	2.79	10.20	1.36	.57	0	0	0	.50	.18	.02
1978	.02	.02	15.50	676.00	9.95	1.00	.02	0	0	0	0	0
1979	0	0	0	895.00	43.70	13.40	53.40	1.43	.09	0	.63	.07
1980	.02	0	6.75	106.00	.87	0	0	.03	0	0	0	0
1981	0	1.36	1.30	.08	47.70	3.92	1.18	.20	4.64	12.70	5.32	1.54
1982	.10	.23	70.80	337.00	24.80	2.86	1.18	.12	0	12.00	7.46	5.04
1983	1.33	.79	342.00	68.80	4.34	247.00	55.70	20.50	18.50	6.18	5.05	1.89
1984	.66	3.60	323.00	176.00	11.60	35.70	2.86	.11	.07	1.88	1.28	.09

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Sand Hill River at the mouth							
1931	3.20	9.15	35.80	62.80	20.70	14.10	9.73	11.20	6.01	10.10	9.74	4.96
1932	5.53	6.35	27.40	253.00	64.10	16.80	4.05	5.24	5.72	12.90	5.45	3.09
1933	3.86	2.38	43.70	151.00	48.40	13.00	5.34	8.44	6.99	9.23	9.54	7.75
1934	5.65	8.49	19.90	71.90	15.30	8.55	2.60	3.71	20.20	14.50	5.94	4.96
1935	4.57	8.49	58.20	70.30	53.70	22.10	20.90	12.60	7.50	10.10	5.62	4.96
1936	3.47	4.45	32.30	218.00	44.40	9.83	1.50	5.41	5.06	6.33	4.96	3.78
1937	2.80	2.72	1.96	44.20	31.30	24.00	8.03	13.10	10.70	6.33	5.99	3.78
1938	3.03	2.97	50.50	25.50	25.90	41.40	9.57	8.28	6.66	4.72	6.30	4.16
1939	2.69	2.26	96.50	77.80	10.90	10.40	4.70	4.07	2.63	3.51	5.89	4.26
1940	1.77	1.40	1.51	193.00	34.70	10.00	3.83	10.50	5.75	5.60	8.16	4.93
1941	4.73	5.42	30.80	413.00	44.20	30.70	7.09	8.52	12.60	36.20	12.70	13.00
1942	5.49	4.54	15.50	265.00	117.00	93.70	18.80	17.80	20.10	16.30	29.10	8.30
1943	5.47	4.45	36.50	307.00	117.00	235.00	66.40	33.40	19.50	18.40	17.10	5.82
1944	4.27	5.37	12.70	63.80	58.70	58.30	98.10	125.00	72.60	46.20	46.50	26.10
1945	12.30	8.83	181.00	295.00	145.00	97.00	41.70	30.50	45.40	57.60	34.40	7.17
1946	6.91	5.24	145.00	225.00	74.60	42.40	32.30	12.90	18.70	35.80	24.40	13.60
1947	12.70	13.00	24.00	687.00	192.00	368.00	65.40	30.30	19.40	19.30	18.60	11.30
1948	8.74	6.45	5.81	511.00	75.90	34.70	33.80	22.30	12.70	12.50	16.90	13.50
1949	9.08	8.95	14.50	172.00	60.40	197.00	69.20	28.90	12.90	24.00	27.50	18.00
1950	11.00	7.00	9.90	819.00	1,156.00	115.00	181.00	43.10	18.40	32.50	21.80	16.00
1951	14.00	12.00	12.50	429.00	131.00	44.60	20.30	18.40	25.60	21.10	20.70	14.00
1952	12.00	11.00	15.00	222.00	46.80	21.50	52.90	18.60	14.60	18.80	20.70	13.30
1953	7.90	10.80	68.40	99.20	65.90	80.30	49.70	28.60	16.30	12.50	13.50	10.90
1954	5.29	6.44	20.10	144.00	57.00	81.60	29.30	10.90	7.99	10.80	12.90	8.32
1955	6.81	7.36	7.42	150.00	31.50	34.40	15.60	12.40	6.49	10.40	8.64	6.13
1956	5.23	5.41	7.42	317.00	105.00	60.20	16.00	11.50	11.50	13.60	20.40	10.40
1957	8.52	7.54	48.60	120.00	41.10	118.00	130.00	23.60	52.00	31.40	43.00	17.40
1958	13.90	12.40	22.20	30.70	23.70	25.60	62.90	17.90	11.30	12.90	17.50	7.24
1959	4.81	3.84	36.90	78.60	68.20	27.50	16.50	14.30	7.89	18.70	11.80	12.20
1960	12.00	9.78	16.30	162.00	39.30	47.00	41.70	16.10	14.50	11.80	16.20	8.38

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Sand Hill River at the mouth--Continued												
1961	6.71	7.28	64.30	52.80	41.70	13.30	10.20	6.30	9.83	17.20	12.50	6.58
1962	2.02	3.55	6.21	254.00	232.00	293.00	298.00	60.10	46.80	36.00	32.40	17.40
1963	9.25	4.94	37.40	94.40	47.20	57.50	33.40	12.10	10.60	10.80	8.88	5.11
1964	6.60	9.59	11.80	226.00	88.80	48.30	68.10	17.60	34.50	24.80	19.60	11.50
1965	10.80	8.34	10.60	917.00	136.00	126.00	54.90	25.40	30.70	71.60	32.30	32.70
1966	18.10	16.20	385.00	935.00	192.00	67.70	25.20	27.70	21.90	18.90	12.30	10.50
1967	12.50	14.30	90.00	341.00	102.00	73.00	26.50	12.70	12.10	13.40	12.90	13.00
1968	10.20	7.96	101.00	67.90	37.60	269.00	48.50	15.00	12.20	21.00	19.40	12.60
1969	4.70	5.64	7.50	669.00	130.00	103.00	50.00	20.40	24.80	30.50	19.70	16.30
1970	13.00	11.10	12.70	751.00	241.00	165.00	37.50	16.80	13.30	25.00	30.40	11.30
1971	11.60	12.50	43.30	345.00	61.34	36.52	17.53	10.66	33.29	223.00	209.00	48.70
1972	25.80	19.10	319.00	717.00	169.04	49.22	29.23	33.56	17.49	22.50	32.70	12.70
1973	11.00	12.20	228.00	51.10	37.54	22.52	12.43	12.76	80.39	95.00	45.60	23.30
1974	18.70	18.00	19.00	712.00	300.04	87.52	19.63	24.76	18.69	18.50	33.90	17.00
1975	11.90	13.70	23.50	756.00	221.04	48.92	182.23	35.46	18.69	22.90	27.10	19.20
1976	15.90	15.10	83.80	317.00	41.36	33.32	19.81	10.92	7.46	9.43	10.20	8.91
1977	7.86	8.18	18.90	51.60	32.66	40.62	11.21	7.18	15.52	21.10	26.30	27.90
1978	18.30	13.20	37.20	946.00	63.46	53.52	21.91	15.52	17.32	13.60	14.80	13.30
1979	12.10	12.90	17.20	869.00	160.06	71.12	166.31	45.42	17.92	18.00	28.10	24.00
1980	19.20	21.30	42.90	280.00	33.56	11.52	9.26	10.42	11.22	15.40	15.30	9.56
1981	8.05	12.20	32.80	25.30	50.72	38.81	24.40	17.17	34.54	59.50	35.40	22.30
1982	12.10	10.30	49.90	348.00	144.18	35.77	43.36	13.39	10.59	81.80	27.50	26.90
1983	19.20	19.00	334.00	181.00	54.79	228.03	113.46	49.73	72.19	70.20	49.90	35.90
1984	26.80	46.80	202.00	337.00	55.68	596.07	45.57	17.69	12.19	35.80	24.80	7.98

