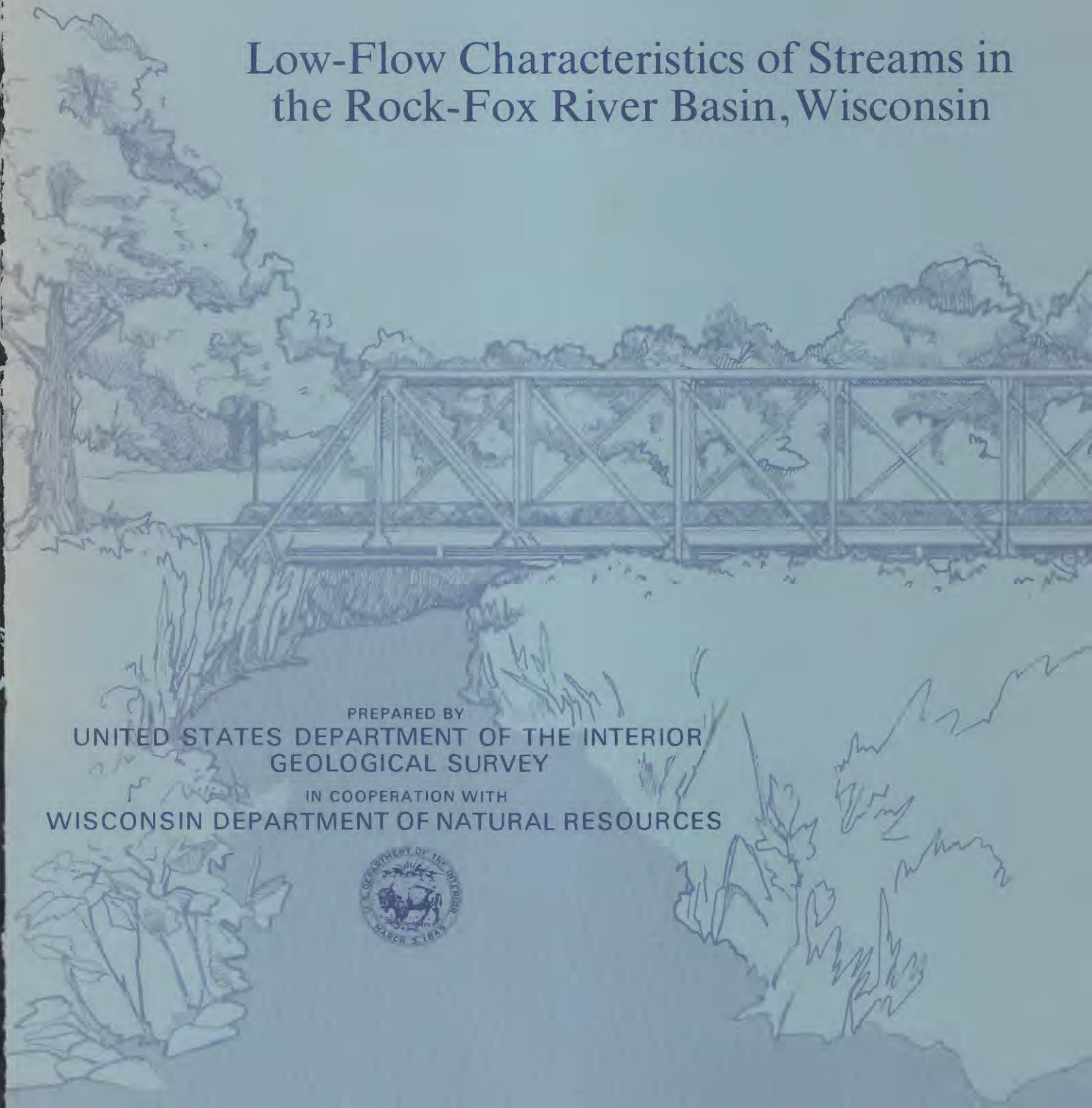
WATER RESOURCES INVESTIGATIONS
OPEN-FILE REPORT 78-85

Low-Flow Characteristics of Streams in the Rock-Fox River Basin, Wisconsin



PREPARED BY
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
IN COOPERATION WITH
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Low-Flow Characteristics of Streams in the Rock-Fox River Basin, Wisconsin

B. K. HOLMSTROM

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UNITED STATES DEPARTMENT OF THE INTERIOR

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B. K. HOLMSTROM

ABSTRACT

Low-flow characteristics of streams in the Rock-Fox River basin include estimates of low-flow frequency and flow duration at 13 gaging stations; low-flow frequency characteristics at 32 low-flow partial-record stations and 78 miscellaneous sites; and a list of base-flow discharge measurements at 244 miscellaneous sites, where data were insufficient to estimate low-flow characteristics.

Four equations are provided to estimate low-flow characteristics at ungaged sites and at sites where one base-flow measurement is available. The low-flow characteristics determined were the annual minimum 7-day mean flows below which the flow will fall on the average of once in 2 years ($Q_{7,2}$) and once in 10 years ($Q_{7,10}$). The equations were determined from multiple-regression analyses that related the low-flow characteristics at gaging stations and low-flow partial-record stations to basin characteristics. The equations and standard error of estimates for ungaged sites are:

$$Q_{7,2} = 0.099A^{0.669}K^{0.257} \qquad SE_{7,2} = 113 \text{ percent}$$

$$Q_{7,10} = 0.046A^{0.629}K^{0.314} \qquad SE_{7,10} = 155 \text{ percent}$$

Drainage area (A) and hydraulic conductivity (K) were the most significant parameters for these analyses. The equations and standard error of estimates at sites where one base-flow measurement has been made are:

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12} \qquad SE_{7,2} = 55 \text{ percent}$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39} \qquad SE_{7,10} = 62 \text{ percent}$$

Drainage area (A) and base-flow index (Bf) were significant parameters for these analyses.

The low-flow characteristics determined for stations in the Rock-Fox River basin are not as well defined as in other basins in Wisconsin. Accuracy levels for the determination of the low-flow characteristics fall below the State average.

INTRODUCTION

The purpose of this report is to describe low-flow characteristics of streams in the Rock-Fox River basin where streamflow data have been collected and to present equations useful for estimating low-flow characteristics at ungaged sites.

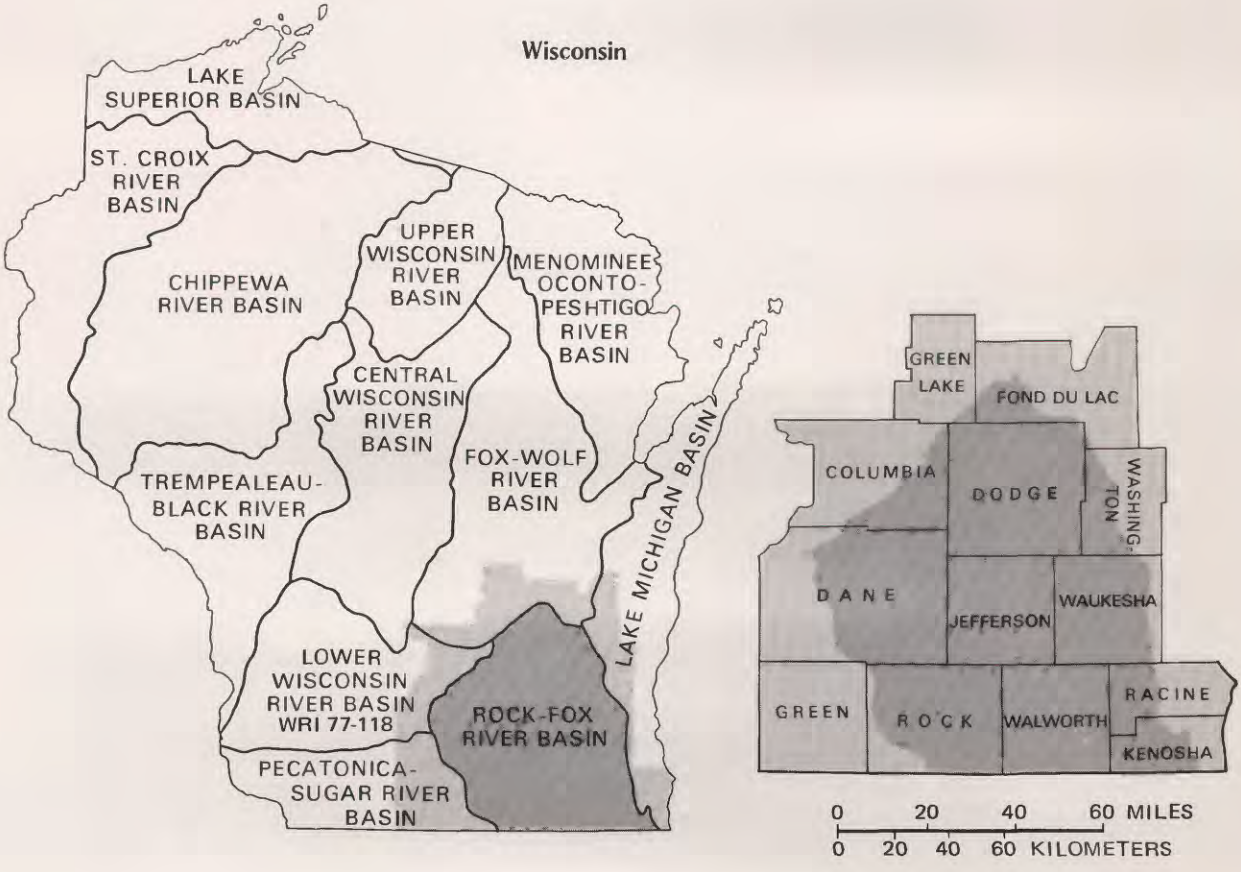

Figure 1. Location of the Rock–Fox River basin in Wisconsin.