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Red Lake River at the mouth							
1931	129.00	162.00	287.00	394.00	252.00	245.00	84.50	33.20	23.00	37.10	109.00	77.20
1932	57.60	61.50	240.00	1,412.00	346.00	88.20	40.50	20.80	13.90	13.30	33.70	29.60
1933	25.00	32.00	118.00	663.00	176.00	134.00	40.00	16.80	14.50	9.57	12.90	21.80
1934	17.00	20.10	143.00	546.00	168.00	87.60	48.10	13.40	9.66	11.40	25.70	22.80
1935	17.50	23.10	371.00	566.00	309.00	173.00	98.30	35.00	61.70	34.10	34.10	31.50
1936	34.60	27.20	27.10	1,488.00	512.00	99.40	28.50	14.40	11.30	8.73	11.00	5.82
1937	21.60	19.40	28.50	440.00	780.00	416.00	767.00	1,264.00	629.00	182.00	100.00	39.10
1938	64.30	87.90	675.00	319.00	3,624.00	1,134.00	379.00	119.00	155.00	169.00	145.00	167.00
1939	171.00	155.00	219.00	719.00	450.00	338.00	196.00	101.00	257.00	314.00	290.00	262.00
1940	171.00	189.00	203.00	2,195.00	1,094.00	525.00	235.00	163.00	156.00	234.00	266.00	198.00
1941	228.00	231.00	215.00	2,883.00	804.00	2,762.00	552.00	332.00	971.00	1,184.00	774.00	588.00
1942	488.00	521.00	1,700.00	3,170.00	3,081.00	889.00	313.00	371.00	1,390.00	629.00	387.00	341.00
1943	395.00	368.00	576.00	4,319.00	2,472.00	3,756.00	1,542.00	1,014.00	1,037.00	942.00	744.00	544.00
1944	451.00	489.00	538.00	1,447.00	1,338.00	2,486.00	1,616.00	2,077.00	1,669.00	1,388.00	1,687.00	1,293.00
1945	773.00	762.00	3,709.00	5,665.00	3,159.00	1,516.00	938.00	624.00	1,055.00	1,185.00	803.00	653.00
1946	620.00	590.00	3,942.00	4,211.00	1,900.00	1,103.00	832.00	381.00	506.00	819.00	643.00	575.00
1947	540.00	494.00	692.00	4,641.00	3,602.00	6,068.00	2,692.00	1,025.00	1,234.00	1,342.00	971.00	1,066.00
1948	994.00	695.00	736.00	7,135.00	3,712.00	1,166.00	1,040.00	718.00	617.00	437.00	437.00	360.00
1949	383.00	386.00	518.00	2,817.00	1,368.00	3,192.00	1,322.00	2,154.00	1,372.00	931.00	943.00	653.00
1950	724.00	713.00	865.00	6,273.00	16,650.00	5,120.00	3,923.00	1,819.00	2,039.00	2,561.00	1,936.00	1,920.00
1951	1,811.00	1,594.00	1,776.00	6,069.00	4,645.00	2,120.00	1,324.00	570.00	794.00	743.00	746.00	1,142.00
1952	1,241.00	1,318.00	1,283.00	3,524.00	2,115.00	1,859.00	2,533.00	935.00	653.00	453.00	405.00	391.00
1953	400.00	409.00	916.00	969.00	1,125.00	1,363.00	1,129.00	492.00	428.00	388.00	374.00	357.00
1954	320.00	330.00	450.00	2,026.00	1,421.00	1,317.00	734.00	473.00	391.00	378.00	443.00	424.00
1955	351.00	367.00	399.00	2,824.00	770.00	1,218.00	530.00	295.00	281.00	285.00	195.00	206.00
1956	246.00	252.00	250.00	3,711.00	2,711.00	923.00	952.00	328.00	1,407.00	392.00	666.00	387.28
1957	252.00	129.00	729.00	2,733.00	1,385.00	3,046.00	3,630.00	1,497.00	2,383.00	2,499.00	1,967.00	853.28
1958	901.00	845.00	1,090.00	1,068.00	528.00	658.00	1,668.00	396.00	113.00	106.00	129.00	81.45
1959	80.50	91.30	325.14	1,654.14	746.14	524.14	346.14	199.14	140.14	240.00	230.00	219.35
1960	201.00	193.00	208.14	2,483.14	823.14	1,027.14	458.14	76.94	92.84	126.00	189.00	81.29

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red Lake River at the mouth--Continued												
1961	70.20	74.40	441.14	720.14	621.14	101.14	97.84	57.54	201.14	236.00	156.00	78.99
1962	86.00	89.30	112.14	3,103.14	5,140.14	7,846.14	4,134.14	2,075.14	1,887.14	1,652.00	1,492.00	1,026.29
1963	1,075.10	965.10	1,380.24	3,481.24	2,264.24	2,424.24	1,361.24	715.24	875.24	1,178.10	657.10	504.45
1964	597.10	564.10	399.24	2,011.30	1,428.26	2,733.57	1,265.48	826.37	511.24	1,090.10	898.10	676.56
1965	682.10	697.10	697.24	7,978.30	4,165.26	4,215.57	1,979.48	871.37	1,246.24	2,625.10	1,496.10	1,334.56
1966	1,188.10	1,138.10	1,840.24	11,175.30	5,727.26	2,616.57	1,518.48	1,916.37	1,625.24	1,313.10	1,260.10	1,214.56
1967	1,152.10	1,180.10	1,594.24	7,446.37	5,178.28	2,748.94	1,447.74	918.52	913.24	594.10	430.10	382.56
1968	346.10	289.10	1,325.24	923.44	441.06	2,358.80	3,951.50	2,031.92	1,438.24	1,040.10	1,263.10	1,368.56
1969	1,361.10	1,355.10	1,334.24	8,546.83	3,982.58	2,228.09	1,303.70	1,033.87	1,342.24	1,951.10	1,457.10	1,167.56
1970	1,218.10	1,133.10	1,136.24	6,106.27	4,244.24	4,469.39	1,707.34	907.30	1,056.24	1,020.10	1,032.10	867.56
1971	846.10	943.10	1,075.24	3,278.91	1,564.60	1,340.49	910.98	745.03	618.24	3,093.10	3,459.10	1,156.56
1972	987.10	1,009.10	2,499.24	5,918.11	3,254.80	1,868.09	1,113.88	1,335.77	1,397.24	1,218.10	747.10	724.56
1973	663.10	666.10	1,851.24	632.51	684.95	570.21	358.40	594.63	2,391.24	2,511.10	1,441.10	1,081.56
1974	1,016.10	1,103.10	1,097.24	7,494.55	6,280.96	3,127.40	1,857.54	2,260.71	1,591.24	1,726.10	1,561.10	1,003.56
1975	1,089.30	995.30	1,024.44	6,634.75	5,131.16	2,861.60	7,555.74	2,005.91	1,909.44	2,148.30	1,754.30	1,196.56
1976	1,463.30	1,355.30	1,752.44	3,742.89	1,475.21	1,381.34	1,091.27	1,138.21	736.44	312.30	207.30	219.63
1977	200.30	204.30	309.44	497.94	415.23	375.63	513.48	267.33	498.44	692.30	737.30	804.25
1978	687.30	684.30	762.44	8,207.98	1,974.24	1,534.85	1,576.63	965.42	671.44	675.30	573.30	558.01
1979	541.30	558.30	614.44	8,394.60	4,906.23	2,990.65	2,635.14	1,775.37	1,277.44	1,246.30	1,026.30	1,316.31
1980	1,189.30	1,137.30	1,172.44	2,928.60	898.23	844.65	525.14	516.37	422.44	210.30	203.30	157.87
1981	143.81	169.81	264.96	284.11	274.01	1,100.76	1,566.52	1,009.28	1,483.96	1,931.81	1,238.81	1,060.86
1982	1,078.04	1,003.04	1,089.17	4,972.87	3,779.93	1,980.87	2,271.77	1,528.16	1,088.17	2,396.04	1,683.04	1,427.90
1983	1,189.34	1,047.34	2,810.47	2,632.52	1,661.11	3,014.47	2,270.87	2,007.47	1,612.47	1,513.34	1,373.34	1,119.07
1984	1,061.85	1,139.85	1,954.98	2,722.89	1,290.99	3,986.18	1,595.13	972.06	631.98	882.85	1,000.85	1,126.07

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Grand Forks, N.Dak.												
1931	161.00	273.00	477.00	1,092.00	612.00	492.00	277.00	136.00	59.50	111.00	199.00	133.00
1932	160.00	207.00	1,173.00	3,933.00	919.00	401.00	178.00	58.60	43.40	36.00	82.70	57.40
1933	38.60	33.60	927.00	2,254.00	768.00	428.00	116.00	41.50	31.30	31.70	79.00	52.50
1934	39.00	40.70	419.00	1,540.00	373.00	151.00	153.00	30.60	20.70	40.60	73.00	40.70
1935	27.70	31.80	898.00	1,521.00	856.00	503.00	666.00	404.00	184.00	103.00	83.30	70.60
1936	58.60	54.30	63.70	4,829.00	1,482.00	274.00	88.80	32.10	20.30	12.10	30.50	17.80
1937	18.80	2.87	42.10	1,485.00	1,636.00	922.00	767.00	1,333.00	794.00	316.00	214.00	55.90
1938	61.30	89.50	1,309.00	954.00	4,560.16	1,992.06	697.84	190.60	208.35	216.00	190.00	199.00
1939	237.00	229.00	455.00	3,126.00	912.16	687.06	388.84	118.60	225.35	324.00	336.00	282.00
1940	161.00	170.00	229.10	4,088.10	1,955.26	961.06	297.84	212.60	171.35	245.00	344.00	282.00
1941	334.00	358.00	448.10	7,013.10	2,166.26	4,704.06	986.84	756.60	1,602.35	1,725.00	1,104.00	880.00
1942	545.00	573.00	1,623.10	5,343.10	6,695.26	3,599.06	1,650.84	1,032.60	3,062.35	1,526.00	1,062.00	734.00
1943	773.00	680.00	1,068.10	18,310.10	5,760.26	10,390.06	4,972.84	2,282.60	1,616.35	1,341.00	1,172.00	921.00
1944	697.00	652.00	634.10	3,311.10	3,351.26	5,425.06	5,899.84	5,030.60	4,167.35	2,392.00	2,321.00	1,668.00
1945	1,377.00	1,373.00	9,093.10	12,190.10	5,862.26	3,161.06	1,627.84	1,017.60	1,336.35	1,696.00	1,213.00	952.00
1946	863.00	767.00	6,452.10	9,541.10	3,466.26	2,046.06	2,239.84	1,227.60	1,188.35	1,741.00	1,438.00	1,112.00
1947	1,075.00	839.00	1,377.10	19,620.10	7,486.26	10,320.06	4,287.84	1,413.60	1,393.35	1,599.00	1,330.00	1,255.00
1948	1,106.00	913.00	1,041.10	19,800.10	7,817.26	2,502.06	1,694.84	1,157.60	892.35	600.00	594.00	463.00
1949	417.00	444.00	679.10	6,780.10	2,657.26	4,843.06	3,306.84	3,086.77	1,612.79	1,088.70	1,173.93	1,032.71
1950	778.80	731.10	1,111.90	25,300.10	36,207.26	10,339.26	7,631.14	3,005.10	2,246.65	2,741.90	1,992.50	2,035.40
1951	1,921.70	816.40	2,390.00	14,577.10	8,077.96	4,091.76	2,248.24	1,108.40	1,433.05	1,291.60	1,278.40	1,851.30
1952	1,730.00	840.30	2,046.80	17,205.57	5,372.37	3,491.40	5,731.90	1,817.60	1,257.87	860.30	761.60	666.50
1953	558.10	614.80	1,936.64	3,221.33	3,168.38	9,067.06	4,538.61	2,036.24	1,208.88	848.70	919.40	818.00
1954	760.60	890.90	1,676.80	4,842.90	3,536.64	3,411.09	2,101.36	912.12	675.70	643.20	626.50	601.00
1955	647.00	645.20	759.49	5,849.80	1,728.24	2,204.29	1,991.96	1,572.82	780.49	758.88	523.42	370.06
1956	433.32	467.00	506.36	9,336.15	5,014.39	2,787.34	1,414.17	717.41	1,452.88	501.81	794.86	478.54
1957	376.36	387.26	1,609.31	4,533.65	3,136.59	4,244.44	5,789.87	2,468.41	4,243.97	3,261.06	2,784.06	1,463.44
1958	1,257.86	226.46	1,917.01	2,714.25	1,408.99	1,338.26	3,689.07	830.71	434.07	381.36	438.16	289.21
1959	340.36	342.53	973.69	3,124.14	1,660.07	2,462.38	1,862.43	644.52	472.64	503.43	448.40	416.73
1960	483.80	465.47	722.43	8,932.53	3,159.07	2,590.42	1,806.85	476.89	563.96	338.57	449.20	278.81

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Grand Forks, N.Dak.--Continued												
1961	256.02	292.80	1,837.33	1,812.53	2,180.97	892.82	406.05	217.13	348.66	571.27	375.64	213.91
1962	190.12	208.77	357.53	10,872.94	9,768.39	19,342.83	13,963.04	5,891.06	3,259.80	2,327.88	2,096.84	1,545.51
1963	1,269.12	1,066.87	2,003.73	5,854.93	3,424.69	6,285.53	2,479.83	1,123.68	1,202.91	1,389.49	919.85	778.75
1964	749.93	731.22	717.46	6,496.47	4,122.47	4,662.79	2,327.21	1,041.69	726.76	1,564.78	1,248.80	847.39
1965	914.33	876.35	863.29	24,775.77	8,099.67	8,310.79	4,297.71	1,987.29	1,902.36	3,885.38	2,289.80	2,090.99
1966	1,804.23	1,765.52	10,667.26	25,253.17	10,891.67	5,265.39	3,036.24	3,429.40	2,287.81	1,922.98	1,794.60	1,744.39
1967	1,655.13	1,522.95	2,893.16	17,203.84	9,177.59	6,077.96	3,182.20	1,180.15	858.61	776.78	707.40	700.29
1968	565.43	507.15	2,140.36	2,585.01	1,875.92	4,595.24	4,251.84	2,173.65	1,562.62	1,461.08	1,643.60	1,576.39
1969	1,461.75	1,346.45	1,966.46	29,345.61	12,110.67	4,578.14	3,241.36	1,552.91	1,456.22	1,969.58	1,827.00	1,466.59
1970	1,376.83	1,461.42	1,555.06	14,486.05	8,293.63	9,796.44	2,976.50	1,146.74	1,172.22	1,151.08	1,428.00	1,116.19
1971	1,073.83	99.85	2,314.56	7,498.69	3,093.73	2,250.26	2,163.28	1,080.53	1,248.01	4,328.78	5,176.60	2,962.39
1972	1,735.53	450.52	9,045.36	15,622.29	7,639.23	5,322.26	2,390.88	2,342.17	1,904.91	1,811.28	1,380.90	1,154.29
1973	1,089.63	125.92	5,630.76	2,050.19	1,405.28	1,180.58	656.07	787.73	3,071.31	3,788.58	2,411.50	1,923.19
1974	1,667.75	543.45	1,847.56	17,320.33	13,155.50	6,098.17	2,978.80	2,753.36	1,799.93	1,963.98	1,963.90	1,205.29
1975	1,272.79	425.52	1,772.34	19,127.34	14,579.97	6,326.92	25,388.24	3,029.96	2,241.75	2,340.79	2,294.85	1,721.75
1976	1,676.47	682.70	3,926.12	9,388.42	2,566.84	1,723.13	1,213.45	1,033.16	707.10	424.53	322.81	220.90
1977	240.78	246.27	572.28	1,423.42	880.93	697.16	695.52	307.39	604.82	1,241.38	1,089.35	1,354.73
1978	1,250.67	33.06	2,660.54	30,466.32	5,012.03	3,299.02	3,168.73	1,472.37	987.40	832.67	793.78	759.68
1979	679.88	653.67	853.67	32,072.82	18,273.70	6,114.96	5,910.99	3,400.12	1,950.38	1,612.08	1,696.44	1,542.97
1980	1,350.29	415.83	1,884.32	8,965.94	1,937.60	1,628.73	777.45	554.47	659.36	364.69	435.54	364.92
1981	304.32	423.13	1,191.64	1,030.46	1,397.40	1,417.08	2,522.02	1,546.57	1,811.70	2,360.04	1,729.76	1,149.26
1982	1,148.08	1,076.30	2,410.73	17,694.79	6,043.24	3,495.10	3,317.43	1,989.79	1,288.45	3,705.60	2,219.47	1,857.37
1983	1,547.23	1,464.77	7,988.15	7,115.80	3,036.56	5,203.75	6,188.50	2,750.46	2,532.24	2,108.53	1,923.97	1,826.46
1984	1,621.76	1,781.71	5,872.74	15,648.05	3,886.73	11,744.46	3,206.37	1,558.61	939.11	2,165.35	2,011.14	1,420.08

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
				Estimated unregulated streamflow, in cubic feet per second, for the Turtle River at the mouth								
1931	0.89	0.88	6.73	34.60	6.12	7.73	3.25	2.58	0.47	1.48	2.07	0.33
1932	.30	20.40	224.00	1.48	29.90	16.70	2.78	1.04	.55	2.19	8.60	.34
1933	0	0	58.30	108.00	20.10	9.88	2.49	2.01	4.20	7.04	6.33	1.31
1934	.59	.48	28.80	41.20	3.99	5.69	3.21	2.72	3.31	2.65	2.07	.33
1935	.30	.43	64.40	40.00	23.30	64.60	13.00	2.17	.56	1.48	2.90	.33
1936	.30	.30	1.30	175.00	17.80	5.72	2.01	1.61	.16	.70	1.47	.17
1937	.16	.30	.69	21.80	10.90	13.80	4.87	4.79	2.46	.70	1.47	.17
1938	.16	.16	34.20	10.70	8.39	3.45	.16	.01	0	0	0	0
1939	0	0	88.50	45.60	2.49	13.20	.75	0	0	0	0	0
1940	0	0	0	149.00	12.60	3.94	.99	5.49	.02	0	0	0
1941	0	0	24.60	401.00	17.70	51.00	9.29	2.50	3.05	11.70	10.20	3.15
1942	.11	.14	10.00	225.00	69.40	31.70	8.54	4.65	3.25	3.20	4.12	1.10
1943	.63	.46	181.00	121.00	34.70	67.50	18.70	3.41	.64	1.23	2.94	.48
1944	.25	.18	2.48	72.40	20.20	24.10	8.25	19.50	13.40	6.99	16.20	7.04
1945	.89	.87	88.10	48.60	21.70	20.70	8.49	2.55	1.40	2.36	2.07	.42
1946	.11	.11	160.00	40.40	8.99	5.80	54.80	.33	6.53	13.00	5.00	2.17
1947	.22	.11	83.70	220.00	23.50	67.10	9.47	9.81	1.74	7.31	8.05	2.86
1948	.14	.11	.11	1,329.00	78.10	101.00	24.10	11.40	2.50	1.48	5.28	.54
1949	.15	.11	.11	440.00	32.80	38.80	9.59	3.48	.47	7.61	7.69	7.85
1950	.11	0	0	2,269.00	1,663.00	55.90	48.30	10.20	22.40	19.10	15.70	5.16
1951	5.82	2.28	47.10	241.00	27.50	16.10	4.51	13.70	47.40	8.53	9.37	6.30
1952	.85	.11	2.04	191.00	16.90	7.99	46.80	4.23	.80	.94	10.50	4.26
1953	1.31	.91	20.70	31.10	30.00	102.00	48.50	4.65	1.19	2.98	3.55	2.68
1954	.32	1.39	30.40	51.70	18.80	23.30	12.90	2.35	1.78	3.62	7.48	3.12
1955	1.23	.77	.06	257.00	21.60	126.00	12.00	4.15	.79	4.15	4.26	.75
1956	.40	.54	.77	369.00	71.50	48.90	7.99	2.47	5.14	1.10	9.59	4.13
1957	3.30	.73	51.60	46.40	18.50	15.90	1.87	8.06	246.00	42.70	28.40	8.44
1958	2.58	4.81	13.90	26.50	16.20	15.90	22.40	1.24	.35	1.66	5.84	1.46
1959	.02	0	43.90	67.90	18.80	12.80	8.93	3.30	.21	11.00	6.64	3.77
1960	2.78	2.09	42.60	490.00	27.90	20.20	8.11	2.31	1.39	.72	4.57	.70