This study was done in cooperation with the Wisconsin Department of Natural Resources. This report is part of a series of 12 planned reports to describe low-flow characteristics of the major basins in Wisconsin (fig. 1).

The report includes: estimates of the magnitude and frequency of recurrence of low flow for various sites where systematic streamflow information has been collected, low-flow discharge measurements that have been obtained at numerous sites throughout the basin, and a method to estimate low-flow characteristics at ungaged sites and at sites where one base-flow measurement has been made.

In recent years, a great demand has been placed on water resources in Wisconsin by increased multiple uses such as: maintenance of fish and wildlife habitat, irrigation of crops, dilution and assimilation of wastes, production of hydropower, construction of impoundments for real-estate developments, and maintenance of adequate flow for canoeing. This increased demand requires an accurate determination of water resources during low-flow periods to ensure proper consideration of all users.

Low-flow frequency analyses and flow-duration analyses are presented for all current and discontinued gaging stations in the Rock-Fox River basin. These analyses have been completed for 13 gaging stations through water year 1975. Low-flow frequency data are included in the report for 32 low-flow partial-record stations and for 78 miscellaneous sites where sufficient data are available.

Previous reports by Gebert and Holmstrom (1974, p. 26-27, 30-31, 52-60), Gebert (1971), and Cotter, Hutchinson, Skinner, and Wentz (1969, sheet 2) contain preliminary information on low-flow characteristics of this basin.

For the convenience of readers who may want to use metric units, the data may be converted by using the following factors:

Multiply	By	To obtain
mile (mi)	1.609	kilometer (km)
foot (ft)	.3048	meter (m)
square mile (mi^2)	2.59	square kilometer (km^2)
cubic foot per second (ft^3/s)	.02832	cubic meter per second (m^3/s)
foot per mile (ft/mi)	.1894	meter per kilometer (m/km)
inch (in.)	2.54	centimeter (cm)
cubic foot per second per square mile {$(ft^3/s)/mi^2$}	.01094	cubic meter per second per square kilometer {$(m^3/s)/km^2$}
gallon per day (gal/d)	.003786	cubic meter per day (m^3/d)
gallon per day per square foot {$(gal/d)/ft^2$}	3.517×10^{-4}	cubic meter per day per square meter {$(m^3/d)/m^2$}

BASIN DESCRIPTION

The Rock-Fox River basin is in southeastern Wisconsin. It includes the drainage area of the Rock, Fox, and Des Plaines Rivers from their headwaters to the Wisconsin-Illinois State line. The basin has a drainage area of approximately 4,820 mi^2, 8.6 percent of the State.

The 1970 population of the Rock-Fox River basin was approximately 860,000. Urban communities are expanding rapidly. The larger cities are Madison (172,769), Janesville (46,426), and Waukesha (40,274).

Mean annual precipitation for the basin is 31.4 in. (U.S. Dept. Commerce, 1931-69), 74 percent during the growing season (April through October). Snowfall is 19 percent of mean annual precipitation. Cotter, Hutchinson, Skinner, and Wentz (1969, sheet 1) also found that mean annual runoff from the basin is 6.6 in. and that mean annual evapotranspiration is 24.7 in.

The topography is gently rolling glacial terrane. Landforms, such as kettles, moraines, and drumlins, are common. The glacial deposits overlie the bedrock and are thin in the northern and western parts of the basin and have a maximum thickness of nearly 500 ft in the southeastern part. The types and locations of glacial deposits are described by Cotter, Hutchinson, Skinner, and Wentz (1969, sheet 1).

Gradients of the major rivers are fairly flat except in their headwaters. Approximate stream gradients for the Rock, Fox, and Des Plaines Rivers are:

Stream	River reach	Average gradient (ft/mi)
Rock River	Horicon to State line	1.0
Fox River	Waukesha to State line	1.3
Des Plaines River	Near headwaters to State line	1.5

LOW-FLOW CHARACTERISTICS

Low flow refers to the low range of stream discharge. A probability of occurrence and a time period can be specified for a more precise definition. Low flow is usually ground-water runoff or base flow, although a 30-, 60-, or 90-day low flow could contain some direct or storm runoff.

A typical low-flow period is illustrated by the discharge hydrograph for Turtle Creek gaging station (fig. 2). The annual 90-day low flow of 37 ft^3/s occurs from May 11 to August 8. Although this was the lowest flow for 90 consecutive days during the year, runoff was substantial on at least four occasions. Except for these rises in stream discharge, the remainder of streamflow for the period was predominantly base flow or ground-water runoff.

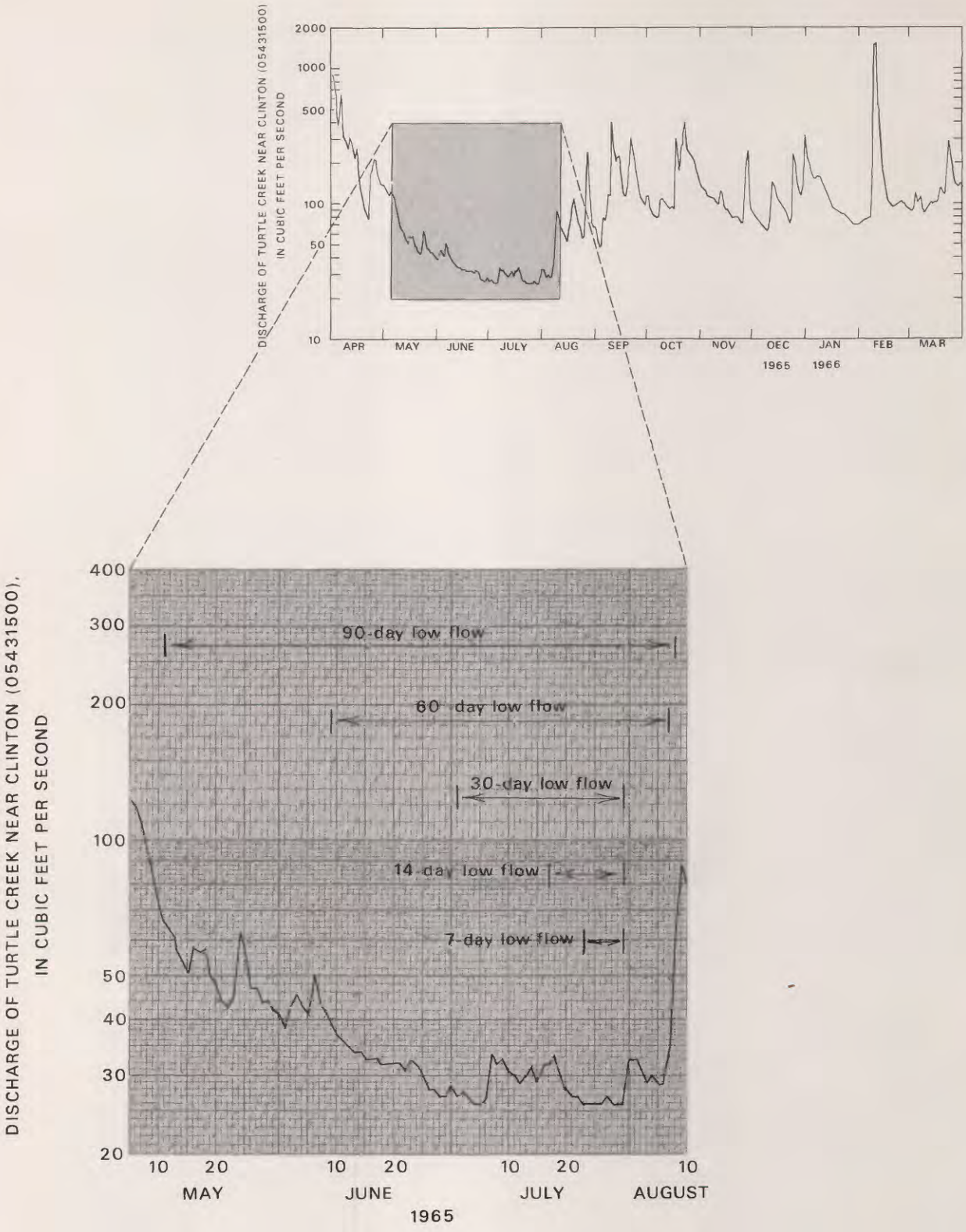

Figure 2. Daily discharge of Turtle Creek for the 1966 climatic year showing annual low-flow periods for various number of days.