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Turtle River at the mouth--Continued												
1961	0.90	0.63	41.10	29.60	16.70	3.92	1.31	0.75	1.34	6.76	3.64	1.47
1962	0	0	0	410.00	152.00	194.00	23.50	3.96	5.34	5.11	12.10	4.01
1963	.55	0	24.60	52.50	15.90	14.30	11.50	3.70	.74	1.27	.73	.11
1964	0	0	.08	169.00	23.00	307.00	23.80	8.69	16.10	14.20	8.39	3.86
1965	1.36	1.69	2.39	637.00	98.10	83.10	22.20	7.41	37.30	56.10	19.10	11.70
1966	5.53	1.90	547.00	451.00	169.00	39.60	52.00	25.20	9.21	10.20	9.42	6.45
1967	4.60	5.53	110.00	611.00	218.00	36.70	7.55	2.57	.95	5.09	6.96	4.24
1968	2.23	1.98	115.00	57.30	23.10	61.80	66.10	15.10	15.40	10.10	14.30	9.31
1969	2.03	.21	.09	722.00	36.10	43.30	18.30	4.88	12.50	16.00	12.70	8.86
1970	4.84	.96	2.18	710.00	180.00	64.90	17.10	14.70	12.30	8.11	16.10	9.24
1971	4.18	5.66	71.90	384.00	58.80	55.60	36.00	6.76	4.72	35.20	29.60	18.50
1972	8.17	5.63	335.00	554.00	159.00	70.40	12.60	6.85	3.24	3.60	11.50	5.13
1973	4.29	6.72	226.00	58.40	22.00	16.30	6.22	3.07	5.08	16.30	13.00	6.08
1974	1.69	3.63	2.95	731.00	184.00	111.00	26.50	8.04	6.81	4.74	10.80	9.15
1975	7.67	6.92	26.60	646.00	163.00	66.40	34.70	4.07	2.71	3.39	9.66	4.67
1976	4.50	5.76	196.00	205.00	26.10	10.40	3.05	5.08	2.04	1.43	4.35	.38
1977	.43	.43	2.75	24.40	13.30	8.76	6.80	.70	2.41	9.16	15.70	8.21
1978	4.71	2.52	247.00	671.00	67.60	34.10	11.60	2.57	6.17	3.48	4.58	2.26
1979	2.11	2.51	3.72	1,662.00	249.00	56.90	29.20	11.10	3.80	9.26	11.50	10.30
1980	5.72	5.41	51.90	194.00	13.40	5.55	1.69	2.75	2.74	2.86	7.00	3.23
1981	2.64	5.55	10.70	10.80	10.90	18.30	9.87	7.65	3.30	10.10	12.40	13.10
1982	5.94	4.84	73.30	586.00	57.90	22.30	17.20	2.88	.58	58.30	19.90	24.70
1983	9.74	8.78	333.00	206.00	52.80	86.50	36.20	16.40	42.30	32.20	22.20	17.70
1984	9.21	7.83	322.00	326.00	70.60	79.30	6.76	4.88	.54	11.50	9.47	1.01

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Forest River at the mouth							
1931	2.51	2.13	12.20	46.00	25.30	12.30	9.54	3.61	1.54	3.60	3.85	1.06
1932	.13	27.40	248.00	171.00	55.00	21.20	9.51	.73	.29	7.66	5.40	2.07
1933	0	0	93.20	289.00	45.10	20.10	6.93	3.70	8.13	11.00	10.60	4.86
1934	1.85	.78	34.40	74.00	19.90	9.42	1.63	5.53	7.02	5.34	3.85	1.06
1935	.21	.79	79.00	75.70	27.10	16.40	13.40	5.52	1.78	.38	0	0
1936	0	0	0	201.00	33.60	15.70	2.63	0	0	0	0	0
1937	0	0	0	26.70	19.20	12.10	.95	.21	0	0	0	0
1938	0	0	45.30	20.70	17.00	4.52	2.63	0	0	0	0	0
1939	0	0	38.70	71.40	13.00	3.02	24.60	0	0	0	0	0
1940	0	0	0	78.30	21.00	5.84	0	24.80	.41	0	0	0
1941	0	0	0	656.00	40.80	41.50	14.10	6.65	17.10	60.50	21.00	11.00
1942	.60	0	239.00	667.00	73.10	27.20	13.80	28.60	8.81	5.46	6.58	3.58
1943	2.39	2.08	269.00	185.00	44.30	361.00	342.00	38.10	18.00	5.15	9.56	8.60
1944	1.29	.06	.47	132.00	35.40	30.50	10.90	2.58	10.60	3.58	21.60	16.40
1945	3.74	2.41	132.00	69.40	29.50	22.30	8.21	4.26	1.45	3.11	4.05	1.54
1946	.73	.29	228.00	61.90	15.60	13.10	7.87	0	4.37	7.44	8.56	4.02
1947	.73	.03	132.00	142.00	25.30	22.80	28.80	7.88	5.36	5.74	8.95	7.68
1948	5.06	1.12	.26	1,745.00	156.00	59.40	27.40	14.00	6.96	5.94	10.30	5.40
1949	1.67	.73	.87	708.00	55.00	25.50	16.40	4.84	.95	8.23	10.20	7.34
1950	1.03	1.03	1.17	2,309.00	2,224.00	79.40	41.50	11.80	13.10	12.30	13.60	6.72
1951	5.36	6.61	45.80	292.00	40.20	22.80	9.51	13.70	12.40	9.36	9.85	6.02
1952	1.61	1.01	5.24	141.00	24.10	11.10	42.70	7.85	4.42	3.24	6.15	2.89
1953	.84	.12	4.37	32.20	24.20	75.40	14.80	3.14	.40	2.64	6.71	3.55
1954	.41	.34	36.30	58.40	26.90	64.30	14.70	16.30	9.44	10.30	9.64	5.87
1955	1.92	.75	.04	427.00	32.40	136.00	16.40	4.18	2.48	7.57	7.79	2.88
1956	.78	.70	.85	750.00	129.00	307.00	39.20	16.20	20.60	14.60	23.20	9.45
1957	6.65	2.34	69.19	37.99	29.99	21.99	9.56	11.49	83.19	18.89	20.89	10.09
1958	3.94	1.32	8.90	36.69	23.99	60.09	18.89	5.67	3.13	11.39	9.68	1.13
1959	.49	.24	15.89	157.09	27.09	16.29	8.47	3.25	.74	8.27	6.80	5.54
1960	2.83	1.54	30.29	890.09	45.19	22.39	6.89	2.88	1.47	2.47	6.12	1.18

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Forest River at the mouth--Continued												
1961	1.03	0.09	34.39	35.89	17.09	7.69	8.37	0.84	0.09	3.73	5.01	1.65
1962	.37	.09	.09	584.09	92.89	392.09	29.79	17.39	12.09	19.49	23.29	7.24
1963	1.48	.09	61.99	50.69	27.79	33.39	38.99	5.57	1.26	4.71	7.94	1.75
1964	.31	.22	.47	204.09	41.19	392.09	74.19	17.89	15.39	18.59	14.89	7.41
1965	5.65	4.16	4.26	706.09	92.59	106.09	34.39	16.99	23.59	37.99	23.29	17.09
1966	7.37	3.23	643.09	523.09	336.09	84.19	53.69	25.89	14.59	16.09	15.89	12.09
1967	5.29	3.73	182.09	527.09	310.09	57.89	25.59	13.19	8.47	7.08	15.19	8.27
1968	3.06	2.37	97.69	67.59	31.39	27.49	24.49	17.39	15.49	13.19	16.09	8.32
1969	1.29	.69	.77	766.09	78.29	29.79	18.09	6.99	7.63	9.63	11.69	8.88
1970	7.99	3.41	1.25	703.09	204.09	61.59	58.49	16.79	9.68	13.49	15.89	6.55
1971	1.41	1.48	10.99	752.09	87.39	44.69	98.59	30.89	17.09	18.09	21.49	8.37
1972	1.26	.47	396.09	523.09	106.09	45.89	14.79	6.71	6.58	11.99	11.59	3.08
1973	.68	.87	87.39	58.69	27.79	41.79	9.12	2.25	6.64	17.29	6.55	4.63
1974	3.83	.96	1.43	970.09	713.09	258.09	40.49	28.89	11.29	19.59	21.79	12.49
1975	8.69	5.49	8.09	418.09	238.09	42.49	159.09	13.69	9.69	16.39	14.09	5.59
1976	5.37	6.17	159.09	570.09	50.89	25.79	12.59	4.35	2.34	2.14	3.30	.81
1977	.09	.09	16.29	48.39	26.09	16.29	10.06	4.70	6.20	13.39	7.58	1.98
1978	1.50	.34	109.09	727.09	82.89	89.89	38.89	12.09	12.79	8.13	4.60	3.20
1979	3.03	2.07	1.56	1,745.09	533.09	93.49	93.19	17.89	25.39	12.09	12.19	6.48
1980	1.62	2.04	12.09	103.09	18.59	10.89	2.83	2.03	4.46	7.93	15.39	12.09
1981	6.11	25.49	48.99	56.99	22.39	31.69	18.09	7.18	22.59	30.19	17.29	12.39
1982	2.34	.52	49.38	483.08	92.58	88.18	346.08	142.08	20.48	86.88	34.68	19.78
1983	14.29	18.39	348.09	289.09	77.19	47.99	27.49	11.69	25.19	13.49	22.09	5.27
1984	1.23	6.67	78.29	131.09	39.29	38.29	14.69	4.68	5.62	5.89	5.37	2.39