Base flow is important for many low-flow studies because during this period stream discharge is the most stable. Thus, low-flow characteristics of a stream where systematic streamflow records have been collected for years can be applied to a nearby stream where only a minimum amount of base-flow discharge measurements is available.

Table 1 lists low-flow characteristics for 367 sites in the Rock-Fox River basin. Each site is identified by station number and station name. The site location, drainage area, type of site, and other pertinent data are included. Characteristics included for each site depend upon the type of site: gaging station, low-flow partial-record station, or miscellaneous site. The locations of the sites are shown on plate 1.

ANALYTICAL TECHNIQUES

Low-flow characteristics in table 1 were determined by three methods of analysis. The method used depended on which of the following three types of basic data were available: (1) continuous record of daily streamflows (continuous-record gaging stations), (2) 11 to 39 base-flow discharge measurements (low-flow partial-record stations), (3) 3 to 9 base-flow discharge measurements (miscellaneous sites).

GAGING STATIONS

Low-flow characteristics of a stream where continuous discharge records have been collected can be determined by flow-duration analysis or frequency analysis. The two analyses serve different purposes. The flow-duration curve indicates the percentage of time that daily mean flows exceed a given discharge, whereas the low-flow frequency curve indicates the probability that the annual low flow in any given year will be less than some specified discharge. The low-flow frequency curve is the more useful analysis in determining the low-flow characteristics. In the Rock-Fox River basin, the annual minimum 7-day mean flow below which the flow will fall on the average of once in 2 years ($Q_{7,2}$) is approximately equal to the discharge at 92 percent flow duration. The annual minimum 7-day mean flow below which the flow will fall on the average of once in 10 years ($Q_{7,10}$) is about equal to the discharge at 99 percent flow duration.

Low-flow frequency and flow-duration analyses were completed for all continuous-record gaging stations that have sufficient data: 10 years of record for low-flow frequency analysis and 5 years of record for flow-duration analysis. Low-flow frequency values are listed in table 1 showing the magnitude and frequency of annual low flows for 7, 14, 30, 60, and 90 consecutive days. Table 1 also contains a list of flow-duration values showing the percentage of time that specified discharges were exceeded.

The low-flow frequency characteristics were determined from the daily discharge records using a log-Pearson Type III probability distribution or a plotting position analysis (Riggs, 1972, p. 1-8). If results of the two analyses were substantially different, the plotting position analysis was

used. Figure 3 is an example of log-Pearson Type III low-flow frequency curves for the Turtle Creek near Clinton gaging station, and figure 4 is a flow-duration curve for the same site.

The entire period of recorded discharge was used for the analyses without adjustment for upstream regulation or change in regulation during the period of record. A statement explaining the type of upstream regulation is included in table 1 for sites where there is substantial regulation.

For gaging stations that have insufficient data for low-flow frequency analysis or flow duration, the low-flow characteristics were determined by a procedure similar to that outlined in the following section for low-flow partial-record stations.

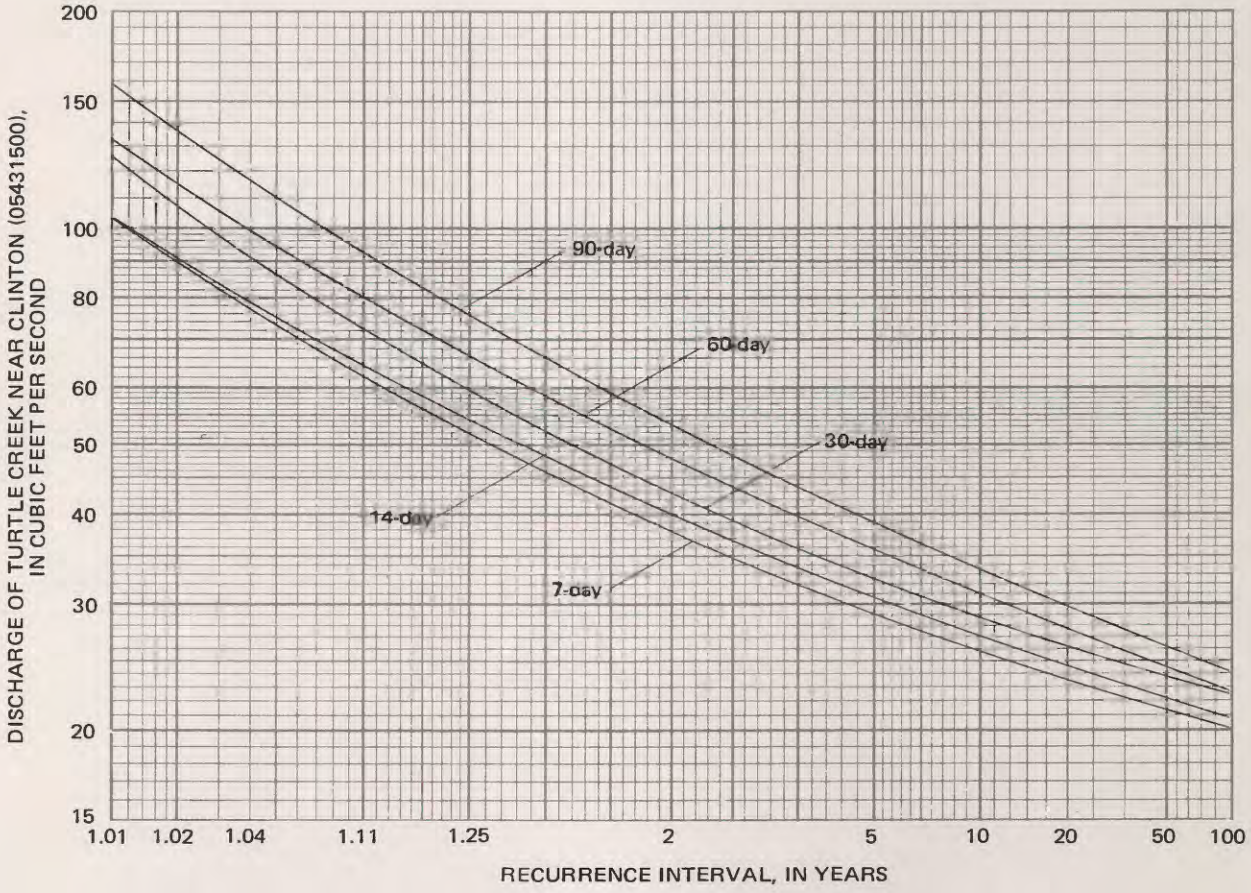

Figure 3. Low-flow frequency curves showing magnitude and frequency of the annual minimum mean discharge for the indicated number of consecutive days at Turtle Creek.

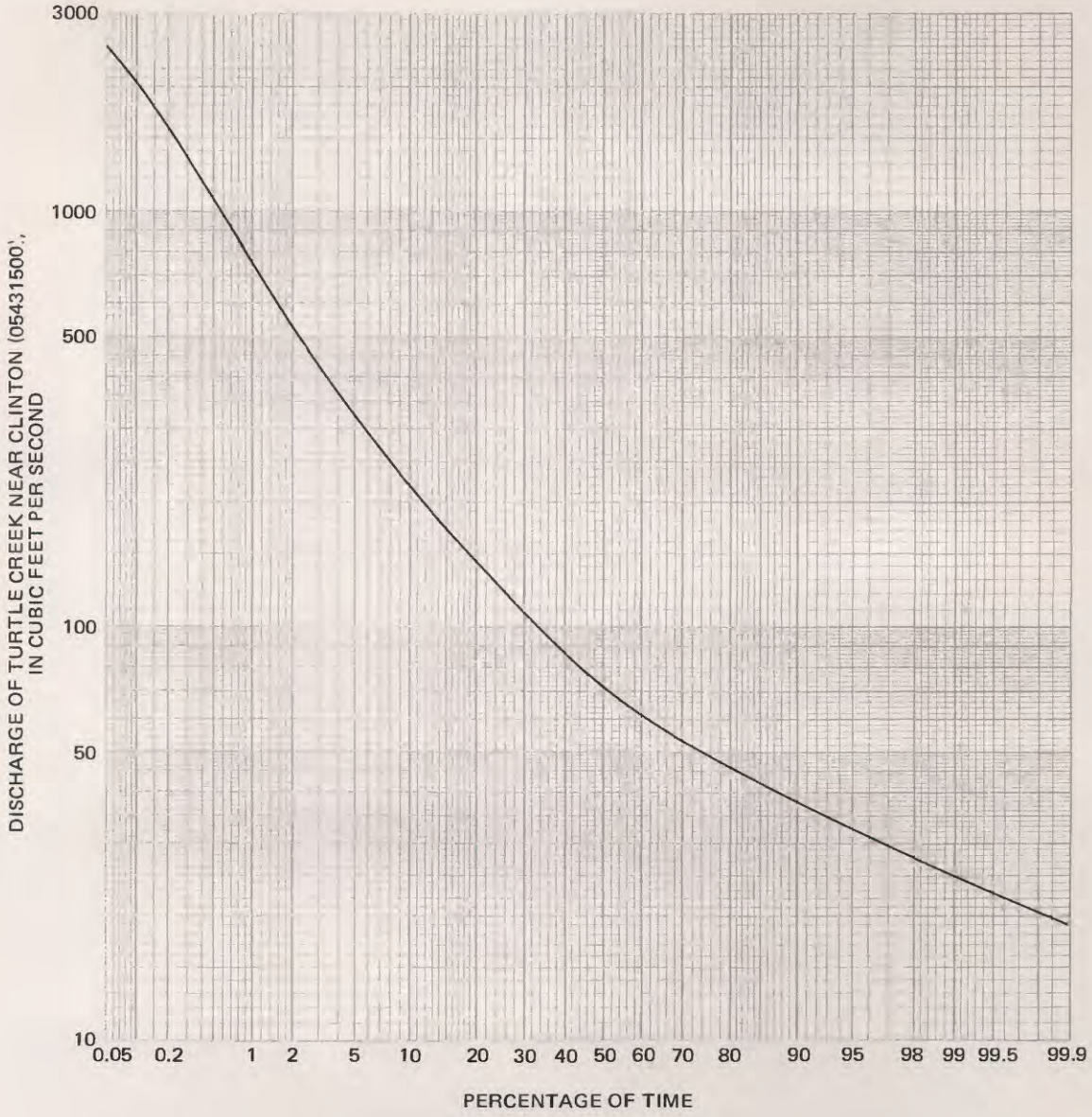

Figure 4. Flow-duration curve showing the percentage of time a given discharge was exceeded for Turtle Creek.

LOW–FLOW PARTIAL–RECORD STATIONS

Low-flow characteristics determined for low-flow partial-record stations are the $Q_{7,2}$ and $Q_{7,10}$. Estimates of $Q_{7,2}$ and $Q_{7,10}$ are presented in table 1 for 32 low-flow partial-record stations. Characteristics were determined from a relation line established by correlating 11 to 39 base-flow discharge measurements at low-flow partial-record stations with concurrent discharges at continuous-record gaging stations in the area (Gebert, 1971). The $Q_{7,2}$ and $Q_{7,10}$ at the continuous-record gaging station then were transferred through the relation line to estimate $Q_{7,2}$ and $Q_{7,10}$ for the partial-record station. Figure 5 is an example of this type of analysis for Sugar Creek near Vienna.

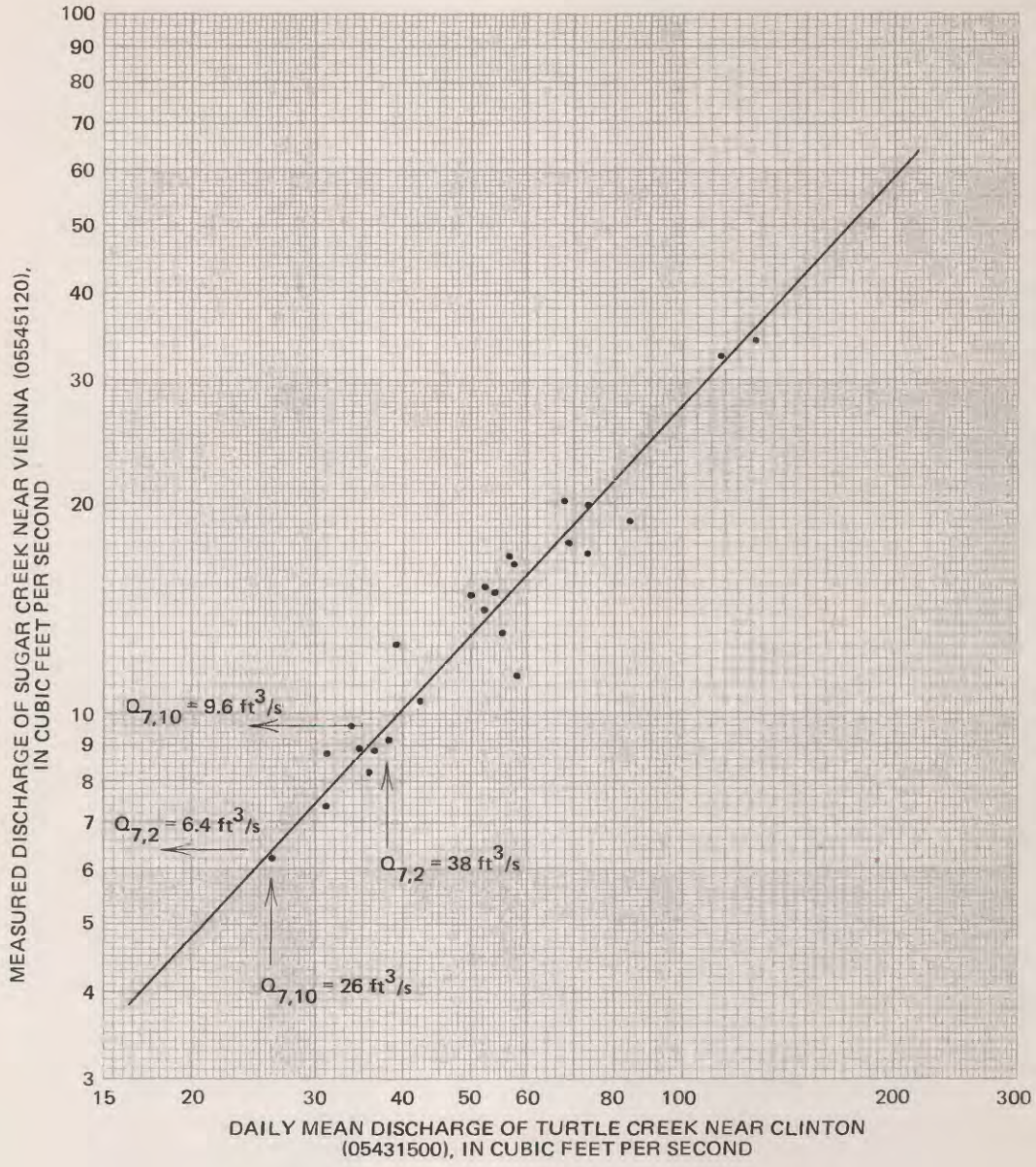

Figure 5. Method of estimating $Q_{7,2}$ and $Q_{7,10}$ at low-flow partial-record stations.

MISCELLANEOUS SITES

Base-flow measurements have been obtained at 322 miscellaneous sites in the Rock-Fox River basin as part of other water-resource investigations. Low-flow characteristics were estimated for these sites (table 1) if at least three base-flow discharge measurements were available and a well-defined relationship existed between the measured discharge and the concurrent daily mean discharge at a nearby gaging station. Estimates of $Q_{7,2}$ and $Q_{7,10}$ were made by the same type of analysis that was used for partial-

record stations (Gebert and Holmstrom, 1974, p. 3-4). Figure 6 illustrates this type of analysis for Spring Brook near Clinton. The slope of the relation line for miscellaneous sites was compared with established relation lines of nearby low-flow partial-record stations and other miscellaneous sites for uniformity. Generally the relation line should have approximately the same slope if the factors that influence low flow are uniform for the area. If the relation line at the site being studied was defined by three discharge measurements that had significant scatter, the line was adjusted to agree more closely with a better defined relation line at a nearby low-flow partial-record station.