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Snake River at the mouth							
1931	1.11	1.00	57.40	85.00	45.10	8.14	1.29	1.40	0.25	0.22	0.14	0.07
1932	.04	37.10	31.80	524.00	75.40	29.80	.97	.22	.32	.47	3.37	.32
1933	0	0	66.50	267.00	77.40	12.30	2.19	.93	6.85	12.90	5.41	1.65
1934	.65	.25	31.80	101.00	8.78	4.84	1.25	1.54	3.37	.65	.14	.07
1935	.04	.22	100.00	98.50	23.00	295.00	20.00	.97	.32	.22	.32	.07
1936	.04	.14	1.40	433.00	43.40	4.91	.50	.07	.07	.07	.07	.04
1937	0	.14	.79	53.60	73.50	21.70	2.87	4.84	2.26	.07	.07	.04
1938	0	.07	82.90	26.20	22.30	2.08	0	0	0	0	0	0
1939	0	0	21.30	112.00	8.35	20.00	.07	0	0	0	0	0
1940	0	0	0	367.00	16.30	2.62	.65	6.38	0	0	0	0
1941	0	0	18.40	995.00	62.10	197.00	10.30	1.29	3.01	8.71	9.43	2.47
1942	.04	.11	152.00	556.00	194.00	88.70	8.68	4.55	3.30	.90	.93	.54
1943	.14	.25	268.00	664.00	319.00	1,367.00	76.40	16.70	5.09	4.48	3.80	.14
1944	.04	.07	1.83	86.60	83.80	79.40	181.00	309.00	93.10	34.30	34.80	8.17
1945	.25	.57	185.00	739.00	165.00	51.30	48.60	28.50	38.50	55.80	17.80	.32
1946	.14	.47	137.00	444.00	133.00	41.50	15.60	2.04	4.66	19.50	8.35	.47
1947	3.37	2.08	12.10	1,885.00	834.00	3,414.00	73.90	13.50	5.05	4.98	4.59	1.33
1948	1.25	.43	1.79	1,285.00	138.00	27.50	17.20	6.85	1.97	1.90	3.73	1.51
1949	1.40	.90	6.13	313.00	88.60	954.00	83.70	12.20	2.04	8.07	10.90	6.92
1950	2.40	.54	3.66	2,368.00	27,090.00	318.00	701.00	29.40	4.48	39.40	27.90	18.30
1951	11.50	9.86	14.90	1,208.00	258.00	25.70	5.48	10.90	98.60	42.70	17.70	12.90
1952	3.69	6.92	12.30	635.00	70.30	12.50	21.60	1.40	0	.14	1.79	.18
1953	0	0	56.30	119.00	78.90	60.60	12.40	.90	0	0	0	0
1954	0	0	0	108.00	77.00	91.10	11.10	.31	0	.08	.23	.15
1955	.11	0	0	198.00	47.60	280.00	17.30	.68	0	.73	.02	.22
1956	.18	0	0	276.00	325.00	67.40	549.00	23.20	14.80	2.96	55.30	9.10
1957	6.95	5.59	143.00	246.00	151.00	232.00	314.00	13.50	584.00	146.00	84.30	26.60
1958	8.96	6.09	13.50	43.70	19.10	17.40	670.00	18.90	.54	.97	1.97	2.33
1959	.72	0	5.77	749.00	107.00	56.30	35.70	15.60	8.71	44.80	37.60	15.50
1960	7.53	3.98	6.02	1,101.00	179.00	176.00	37.30	3.19	.79	1.15	1.51	2.04

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Snake River at the mouth--Continued							
1961	1.18	0.68	82.50	97.90	38.70	2.76	0.00	0.00	5.27	29.50	10.50	3.30
1962	1.36	.47	0	878.00	1,072.00	1,728.00	157.00	26.30	27.30	9.43	15.00	12.50
1963	1.47	0	67.00	678.00	149.00	110.00	24.70	16.70	.50	.04	.65	.11
1964	0	0	0	265.00	160.00	1,097.00	145.00	101.00	30.20	96.80	46.30	14.10
1965	9.18	4.19	4.91	2,068.00	570.00	366.00	331.00	18.00	28.50	231.00	77.40	30.60
1966	14.50	6.88	333.00	2,678.00	832.00	117.00	384.00	86.80	17.00	18.10	6.92	3.26
1967	2.33	1.90	55.90	1,696.00	846.00	75.30	17.60	.57	0	1.94	5.84	2.15
1968	0	.47	93.20	68.80	14.50	835.00	735.00	101.00	100.00	83.50	46.60	19.40
1969	3.23	5.92	10.70	1,982.00	227.00	169.00	41.20	4.23	.79	.61	1.51	1.72
1970	1.29	.14	0	1,086.00	1,183.00	2,366.00	91.10	9.86	3.12	7.42	16.20	8.14
1971	5.56	5.16	22.10	581.00	99.70	43.40	12.20	.93	.32	2.51	27.50	10.10
1972	1.29	.22	73.90	760.00	129.00	62.40	7.96	.07	.07	.04	.61	0
1973	0	0	125.00	23.00	11.80	1.33	0	.07	.29	6.85	8.71	.18
1974	.36	.22	0	1,527.00	688.00	161.00	10.80	1.76	1.25	1.25	2.19	2.33
1975	2.87	1.36	4.45	807.00	452.00	165.00	2,466.00	39.40	5.52	4.19	15.50	6.09
1976	6.06	6.45	75.60	678.00	58.40	11.80	4.66	.25	0	0	0	0
1977	0	0	2.65	36.90	15.70	11.70	.79	1.15	.25	.29	16.00	14.50
1978	4.45	2.98	48.00	1,717.00	419.00	175.00	220.00	25.50	3.84	1.43	5.63	4.45
1979	3.12	2.19	5.09	2,190.00	455.00	171.00	44.10	5.77	2.40	1.08	5.84	4.77
1980	4.55	3.73	7.17	405.00	24.10	2.83	.07	.50	2.12	1.08	.25	.18
1981	.04	1.83	19.80	19.30	7.60	30.10	76.40	.14	2.76	0	0	0
1982	0	0	33.60	1,018.00	366.00	58.10	187.00	41.90	1.76	337.00	86.00	56.60
1983	16.70	11.90	778.00	559.00	203.00	220.00	70.60	3.58	1.61	15.00	24.70	14.30
1984	5.88	3.76	207.00	405.00	80.30	325.00	11.10	.54	.04	.93	1.72	1.22

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
				Estimated unregulated streamflow, in cubic feet per second, for the Park River at the mouth								
1931	0.03	0.87	43.10	223.00	18.20	4.42	1.42	0.28	0.15	0.15	0.58	0.15
1932	0	2.91	21.80	269.00	31.50	8.11	.39	0	0	1.45	1.16	0
1933	0	0	58.10	597.00	32.40	17.70	.73	.29	0	0	0	0
1934	0	.07	21.80	113.00	3.14	.60	.02	0	.12	0	0	0
1935	0	0	100.00	95.80	8.82	5.68	2.91	.73	0	0	0	0
1936	0	0	0	330.00	17.40	18.90	.05	0	0	0	0	0
1937	0	0	0	131.00	30.70	5.36	6.90	1.70	0	0	0	0
1938	0	0	78.00	7.85	8.55	.51	6.84	0	0	0	0	0
1939	0	0	12.70	34.40	2.98	4.11	.17	0	0	0	0	0
1940	0	0	0	55.20	6.10	.55	.20	.39	0	0	0	0
1941	0	0	.55	839.00	25.60	17.40	2.15	.33	46.20	47.50	12.20	4.53
1942	0	0	174.00	1,269.00	86.60	23.80	5.06	4.91	4.78	.39	1.06	.07
1943	.14	.16	372.00	247.00	43.70	294.00	219.00	18.50	.36	.02	1.09	1.03
1944	.01	0	.48	161.00	10.30	12.10	3.52	16.60	11.30	1.22	21.20	10.20
1945	.38	.33	596.00	195.00	82.40	45.80	10.70	1.24	.89	.23	.31	.20
1946	.15	.19	344.00	99.50	13.90	7.16	1.85	.19	.54	.55	.28	.06
1947	0	0	6.89	247.00	14.20	30.20	90.10	18.50	5.44	1.86	3.65	3.50
1948	.70	.17	.67	2,629.00	317.00	54.90	65.70	44.30	3.39	.70	1.50	.55
1949	.33	.29	.45	1,118.00	74.70	16.70	3.31	1.67	.09	.57	.28	.15
1950	.15	.15	.25	2,981.00	3,010.00	94.50	30.80	18.80	1.83	3.17	2.34	3.07
1951	1.60	.83	17.60	481.00	49.10	9.34	1.03	4.33	60.00	49.60	1.93	.83
1952	.14	0	.29	68.20	12.00	.57	.33	0	32.10	0	.04	1.18
1953	.31	0	3.23	11.80	7.64	14.70	1.67	.07	.29	.09	1.00	.25
1954	.02	2.17	8.57	23.40	19.80	190.00	27.60	8.78	7.08	7.08	5.70	1.70
1955	.29	.29	1.16	647.00	67.40	112.00	15.30	1.89	17.20	.64	0	0
1956	.86	.86	18.16	1,474.86	650.86	238.86	29.36	5.77	11.76	11.36	12.66	5.35
1957	3.16	8.78	84.46	70.66	33.96	15.96	3.59	7.63	219.86	10.86	11.26	7.15
1958	3.32	2.84	6.14	27.06	6.61	4.75	5.00	.97	.86	2.69	.86	1.14
1959	1.44	.86	1.82	353.86	40.06	9.36	5.63	.91	.87	.86	.96	.95
1960	.93	.88	2.37	1,369.86	50.56	17.26	2.39	.90	1.47	1.63	.86	.86