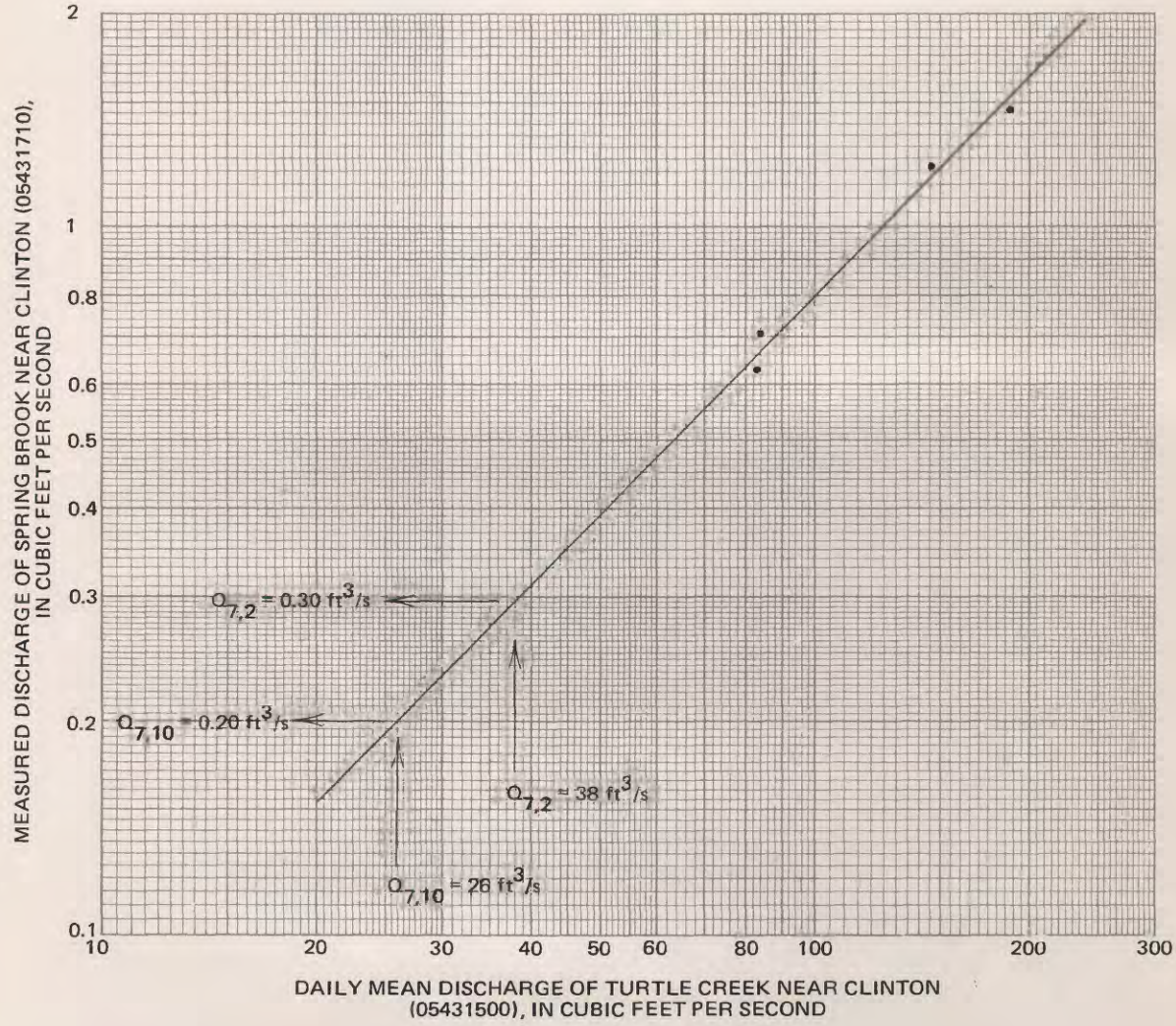

Figure 6. Method of estimating $Q_{7,2}$ and $Q_{7,10}$ at miscellaneous sites.

The low-flow characteristics were not determined at a site if the relationship between measurements at the site and concurrent daily mean discharge at a gaging station was poorly defined. An inadequate relationship was generally due to poor base-flow-measurement conditions or an insufficient number of discharge measurements.

For those sites where low-flow characteristics were not determined, the measured base-flow discharges are listed in table 1 to provide a range of observed base flows.

ACCURACY

The low-flow characteristics listed in table 1 are estimates of flow expected in the future. Low-flow characteristics like other streamflow characteristics are only estimates, with their true value being difficult or impossible to determine. The estimates are based on data collected at each site and analyzed by several methods. Each estimate has an error associated with it, depending on the amount and kind of data and the analytical method. Two major sources of error are the time-sampling error in streamflow records and the error in the analytical method.

The expected degree of accuracy for the $Q_{7,2}$ and $Q_{7,10}$ estimates are presented in table 1 for selected sites. The accuracy is determined by the standard error of estimate for the 7-day, 2-year low flow ($SE_{7,2}$) and for the 7-day, 10-year low flow ($SE_{7,10}$). The standard error of estimate is a range, so that the values estimated by the method are within this range at 67 percent of the sites and are within twice this range at about 95 percent of the sites.

The methods used to obtain the standard errors are not precise and the standard errors presented in table 1 should be used as a relative guide to indicate a general level of confidence. In addition, there may be greater errors associated with accuracy estimates for low-flow estimates that approach 0 ft^3/s.

GAGING STATIONS

Accuracy of low-flow characteristics at gaging stations was determined according to Hardison and Moss (1972, p. 38). An average $SE_{7,2}$ of 14 percent and $SE_{7,10}$ of 23 percent was determined for the nine gaging stations in the Rock-Fox River basin that had greater than 10 years of streamflow record.

A common length of record was used to compare the accuracy of low-flow characteristics determined from recorded discharge at gaging stations in the Rock-Fox River basin with that of gaging stations throughout the State. The analysis assumed that 10 years of record was available at each gaging station to determine the $Q_{7,10}$ discharge. An $SE_{7,10}$ of 32 percent was determined for the Rock-Fox River basin as compared with an $SE_{7,10}$ of 16 percent for gaging stations throughout the State. The significant difference between the two $SE_{7,10}$'s indicates that low-flow characteristics can generally be determined less accurately in the Rock-Fox River basin.

LOW-FLOW PARTIAL-RECORD STATIONS

The accuracy of low-flow characteristics at low-flow partial-record stations was determined by a method developed by Hardison and Moss (1972, p. 36-37). Using this method, an average $SE_{7,10}$ of 45 percent was found for 29 low-flow partial-record stations in the Rock-Fox River basin. The accuracy analysis was not applicable for the three low-flow partial-record stations that had $Q_{7,10}$'s of zero. This compares to an average $SE_{7,10}$ of 29 percent for 265 low-flow partial-record stations throughout the State.

MISCELLANEOUS SITES

The accuracy of low-flow characteristics at miscellaneous sites was determined as an average value for the entire basin by analyzing data collected at low-flow partial-record stations. Three random base-flow measurements were selected from the 11 to 39 measurements available at the 32 low-flow partial-record stations. Low-flow characteristics were determined from these three measurements using the same procedure used for miscellaneous sites. Then low-flow characteristics determined by the three measurements were plotted against the low-flow characteristics based on 11 to 39 measurements. The SE between the two methods was determined from this plotted relationship. The overall SE includes the SE determined by the plotted relationship and the SE associated with the low-flow estimates based on 11 to 39 measurements. Assuming the two errors are independent, the overall SE can be approximated by taking the square root of the sum of the squares of the two different SE's. For the Rock-Fox River basin this resulted in an $SE_{7,10}$ of 59 percent, which is listed in table 1 as the average basin accuracy. The 59 percent value should be used cautiously for any particular site, as the actual value for a subbasin could be significantly different from the mean for the basin. If the low-flow characteristics are based on more than three discharge measurements, the accuracy will probably be improved and should approach the accuracy at low-flow partial-record stations as additional measurements are obtained.

ESTIMATING LOW-FLOW CHARACTERISTICS AT UNGAGED SITES

A method is required to transfer low-flow characteristics from gaged sites to ungaged sites because it is impossible to obtain actual streamflow data for all sites where the information is needed. The most practical transfer method relates low-flow characteristics to topographic, geologic, and climatic characteristics of the drainage basin by multiple-regression analysis. The method is outlined in detail by Thomas and Benson (1970).

STREAMFLOW CHARACTERISTICS

The streamflow characteristics that were used as dependent variables in the multiple-regression analysis are $Q_{7,2}$ and $Q_{7,10}$. Multiple-regression analysis was performed on data from 2 gaging stations and 28 low-flow partial-record stations in the Rock-Fox River basin.

BASIN CHARACTERISTICS

Basin characteristics such as climate, topography, and geology were quantified to explain the variation in low flow. These indices are the independent variables in the multiple-regression analysis. The basin characteristics for gaging stations (drainage areas less than 150 mi^2) and low-flow partial-record stations in the Rock-Fox River basin are listed in table 2.

The basin characteristics used in the multiple-regression analysis for the Rock-Fox River basin are:

Drainage area (A).--The drainage area of a stream is that area, measured in a horizontal plane, that is enclosed by a drainage divide. Drainage areas, in square miles, were computed from U.S. Geological Survey topographic maps. Drainage-area data for this study were obtained from Holmstrom (1972, p. 67-76).

Main-channel slope (S).--Main-channel slope (Benson, 1962 and 1964) is a characteristic that relates to the change in streamflow for different basins. The index of slope used in this analysis is the average slope in feet per mile between points 10 percent and 85 percent of the distance upstream from the gaged site to the drainage-basin divide.

Main-channel length (L).--Main-channel length is another landform characteristic that indicates basin shape in conjunction with drainage area of the basin. In estimating ground-water runoff to the stream, L can be viewed as describing the length of the vertical cross-sectional area of the porous aquifer material through which the flow occurs. Channel length was obtained from the U.S. Geological Survey topographic maps by measuring the total indicated blue-line length by a digitizer, divider, or other means.

Basin storage (BS).--Basin storage is that part of total drainage area occupied by lakes and marshes. Variations in streamflow can be caused by retention and release of water from basin storage. For some streams, runoff is delayed by storage, but total runoff may not be reduced; whereas on other streams prolonged retention allows increased evapotranspiration that results in decreased runoff. Essentially, the basin storage index is used in the analysis to reflect the effect of evapotranspiration on low flow.

The basin storage area was obtained from U.S. Geological Survey topographic maps. A value of 1.00 percent was added to all values of basin storage to avoid problems of using zero in the regression analysis.

Forest cover (F).--Forests affect streamflow in several ways. Their major influences on low flow are intercepting precipitation before it reaches the ground and using water through transpiration.

The forest cover index used in this analysis is the percentage of drainage area covered by forests, as shown on U.S. Geological Survey

topographic maps. A value of 1.00 percent was added to all values of forest cover to avoid problems of using zero in the regression analysis.

Mean annual precipitation (P).--Mean annual precipitation of a basin expresses the amount of water available for potential runoff. The precipitation that infiltrates the soil and passes through the unsaturated zone to the ground-water supply is the source of base flow for a stream. The mean annual precipitation, in inches, for each basin was computed from an isohyetal map determined from precipitation recorded in the 1931-60 period (Wisconsin Statistical Reporting Service, 1967, p. 18).

A constant of 20 in. was subtracted from each value for use in the regression analysis. This reduction provides constants and exponents in the regression equation that are more manageable.

Soil-infiltration rate (I).--Soil permeability influences the amount of direct runoff from a storm and the amount of water that infiltrates the soil. The permeability used is an average rate for the basin under average soil and moisture conditions.

Soil types and average permeability, in inches per hour, for each basin were determined from maps by Cotter, Hutchinson, Skinner, and Wentz (1969, sheet 1).

Mean annual snowfall (Sn).--Mean annual snowfall, like mean annual precipitation, is an indicator of water available for runoff. For each basin an average mean annual snowfall, in inches, was determined from a map of Wisconsin weather (Wisconsin Statistical Reporting Service, 1970, p. 1) and average snowfall values from National Weather Service weather stations in the basin (Wisconsin Crop Reporting Service, 1961). A constant of 20 in. was subtracted from each value to provide more manageable constants and exponents in the equations.

Base-flow index (Bf).--A good indicator of a stream's low-flow potential is a discharge measurement made during base-flow conditions. Base-flow measurements provide considerable information about the characteristics of the aquifers supplying outflow to the stream.

To use base-flow measurements, it is necessary to convert them to a uniform base because measurements are generally obtained at various points on the base-flow recession curves. Therefore, the measurements were used to determine a base-flow index value to represent a common base flow. Discharge at the 90 percent flow duration was selected as the common base-flow value that was used to determine the base-flow index value. To evaluate the technique and develop the necessary relationships for this study, sites were selected that had discharge measurements obtained for a low-flow investigation during August 14-16, 1967.

Measured discharges (Q_m) were converted to a unit discharge by dividing the values by their respective drainage area (A). These values then were adjusted by a basin ratio to determine the base-flow index for each site.

Basin ratios were determined for gaging stations on unregulated streams within the Rock-Fox River basin by dividing the discharge at 90 percent flow duration (Q_{90}) by the observed average daily discharge during August 14-16, 1967 (Q_r). Thus, base-flow index values were determined by the equation:

$$Bf = \frac{Q_m \, Q_{90}}{A \, Q_r}$$

Plate 2 shows the locations of 81 sites, their respective drainage-area outlines and computed base-flow index values. Values obtained for 28 low-flow partial-record stations and 2 gaging stations (stations with $Q_{7,10}$ >0.01 ft^3/s) were used in the multiple-regression analysis. In most cases, discharges had been obtained at the low-flow partial-record stations during August 14-16, 1967; therefore, only a minimum amount of interpolation was needed to compute the Bf values.

Hydraulic conductivity (K).--Hydraulic conductivity is the volume of water at the existing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow. Average values of hydraulic conductivity were given to material constituting the drift in the Rock-Fox River basin and are:

	Hydraulic conductivity (gal/d)/ft^2
Marsh (peat and muck)	1
Ground moraine (till; consists of clay, silt, sand, gravel, and boulders)	10
End moraine (till; sand and gravel)	100
Outwash (sand and gravel)	2,500

Average values of hydraulic conductivity were obtained for each of the subbasins by the following procedure: (1) outline subbasin divide on glacial geology map (Cotter and others, 1969, sheet 1), (2) determine the subareas for each of the glacial drift types, (3) multiply these subareas by the hydraulic conductivity values assigned to the glacial drift, and (4) divide the sum of these products by the sum of the subareas.

Drift thickness (H).--Drift was deposited by glaciers and serves as an aquifer that stores water for release to streams. Its thickness ranges from less than 50 ft in the western part of the basin to nearly 500 ft in the southeastern part. An average thickness for each subbasin was determined from the glacial geology map by Cotter, Hutchinson, Skinner, and Wentz (1969, sheet 1).

Transmissivity (T).--The water-transmitting capability of an aquifer is expressed in terms of transmissivity and is the product of the hydraulic conductivity and drift thickness of the aquifer.

Drainage density (D).--Drainage density is the ratio of total drainage length to drainage-basin area. The total drainage length was determined by

extending drainage lines on topographic maps (7½-minute maps in most instances) wherever a V-notch of a contour line indicates a channel. As the total drainage length increases, a better drainage network is established, and precipitation has a better chance to run off as overland flow. Prior studies in the eastern United States have shown base-flow discharge to vary inversely with drainage density squared (Carlston, 1963, p. 65). Drainage density was not significant in this study.

REGRESSION ANALYSIS

Multiple-regression analysis was used to determine the relationship between the low-flow characteristics (dependent variables) and the basin characteristics (independent variables). The analysis provides an equation, or series of equations, relating the dependent to the independent variables. This analysis defined mathematical equations of the form:

$$Q_T = a\, A^{b_1} B^{b_2} C^{b_3} \ldots\ldots\ldots\ldots\ldots\ldots N^{b_n},$$

where:

Q_T is a 7-day low-flow characteristic having a T-year recurrence interval, in cubic feet per second;

a is a regression constant defined by the regression analysis;

ABC.....N are drainage-basin characteristics; and

$b_1 b_2 b_3 \ldots\ldots b_n$ are regression coefficients defined by regression analysis.

The analysis also defined the standard error of estimate (SE) of the analytical method and the statistical significance of each variable in the equation.

The standard error of estimate is a measure of the accuracy of the regression relationships. It describes a range in error between the defined relationship and the data included in the analysis. Values estimated by the regression equations are within the range of one standard error of estimate at 67 percent of the sites and within twice this range for 95 percent of the sites.

Step-backward regression analyses were done by digital computer procedures outlined by Thomas and Benson (1970, p. 26-31). The equations with the lowest standard error of estimate with all variables significant at the 99 percent or the 95 percent confidence level were selected as the best equations for prediction.