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Park River at the mouth--Continued												
1961	0.86	0.86	5.47	19.16	4.25	0.86	0.94	0.94	0.92	0.89	2.11	1.28
1962	.98	5.12	15.66	1,042.86	150.86	339.86	27.86	16.86	1.03	1.22	1.56	.98
1963	.86	1.21	44.86	38.16	13.56	153.86	25.86	13.66	.86	1.47	.89	.86
1964	.97	1.94	1.92	323.86	85.56	837.86	94.16	4.68	2.55	10.58	3.75	1.44
1965	1.02	3.01	9.33	1,298.86	237.86	124.86	32.86	15.26	55.76	67.86	23.66	14.96
1966	3.90	1.14	433.86	927.86	641.86	123.86	198.86	49.26	3.81	2.20	2.63	3.59
1967	2.50	2.79	161.86	926.86	746.86	34.76	3.74	.98	.86	.91	1.05	.93
1968	.89	3.30	121.86	68.26	74.86	34.56	14.56	1.24	1.02	1.09	.97	1.03
1969	.98	4.17	12.56	1,248.86	45.36	21.96	11.16	1.47	4.13	1.50	.99	4.45
1970	1.25	1.05	1.73	921.86	302.86	57.06	22.66	1.28	.87	.88	5.51	2.01
1971	.87	1.78	25.56	1,273.86	84.26	110.86	109.86	8.07	.91	8.62	10.55	1.48
1972	.86	6.47	466.86	606.86	83.96	14.76	1.18	.89	3.64	.92	.97	5.58
1973	1.91	1.31	91.96	41.86	18.86	14.56	1.41	2.20	1.69	8.81	8.87	11.66
1974	3.19	3.50	13.16	1,567.86	1,000.86	147.86	8.97	7.46	1.96	1.17	6.70	13.46
1975	8.26	5.64	6.14	358.86	212.86	23.26	116.86	1.59	1.25	2.02	11.56	10.96
1976	8.78	7.88	50.37	789.27	40.07	120.27	6.63	1.85	1.82	1.60	3.74	4.35
1977	3.97	3.70	9.60	13.59	7.85	3.03	.98	.92	.87	1.10	4.29	4.41
1978	4.56	3.18	29.87	1,258.07	145.07	33.67	7.77	1.58	4.01	1.33	8.67	7.06
1979	2.48	2.26	4.58	2,108.14	415.14	69.44	79.94	10.15	7.62	1.59	9.23	7.36
1980	4.71	3.08	4.49	135.16	19.06	36.76	2.13	4.08	58.76	59.76	46.66	21.66
1981	8.28	66.80	164.40	157.40	41.50	74.10	86.30	14.20	15.90	13.10	11.30	9.54
1982	8.30	5.38	42.57	724.47	161.47	142.47	369.47	56.57	2.61	102.47	32.57	25.77
1983	20.57	15.47	581.37	465.37	85.07	108.37	30.07	1.31	.56	2.24	7.56	1.78
1984	1.08	2.89	53.70	113.40	31.10	25.20	3.67	2.25	.49	4.41	11.60	2.77

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Drayton, N.Dak.												
1931	163.00	270.00	1,043.00	1,153.00	628.00	499.00	327.00	156.00	61.00	120.00	222.00	136.00
1932	162.00	204.00	1,483.00	4,426.00	962.00	403.00	211.00	67.50	44.30	39.50	94.00	58.50
1933	39.00	33.00	936.00	2,467.00	797.00	920.00	110.00	47.90	31.80	34.80	89.90	53.50
1934	39.40	40.00	422.00	1,654.00	373.00	144.00	182.00	35.40	20.90	44.50	83.20	41.40
1935	28.00	31.20	851.00	1,633.00	893.00	511.00	779.00	458.00	192.00	112.00	94.70	72.00
1936	59.20	53.40	58.40	5,768.00	1,826.00	399.00	118.00	50.10	27.40	13.80	35.50	18.10
1937	19.00	2.80	37.80	1,729.00	1,952.00	968.00	896.00	1,495.00	843.00	339.00	238.00	57.00
1938	61.90	88.10	1,580.00	1,001.00	5,169.16	2,280.06	815.84	217.60	217.35	233.00	212.00	204.00
1939	239.00	226.00	460.00	3,478.00	954.16	709.06	456.84	135.60	235.35	347.00	370.00	289.00
1940	163.00	168.00	224.10	4,609.10	2,125.26	943.06	350.84	242.60	178.35	263.00	378.00	289.00
1941	337.00	354.00	453.10	8,122.10	2,366.26	4,607.06	1,148.84	852.60	1,717.35	1,819.00	1,181.00	905.00
1942	550.00	567.00	1,532.10	11,400.10	7,003.26	3,665.06	1,912.84	1,160.60	3,311.35	1,611.00	1,137.00	755.00
1943	780.00	674.00	1,312.10	20,640.10	6,606.26	10,690.06	5,699.84	2,547.60	1,733.35	1,417.00	1,252.00	948.00
1944	703.00	646.00	834.10	3,694.10	3,741.26	6,030.06	6,750.84	5,577.60	4,525.35	2,514.00	2,440.00	1,720.00
1945	1,388.00	1,363.00	10,690.10	15,870.10	6,780.26	3,504.06	1,886.84	1,143.60	1,429.35	1,788.00	1,295.00	980.00
1946	870.00	760.00	7,442.10	12,430.10	3,687.26	2,132.06	2,587.84	1,377.60	1,268.35	1,835.00	1,529.00	1,145.00
1947	1,084.00	832.00	1,301.10	23,970.10	10,360.26	11,140.06	5,267.84	1,762.60	1,490.35	1,687.00	1,417.00	1,293.00
1948	1,115.00	905.00	986.10	24,210.10	12,700.26	3,096.06	2,067.84	1,299.60	949.35	639.00	645.00	475.00
1949	421.00	439.00	700.10	11,440.10	2,977.26	5,460.06	3,425.84	3,286.77	1,737.79	1,141.70	1,284.93	1,063.71
1950	795.80	730.10	1,033.90	32,320.10	58,587.26	14,619.26	8,333.14	3,301.10	2,320.65	2,973.90	1,992.50	2,011.40
1951	1,966.70	1,825.40	2,402.00	17,367.10	8,906.96	4,470.76	2,440.24	1,240.40	1,717.05	1,337.60	1,293.40	1,743.30
1952	1,622.00	1,847.30	2,067.80	17,165.57	6,588.37	3,557.40	5,785.90	2,100.60	1,318.87	894.30	809.60	689.50
1953	583.10	626.80	1,699.64	3,712.33	3,165.38	8,961.06	5,248.61	2,229.24	1,308.88	847.70	911.40	865.00
1954	757.60	882.90	1,657.80	5,505.90	3,882.64	3,817.09	2,248.36	1,025.12	673.70	661.20	660.50	603.00
1955	645.00	632.20	736.49	7,524.80	2,104.24	2,983.29	2,109.96	1,680.82	864.49	855.88	604.42	425.06
1956	424.46	449.14	491.50	11,340.29	8,194.53	3,996.48	2,511.31	927.55	1,619.02	606.95	1,089.00	526.68
1957	402.59	386.49	1,378.54	4,974.88	3,781.82	3,827.67	6,894.10	2,612.64	5,371.20	3,642.29	3,300.29	1,585.67
1958	1,288.16	1,240.76	1,884.31	3,095.55	1,580.29	1,533.56	4,033.37	985.01	471.37	400.66	473.46	327.51
1959	333.66	351.83	827.99	5,135.44	1,825.37	2,618.68	2,145.73	776.82	545.63	556.73	553.70	449.03
1960	558.78	548.77	712.73	13,659.83	3,823.37	2,799.72	2,184.15	561.19	688.26	341.87	468.50	319.11