Two separate sets of analyses were done in an attempt to develop equations for sites without streamflow data available and for sites with minimum streamflow data available. Therefore, one analysis included all

the basin characteristics except for the base-flow index, and the other analysis contained all the basin characteristics, including the base-flow index.

SITES WITHOUT STREAMFLOW DATA

The two equations and respective standard errors for application at sites without streamflow data are:

$$Q_{7,2} = 0.099A^{0.669}K^{0.257} \qquad SE_{7,2} = 113 \text{ percent} \qquad (1)$$

$$Q_{7,10} = 0.046A^{0.629}K^{0.314} \qquad SE_{7,10} = 155 \text{ percent} \qquad (2)$$

$Q_{7,2}$ is the 7-day, 2-year low flow, in cubic feet per second;

$Q_{7,10}$ is the 7-day, 10-year low flow, in cubic feet per second;

A is the drainage area, in square miles; and

K is the hydraulic conductivity, in gallons per day per square foot.

The standard error of estimates listed for equations 1 and 2 were determined by taking the square root of the sum of the squares of the standard error of the regression analysis and the standard errors associated with the $Q_{7,2}$ and $Q_{7,10}$ values of the stations used to develop the equations.

Equations 1 and 2 apply to sites without streamflow data and drainage areas less than 150 mi^2.

SITES WITH MINIMUM STREAMFLOW DATA

The two equations and respective standard errors selected for application at sites with minimum streamflow data are:

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12} \qquad SE_{7,2} = 55 \text{ percent} \qquad (3)$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39} \qquad SE_{7,10} = 62 \text{ percent} \qquad (4)$$

$Q_{7,2}$ is the 7-day, 2-year low flow, in cubic feet per second;

$Q_{7,10}$ is the 7-day, 10-year low flow, in cubic feet per second;

A is drainage area, in square miles; and

Bf is the base-flow index, in cubic feet per second per square mile.

The standard error of estimates listed for equations 3 and 4 were determined by taking the square root of the sum of the squares of the

standard error of the regression analysis and the standard errors associated with the $Q_{7,2}$ and $Q_{7,10}$ values of the stations used to develop the equations.

VERIFICATION OF REGRESSION EQUATIONS THAT USE BASE-FLOW INDEX

To test the validity of equations 3 and 4 for other flow conditions, the following comparisons were done using streamflow data collected at 28 low-flow partial-record stations. Periods selected for the analysis were: a low base-flow period (flow durations greater than 80 percent), July 29-30, 1965; a medium base-flow period (flow durations 60-80 percent), September 12-14, 1966; and two high base-flow periods (flow durations less than 60 percent), April 25-27, 1962, and June 1-2, 1966. Values of Bf were obtained as outlined previously. When compared to the $Q_{7,2}$ and $Q_{7,10}$ values listed in table 1, the following SE's were determined for the estimated low-flow characteristics.

Regression analysis equations	SE from regression analysis	SE using various flow conditions to determine Bf		
		Low base flow	Medium base flow	High base flow (2 runs)
Equation 3	55 percent	61 percent	62 percent	$\frac{160 + 171}{2}$ = 166 percent
Equation 4	62 percent	77 percent	74 percent	$\frac{201 + 207}{2}$ = 204 percent

As illustrated, equations 3 and 4 produce satisfactory results for low and medium base-flow conditions. However, unsatisfactory results were obtained using equations 3 and 4 during high base-flow conditions. Base-flow measurements should be obtained at low to medium base-flow conditions (flow durations greater than 60 percent) to develop base-flow index values for use in equations 3 and 4.

Equations 3 and 4 should provide estimates of $Q_{7,2}$ and $Q_{7,10}$ at approximately the SE indicated for sites where the Bf has already been determined (pl. 2) and for other sites where low to medium base-flow measurements (flow durations greater than 60 percent at nearby unregulated gaging station) have been made.

In addition, for sites without streamflow data available, equations 3 and 4 should provide more reliable estimates than equations 1 and 2 for the following conditions:

1. For ungaged sites that are located in an area where a high degree of uniformity exists among Bf values as shown on plate 2.

2. For ungaged sites that are located within the indicated subbasins on plate 2.

APPLICATION OF ESTIMATING PROCEDURES

SITES WITHOUT STREAMFLOW DATA

Computation of low-flow characteristics at an ungaged site may be made as follows:

1. Use equations 1 and 2 listed on page 17 to determine the low-flow characteristics.

2. Compute the drainage area as indicated on page 13, and hydraulic conductivity, as indicated on page 15.

3. Substitute these values into equations 1 and 2 and solve for the low-flow characteristics.

For example, to determine the low-flow characteristics of Ore Creek at bridge on State Highway 36, 0.5 mi south of Springfield, Wis., the applicable equations for an ungaged area are:

$$Q_{7,2} = 0.099A^{0.669}K^{0.257}$$

$$Q_{7,10} = 0.046A^{0.629}K^{0.314}$$

Determine the hydraulic conductivity, as outlined on page 15 and the drainage area, as outlined on page 13 of this report. A drainage area of 10.6 mi^2 and hydraulic conductivity of 140 $(gal/d)/ft^2$ were determined for Ore Creek. Substituting these values into the respective equations results in low-flow characteristics of:

$$Q_{7,2} = 0.099A^{0.669}K^{0.257}$$

$$= 0.099(10.6)^{0.669}(140)^{0.257}$$

$$= 0.099(4.85)(3.56)$$

$$= 1.7 \text{ ft}^3/\text{s}$$

$$Q_{7,10} = 0.046A^{0.629}K^{0.314}$$

$$= 0.046(10.6)^{0.629}(140)^{0.314}$$

$$= 0.046(4.41)(4.72)$$

$$= 0.96 \text{ ft}^3/\text{s}$$

SITES WITH MINIMUM STREAMFLOW DATA

Computation of the low-flow characteristics at sites with minimum streamflow data available is made as follows:

1. Use equations 3 and 4 listed on page 17 to determine the low-flow characteristics.

2. Determine from plate 1 and table 1 the type of streamflow data that are available.

3. If streamflow measurements were made during August 14-16, 1967, the base-flow index (Bf) can be selected from plate 2.

4. If the streamflow measurements were made for some other period during base-flow conditions, the Bf should be determined as outlined on page 14.

5. Compute drainage area, as outlined on page 13.

6. Substitute values determined in steps 3 or 4 along with step 5 into equations 3 and 4.

As an example to determine the low-flow characteristics of Jericho Creek near Jericho (station number 05544080), the following procedure would be used:

The applicable equations for an ungaged area with minimum streamflow data available are:

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12}$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39}$$

Drainage area (A) obtained from table 1, page 58, is 12.1 mi^2.

The base-flow index obtained from plate 2 is 0.12 $(ft^3/s)/mi^2$.

Substituting these values into their respective equations:

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12}$$

$$= 0.747(12.1)^{1.09}(0.12)^{1.12}$$

$$= (0.747)(15.1)(0.093)$$

$$= 1.0 \text{ ft}^3/\text{s}$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39}$$

$$= 0.554(12.1)^{1.15}(0.12)^{1.39}$$

$$= (0.554)(17.6)(0.052)$$

$$= 0.51 \text{ ft}^3/\text{s}$$

To determine low-flow characteristics at sites where streamflow measurements are available but not for the August 14-16, 1967, period, the following procedure at the site, Spring Brook near Whitewater (station number 05427003), is used as an example.

The equations to use are the same as the above example:

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12}$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39}$$

Drainage area (A) obtained from table 1, page 26, 3.00 mi^2.

The base-flow index cannot be obtained from plate 2 because a base-flow measurement was not obtained during the August 14-16, 1967, period. Therefore, a Bf value has to be determined from the base-flow measurements that are available. Two measurements were made at this site (table 1). Following the same general procedure indicated on pages 14 and 15, a Bf value was determined by the equation:

$$Bf = \frac{Q_m \, Q_{90}}{A \, Q_r}$$

where: Q_m is the measured discharge, 1.57 ft^3/s, of Spring Brook near Whitewater on September 24, 1971;

A is the drainage area, 3.00 mi^2, of Spring Brook near Whitewater;

Q_r is the recorded discharge at a nearby continuous-record gaging station. Referring to plate 1, station 05431500, Turtle Creek near Clinton is the closest active gaging station. From "Water Resources Data for Wisconsin" (1971, p. 142), the average daily discharge for September 24, 1971, was 49 ft^3/s; and

Q_{90} for Turtle Creek near Clinton is 38 ft^3/s, obtained from table 1.