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Drayton, N.Dak.--Continued												
1961	297.32	304.10	1,828.63	2,210.83	2,416.27	1,060.12	478.35	261.43	382.96	659.57	416.94	236.21
1962	192.42	196.07	324.83	14,324.24	9,937.86	23,424.19	14,965.25	6,993.01	3,420.47	2,374.18	2,099.14	1,565.81
1963	1,308.42	1,084.17	1,786.03	6,519.23	3,594.18	6,552.90	2,873.16	1,183.72	1,210.79	1,443.95	1,020.31	770.21
1964	762.34	760.63	708.87	7,769.88	4,785.07	7,597.27	3,238.65	1,351.84	724.75	1,807.35	1,305.37	823.96
1965	854.74	840.76	921.70	25,607.18	13,021.27	9,229.27	5,019.15	2,076.44	1,944.35	4,118.95	2,455.37	2,201.56
1966	1,978.64	1,779.93	8,081.67	38,284.58	14,423.27	5,933.87	3,663.68	3,448.55	2,416.80	1,869.55	1,731.17	1,536.96
1967	1,663.54	1,472.36	2,399.57	22,995.25	14,429.19	6,085.44	3,309.64	1,319.30	878.60	849.35	733.97	646.86
1968	499.84	504.56	1,977.77	3,576.42	2,182.52	5,610.72	5,800.28	2,590.80	1,917.61	1,601.65	1,857.17	1,633.96
1969	1,493.16	1,410.86	2,009.87	28,137.02	18,772.27	5,121.62	3,545.80	1,718.06	1,501.21	1,990.15	1,940.57	1,719.16
1970	1,348.24	1,327.83	1,424.47	17,677.46	14,000.23	12,476.92	3,808.94	1,188.89	1,220.21	1,130.65	1,375.57	1,083.76
1971	1,040.24	1,078.26	2,532.97	11,534.10	3,540.33	2,505.74	2,512.72	1,189.68	1,432.00	4,507.35	5,617.17	2,966.96
1972	1,770.94	1,420.93	7,707.77	22,153.70	9,214.83	6,205.74	2,513.32	2,516.32	2,084.90	1,791.85	1,450.47	1,145.86
1973	1,093.04	1,162.33	6,271.17	2,542.60	1,625.88	1,353.06	677.51	854.88	3,018.30	4,469.15	2,703.07	1,997.76
1974	1,712.16	1,558.86	1,816.97	19,601.74	18,267.10	7,804.65	3,418.24	3,288.51	1,979.92	1,981.55	2,076.47	1,254.86
1975	1,302.20	1,427.93	1,719.75	16,668.75	22,831.57	6,126.40	28,360.68	4,031.11	2,498.74	2,365.36	2,558.42	1,679.32
1976	1,603.24	1,714.47	3,521.89	13,453.19	3,069.79	2,082.96	1,469.18	1,222.62	726.42	398.46	305.74	179.83
1977	224.11	233.60	508.61	1,882.75	986.43	825.55	744.78	325.38	537.68	1,310.87	1,131.84	1,449.21
1978	1,310.30	1,045.69	2,329.17	37,027.95	7,463.84	3,947.71	3,816.29	1,606.67	1,094.57	944.46	809.57	801.47
1979	722.59	695.38	773.38	29,854.53	32,035.58	6,811.73	6,408.61	3,443.48	2,112.62	1,626.95	1,670.31	1,517.84
1980	1,399.53	1,477.07	1,687.56	10,301.18	2,164.08	1,712.06	869.97	590.62	745.28	503.09	656.94	429.32
1981	317.73	378.54	1,490.05	1,327.87	1,412.67	1,459.81	2,877.89	1,592.16	1,913.32	2,464.85	1,819.57	1,213.07
1982	1,125.61	1,047.83	1,978.26	23,946.32	7,834.85	3,848.66	4,365.39	2,385.63	1,289.17	4,296.15	2,335.02	2,067.92
1983	1,555.98	1,464.52	9,623.90	11,020.55	3,432.36	5,291.52	6,712.52	3,024.40	2,990.53	2,153.71	1,884.15	1,699.64
1984	1,525.49	1,552.44	4,710.47	19,429.78	4,288.48	12,136.20	3,477.20	1,520.42	961.78	2,148.97	2,147.76	1,518.70

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Estimated unregulated streamflow, in cubic feet per second, for the Pembina River at the mouth							
1931	8.34	7.64	52.30	536.00	119.00	25.80	12.50	2.40	0.45	0.74	5.70	1.20
1932	.15	3.99	16.30	490.00	215.00	82.40	24.40	7.06	2.13	8.72	9.28	3.14
1933	0	0	20.70	835.00	643.00	370.00	86.30	31.50	33.50	54.60	27.90	11.10
1934	5.49	5.57	87.10	397.00	178.00	78.40	23.00	1.59	.12	1.94	1.24	.10
1935	0	0	14.60	167.00	74.30	125.00	72.20	27.20	17.30	16.20	5.80	2.54
1936	.66	.04	0	788.00	495.00	228.00	66.00	24.00	29.30	16.30	8.20	4.09
1937	.64	0	0	130.00	86.60	75.80	16.50	14.50	.46	.94	.42	.20
1938	0	0	207.00	117.00	90.60	42.40	14.50	.06	0	0	0	0
1939	0	0	1.57	73.70	22.40	16.10	.96	0	0	0	0	0
1940	0	0	0	208.50	52.26	10.38	.78	7.61	.03	0	.03	0
1941	0	0	0	1,449.37	419.75	230.54	66.87	28.75	187.37	167.16	67.78	35.73
1942	8.12	2.01	125.83	2,731.58	1,171.07	424.34	140.53	164.41	109.30	58.97	42.80	11.21
1943	8.59	6.52	336.17	766.02	395.87	614.47	322.39	214.93	185.53	127.67	79.08	44.09
1944	9.10	3.70	3.79	473.02	239.73	291.16	596.10	853.28	540.99	216.76	373.82	136.85
1945	54.47	58.78	1,304.25	1,277.62	898.28	535.48	312.29	154.31	110.22	78.16	47.67	29.39
1946	13.78	13.04	850.52	782.55	329.74	133.18	76.97	33.80	27.83	41.42	31.50	10.29
1947	1.87	1.22	2.49	865.22	337.09	310.45	116.65	137.77	72.19	69.62	40.60	24.71
1948	21.03	7.33	7.72	1,763.50	1,094.84	464.75	376.58	223.19	124.91	76.60	55.57	23.88
1949	14.51	12.49	16.07	2,993.35	1,660.63	693.46	284.73	147.88	74.49	72.84	53.82	21.95
1950	10.01	7.90	11.30	2,365.11	4,148.81	1,365.79	649.37	422.50	237.89	169.92	101.03	44.82
1951	36.74	28.38	120.32	1,175.66	579.57	293.00	127.67	80.18	56.95	39.95	24.34	13.59
1952	5.06	4.01	14.97	428.93	225.03	130.43	75.32	22.50	6.33	14.24	14.60	7.60
1953	1.75	.82	7.04	101.95	103.79	206.66	99.20	78.90	19.93	12.68	12.40	3.89
1954	2.99	3.60	30.59	203.90	137.77	551.09	709.99	416.08	231.46	154.31	85.24	32.15
1955	14.33	21.13	18.65	2,038.12	921.24	654.88	413.32	116.65	63.74	70.72	39.40	20.48
1956	19.20	21.40	24.06	2,080.38	2,925.38	992.89	424.34	200.23	177.27	153.39	77.34	29.39
1957	24.62	12.31	239.73	364.64	270.04	177.27	83.58	101.95	180.94	184.62	135.02	80.18
1958	43.36	29.67	53.92	257.37	147.15	52.36	69.17	9.74	6.31	25.17	21.59	11.49
1959	7.57	6.80	18.47	808.46	229.81	167.36	49.42	22.33	19.39	41.62	70.36	107.65
1960	76.34	47.77	30.32	2,453.75	1,387.39	507.48	214.48	100.59	49.06	39.51	30.23	16.82

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Estimated unregulated streamflow, in cubic feet per second, for the Pembina River at the mouth--Continued											
1961	9.93	5.87	92.32	300.82	198.86	61.18	16.55	5.28	5.93	10.94	13.97	6.15
1962	5.63	3.24	3.91	1,071.43	629.64	501.97	182.33	115.28	125.39	66.05	40.88	29.86
1963	34.64	18.75	109.77	235.60	224.58	477.17	227.34	155.70	98.75	75.88	62.10	12.60
1964	10.76	8.95	4.83	585.55	442.26	444.10	129.06	64.86	92.60	64.49	35.93	28.12
1965	19.30	12.96	20.95	1,522.41	1,035.61	571.77	218.15	95.08	126.30	144.67	84.70	52.27
1966	38.68	27.20	547.89	2,190.15	1,413.11	435.83	341.23	141.00	57.33	70.00	42.08	38.04
1967	18.75	18.57	133.65	1,414.94	1,570.17	330.21	117.12	43.00	24.54	46.95	60.54	22.06
1968	22.42	18.57	219.07	288.88	263.16	119.87	88.65	165.80	365.11	388.07	209.89	89.29
1969	32.07	28.39	44.28	3,963.75	1,945.89	665.48	393.91	190.83	126.42	105.18	87.73	58.24
1970	38.22	36.02	29.95	2,287.51	2,923.16	1,628.05	843.06	341.46	193.47	123.55	95.99	48.97
1971	38.04	21.78	23.34	3,194.97	1,661.16	731.61	396.67	278.08	164.08	130.90	115.28	75.14
1972	25.45	22.79	556.16	1,682.22	975.05	379.83	219.40	189.91	123.67	84.79	74.04	20.59
1973	14.52	15.53	201.62	144.67	98.81	65.61	76.67	68.03	67.09	80.29	52.09	31.98
1974	25.00	17.28	47.50	3,816.79	5,364.50	1,887.07	548.22	156.84	104.38	76.34	51.36	36.48
1975	29.59	22.42	20.77	462.47	1,324.07	685.68	279.10	114.59	60.39	58.34	57.97	33.81
1976	27.07	30.65	47.09	3,235.72	1,489.70	603.34	262.76	94.63	48.45	34.51	18.34	6.39
1977	9.30	9.24	38.75	84.22	95.71	64.59	44.60	12.94	34.28	35.17	19.65	13.86
1978	15.32	28.92	42.42	1,807.02	620.45	209.82	71.32	51.68	52.67	37.18	37.92	37.37
1979	9.92	29.55	63.63	2,772.25	3,887.35	950.91	348.67	95.08	125.17	56.28	35.98	18.53
1980	22.05	19.02	29.03	320.92	91.88	41.02	15.50	42.25	99.82	38.21	42.71	21.86
1981	16.40	82.89	201.47	367.72	199.64	127.07	48.79	35.54	48.48	105.95	80.69	20.16
1982	5.94	3.57	73.07	909.44	768.02	612.77	310.71	155.46	86.53	95.26	34.46	25.06
1983	16.03	7.52	340.15	1,265.99	520.19	303.41	86.07	29.19	22.57	29.53	23.23	4.00
1984	1.85	1.24	35.22	218.00	196.01	164.75	58.53	11.25	13.46	9.62	6.39	3.86

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Emerson, Man.												
1931	176.00	200.00	960.00	3,385.00	881.00	660.00	356.00	158.00	81.00	84.80	221.00	187.00
1932	166.00	138.00	1,364.00	7,809.00	1,925.00	586.00	256.00	62.50	40.00	46.10	121.00	89.00
1933	54.00	49.30	862.00	5,839.00	1,548.00	1,026.00	253.00	73.10	45.90	48.80	84.80	46.20
1934	54.30	32.60	492.00	2,178.00	663.00	196.00	138.00	46.60	23.80	47.10	77.20	41.70
1935	14.10	27.00	749.00	3,325.00	1,173.00	438.00	1,082.00	514.00	269.00	117.00	77.80	59.20
1936	56.80	54.00	58.20	6,739.00	2,602.00	583.00	121.00	79.30	66.90	28.60	23.70	33.50
1937	7.09	1.21	2.25	2,025.00	2,886.00	1,059.00	830.00	1,565.00	818.00	402.00	281.00	72.40
1938	53.30	75.90	1,453.00	1,282.00	4,870.16	2,584.06	855.84	218.60	193.35	200.00	207.00	182.00
1939	198.00	255.00	260.00	3,718.00	1,193.16	659.06	566.84	188.60	230.35	357.00	385.00	278.00
1940	135.00	148.00	224.10	5,085.10	2,232.26	1,053.06	357.84	255.60	187.35	236.00	392.00	296.00
1941	312.00	348.00	362.10	13,650.10	3,120.26	5,284.06	1,426.84	755.60	1,853.35	3,065.00	1,389.00	888.00
1942	565.00	635.00	1,962.10	16,530.10	8,966.26	4,187.06	1,809.84	1,254.60	3,110.35	1,643.00	1,135.00	775.00
1943	798.00	700.00	1,207.10	23,130.10	7,258.26	12,440.06	6,497.84	2,584.60	1,818.35	1,473.00	1,432.00	926.00
1944	663.00	736.00	768.10	4,349.10	3,776.26	6,947.06	6,806.84	6,003.60	5,909.35	2,906.00	4,026.00	2,733.00
1945	1,294.00	1,365.00	9,121.10	20,150.10	8,646.26	4,043.06	2,187.84	1,309.60	1,776.35	1,975.00	1,398.00	988.00
1946	945.00	791.00	5,738.10	14,640.10	4,119.26	2,223.06	2,442.84	1,273.60	1,167.35	1,661.00	1,617.00	1,169.00
1947	1,031.00	897.00	1,057.10	17,830.10	11,940.26	12,050.06	5,785.84	2,029.60	1,571.35	1,865.00	1,653.00	1,346.00
1948	1,084.00	845.00	851.10	24,890.10	20,050.26	3,858.06	3,139.84	1,661.60	1,009.35	674.00	712.00	556.00
1949	449.00	454.00	596.10	14,720.10	5,092.26	6,070.06	3,414.84	3,310.77	1,806.79	1,162.70	1,388.93	1,060.71
1950	824.80	748.10	981.90	27,740.10	72,517.26	21,559.26	9,980.14	3,781.10	2,637.65	3,349.90	2,078.50	2,158.40
1951	2,045.70	1,795.40	2,408.00	19,847.10	10,744.96	4,945.76	2,741.24	1,456.40	1,961.05	1,558.60	1,421.40	1,907.30
1952	1,771.00	1,885.30	2,087.80	17,725.57	7,717.37	3,813.40	5,987.90	2,264.60	1,372.87	933.30	861.60	692.50
1953	593.10	618.80	1,395.64	4,133.33	3,248.38	9,012.06	5,543.61	2,301.24	1,305.88	876.70	944.40	907.00
1954	781.60	884.90	1,436.80	5,856.90	4,250.64	4,407.09	2,969.36	1,480.12	876.70	819.20	758.50	638.00
1955	654.00	631.20	728.49	10,851.80	3,246.24	4,253.29	2,579.96	1,811.82	943.49	948.88	601.42	444.06
1956	432.46	453.14	476.50	13,160.29	14,521.53	5,460.48	4,100.31	1,175.55	2,031.02	689.95	1,334.00	577.68
1957	404.59	367.49	1,503.54	6,000.88	4,590.82	4,196.67	9,315.10	2,878.64	6,367.20	3,793.29	3,357.29	1,667.67
1958	1,316.27	1,260.87	1,858.42	3,440.66	1,702.40	1,482.67	4,099.48	1,014.12	451.48	415.77	465.57	324.62
1959	314.77	312.94	686.10	6,183.55	2,167.48	2,779.79	2,081.84	759.93	542.74	573.84	592.81	612.14
1960	604.49	544.16	640.12	16,701.22	5,252.76	3,104.11	2,317.54	587.58	624.65	340.26	534.89	343.50

Supplement 4.--Estimated unregulated streamflow for 29 sites in the Red River of the North basin, 1931-84--Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Estimated unregulated streamflow, in cubic feet per second, for the Red River of the North at Emerson, Man.--Continued												
1961	306.71	262.49	1,884.02	2,707.22	2,442.66	1,112.51	448.74	276.82	283.35	591.96	406.33	259.60
1962	191.81	194.46	271.22	14,985.63	12,027.25	25,435.58	16,056.64	7,219.40	3,399.86	2,446.57	2,163.53	1,601.20
1963	1,212.81	1,039.56	1,562.42	7,937.62	3,823.57	7,533.29	3,073.55	1,328.11	1,232.12	1,410.65	966.83	683.13
1964	756.73	752.02	704.26	8,678.27	5,541.46	9,626.66	3,638.04	1,373.23	707.08	1,745.05	1,387.89	894.88
1965	881.13	859.15	1,024.78	25,278.57	18,572.66	10,082.66	5,618.54	2,380.83	2,130.68	4,444.65	3,300.89	2,707.48
1966	1,794.03	1,603.32	6,264.06	45,715.97	20,274.66	7,047.26	4,836.07	3,722.94	2,885.13	2,021.25	2,139.69	1,788.88
1967	1,586.93	1,401.75	2,276.96	25,706.64	19,910.58	6,641.83	3,621.03	1,492.69	958.93	922.05	977.49	664.78
1968	467.23	462.95	1,703.16	4,929.81	2,500.91	6,055.11	6,928.67	3,314.19	3,017.94	2,212.35	2,140.69	1,933.88
1969	1,665.55	1,449.25	2,034.26	29,818.41	27,453.72	6,517.03	4,022.52	2,129.68	1,691.66	2,112.85	2,065.09	1,568.08
1970	1,422.63	1,339.22	1,462.86	19,518.85	23,021.68	16,958.33	5,598.66	1,673.51	1,424.66	1,314.35	1,691.09	1,085.68
1971	1,009.63	949.65	1,857.36	14,875.49	5,547.78	3,330.15	2,952.44	1,518.30	1,523.45	4,072.05	5,132.69	2,579.88
1972	1,874.33	1,571.32	7,288.16	23,835.09	10,935.28	6,495.15	2,601.04	2,557.94	2,069.35	1,857.55	1,691.99	1,153.78
1973	1,080.43	1,082.72	5,986.56	2,800.99	1,768.33	1,465.47	722.23	833.50	2,582.75	4,215.85	2,614.59	2,066.68
1974	1,682.55	1,576.25	1,827.36	19,993.13	29,668.55	10,933.06	3,866.96	3,320.13	2,069.37	1,974.25	2,143.99	1,332.78
1975	1,288.59	1,406.32	1,689.14	13,340.14	27,253.02	7,079.81	28,142.40	4,742.73	2,585.19	2,437.06	2,399.94	1,523.24
1976	1,497.96	1,630.19	3,021.67	17,584.91	4,453.54	2,545.69	1,666.09	1,180.48	745.27	414.24	346.52	211.61
1977	209.03	224.52	484.44	2,191.67	1,252.45	1,013.50	744.22	345.67	555.72	1,451.70	1,141.67	1,298.04
1978	1,194.57	909.96	1,901.47	36,319.22	10,278.23	4,021.03	3,723.17	1,801.38	1,145.11	922.76	873.87	657.77
1979	560.76	552.55	669.55	26,677.00	49,166.81	8,252.92	6,574.09	3,474.87	2,244.44	1,719.87	1,830.67	1,559.95
1980	1,363.82	1,346.36	1,515.45	10,402.47	2,492.49	1,811.40	974.88	588.36	740.79	510.64	674.70	383.03
1981	306.97	335.78	1,729.29	1,861.11	1,434.92	1,732.05	2,851.19	1,601.44	1,827.84	2,307.82	1,888.75	1,132.31
1982	1,165.67	1,062.89	1,787.32	22,377.38	8,895.93	4,405.72	4,210.57	2,559.78	1,381.32	4,364.75	2,414.08	1,889.98
1983	1,564.21	1,372.75	9,657.13	12,601.78	3,993.60	5,005.75	6,556.81	2,639.67	2,850.33	2,097.94	2,014.38	1,618.87
1984	1,325.73	1,245.68	3,164.71	19,331.02	4,296.77	11,797.46	3,546.69	1,610.84	950.56	1,792.21	1,859.00	1,090.94