Substituting these values in the equation:

$$Bf = \frac{Q_m \, Q_{90}}{A \, Q_r}$$

$$= \frac{(1.57)(38)}{(3.00)(49)}$$

$$= 0.41 \ (ft^3/s)/mi^2$$

The low-flow characteristics can then be determined by substituting these values in their respective equations.

$$Q_{7,2} = 0.747A^{1.09}Bf^{1.12}$$

$$= 0.747(3.00)^{1.09}(0.41)^{1.12}$$

$$= 0.747(3.31)(0.37)$$

$$= 0.91 \ ft^3/s$$

$$Q_{7,10} = 0.554A^{1.15}Bf^{1.39}$$

$$= 0.554(3.00)^{1.15}(0.41)^{1.39}$$

$$= 0.554(3.54)(0.29)$$

$$= 0.57 \ ft^3/s$$

COMPARISON OF METHODS

If estimates of low-flow characteristics are required at sites other than those presented in this report, the user interested in the data should evaluate the need for the low-flow information. Generally the most important criteria in choosing a method are: accuracy requirements of the low-flow characteristics, time available to collect and analyze data, and cost of data collection and analyses.

Table 3 compares the methods available and provides: type of data required, number of sites where required data are available, time required to collect data, analytical method used to determine the low-flow characteristics, and standard error of estimate associated with the method. If a high degree of reliability is required of low-flow characteristics and sufficient time is available for data collection, a gaging station or low-flow partial-record station should be operated. If a lesser degree of reliability is acceptable, three base-flow discharge measurements, or one of the regression equations, may be sufficient.

CONCLUSIONS

For the 32 low-flow partial-record stations and 4 gaging stations with drainage areas less than 150 mi^2, the average $Q_{7,2}$ is 0.10 $(ft^3/s)/mi^2$ and the average $Q_{7,10}$ is 0.06 $(ft^3/s)/mi^2$. These basin averages are significantly lower than the State averages of 0.20 $(ft^3/s)/mi^2$ for $Q_{7,2}$ and 0.14 $(ft^3/s)/mi^2$ for the $Q_{7,10}$.

Multiple-regression equations were developed to determine low-flow characteristics at ungaged sites. The equations developed for sites without streamflow data available had high standard error of estimates. Equation 1 had an $SE_{7,2}$ of 113 percent and equation 2 an $SE_{7,10}$ of 155 percent. Drainage area and hydraulic conductivity were the most significant parameters in this analysis.

Multiple-regression equations were also developed to determine low-flow characteristics at sites where base flow had been measured. Equation 3 had an $SE_{7,2}$ of 55 percent and equation 4 had an $SE_{7,10}$ of 62 percent. Equations 3 and 4 provided satisfactory results at sites with low to medium base-flow measurements (flow durations greater than 60 percent) and drainage areas less than 150 mi^2. The most significant characteristics in explaining the variation in low flow were found to be drainage area and base-flow index for this analysis.

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Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin

05423000 West Branch Rock River near Waupun, Wis.

Location.--NW¼SE¼ sec. 24, T. 14 N., R. 15 E., Fond du Lac County, 700 ft downstream from U.S. Highway 151, 4.5 mi northeast of Waupun.

Drainage area.--41.4 mi^2. Tributary to.--Mississippi River.

Type of site.--Gaging station.

Period of record.--January 1949 to September 1970.

Average discharge.--21 years, 18.9 ft^3/s.

Extremes.--Maximum discharge, 949 ft^3/s Mar. 27, 1950; no flow Dec. 5, 1949, Feb. 6-13, 1959, Dec. 20-22, 1963, many days in 1964-65, and Aug. 2 to Sept. 16, 1970.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years				
	2	5	10	20	50
7	0.78	0.07	0.00	0.00	0.00
14	.84	.10	.02	.00	.00
30	.97	.20	.04	.00	.00
60	1.1	.27	.10	.04	.01
90	1.6	.55	.29	.16	.08

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	150	83	46	22	12	7.1	4.5
Percent	60	70	80	90	95	98	99.9
ft^3/s	3.1	2.1	1.4	0.64	0.28	0.11	0.00

Accuracy.--$SE_{7,2}$ = 49 percent, $SE_{7,10}$ = not applicable.

05423300 South Branch Rock River tributary near Waupun, Wis.

Location.--SE¼SW¼ sec. 22, T. 14 N., R. 14 E., Fond du Lac County, at country road 4.5 mi northwest of Waupun.

Drainage area.--12.6 mi^2. Tributary to.--South Branch Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--12 observations of no flow.

Low-flow frequency.--$Q_{7,2}$ = 0.00 ft^3/s, $Q_{7,10}$ = 0.00 ft^3/s.

Basis of estimate.--Correlated with South Branch Rock River near Waupun using 21 discharge measurements made in the period 1962-67.

Accuracy.--Not applicable, plotting position analysis was used for 7-day low flows.

05423370 South Branch Rock River tributary near Alto, Wis.

Location.--SE¼SE¼ sec. 23, T. 14 N., R. 14 E., Fond du Lac County, at culvert on County Trunk E, 1.1 mi southeast of Alto.

Drainage area.--1.12 mi^2. Tributary to.--South Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1975, 0.564 ft^3/s; July 21, 1976, 0.321 ft^3/s; Nov. 10, 1976, 0.358 ft^3/s.

Low-flow frequency.--Unable to define relationship, discharge predominantly effluent from Foremost Foods and Alto Coop Creamery.

05423395 South Branch Rock River tributary at Brandon, Wis.

Location.--SW¼SW¼ sec. 36, T. 15 N., R. 14 E., Fond du Lac County, at bridge on County Trunk JJ, 1.0 mi south of Brandon.

Drainage area.--1.23 mi^2. Tributary to.--South Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 0.727 ft^3/s; July 12, 1973, 0.325 ft^3/s; Sept. 11, 1973, 0.128 ft^3/s; Sept. 24, 1975, 0.196 ft^3/s; July 21, 1976, 0.295 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.01 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with South Branch Rock River at Waupun using 5 discharge measurements.

Accuracy.--59 percent (basin average).

05423500 South Branch Rock River at Waupun, Wis.

Location.--SW¼NW¼ sec. 33, T. 14 N., R. 15 E., Fond du Lac County, 100 ft upstream from U.S. Highway 151, 0.8 mi northeast of Waupun.

Drainage area.--62.8 mi^2. Tributary to.--West Branch Rock River.

Type of site.--Gaging station.

Period of record.--October 1948 to September 1969.

Average discharge.--21 years, 23.8 ft^3/s.

Extremes.--Maximum discharge, 1,500 ft^3/s Apr. 3, 1959; minimum discharge, no flow at times in 1949, 1953-54, 1958-59, 1963-64.

Period of consecutive days	Magnitude and frequency of annual low flow Discharge, in cubic feet per second, for indicated recurrence interval, in years				
	2	5	10	20	50
7	0.60	0.15	0.06	0.00	0.00
14	.92	.23	.10	.04	.02
30	1.1	.33	.17	.10	.05
60	1.4	.53	.30	.18	.10
90	1.9	.68	.38	.24	.13

Duration table of daily flow Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	190	100	58	30	17	10	6.5
Percent	60	70	80	90	95	98	99.9
ft^3/s	4.1	2.5	1.4	0.70	0.38	0.17	0.00

Accuracy.--Not applicable, plotting position analysis was used for 7-day low flows.

Remarks.--Occasional regulation at dam 0.67 mi upstream.

05423510 West Branch Rock River near Waupun, Wis.

Location.--SW¼SW¼ sec. 35, T. 14 N., R. 15 E., Fond du Lac County, at bridge on State Highway 49, 2.3 mi east of Waupun.

Drainage area.-- Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 26, 1966, 4.18 ft^3/s.

05423623 Spring Brook near Burnett, Wis.

Location.--SE¼NE¼ sec. 15, T. 12 N., R. 15 E., Dodge County, at culvert on Burnett Ditch Road, 1.1 mi northeast of Burnett.

Drainage area.--8.72 mi^2. Tributary to.--West Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1975, 2.67 ft^3/s; Nov. 11, 1976, 1.22 ft^3/s.

05423800 East Branch Rock River tributary near Slinger, Wis.

Location.--SW¼SE¼ sec. 26, T. 11 N., R. 18 E., Washington County, at U.S. Highway 41, 3.7 mi northwest of Slinger.

Drainage area.--3.04 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.18 ft^3/s, July 1, 1964.

Low-flow frequency.--$Q_{7,2}$ = 1.6 ft^3/s, $Q_{7,10}$ = 1.1 ft^3/s.

Basis of estimate.--Correlated with Cedar Creek near Cedarburg using 28 discharge measurements made in the period 1961-67.

Accuracy.--$SE_{7,2}$ = 19 percent, $SE_{7,10}$ = 31 percent.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05423825 East Branch Rock River at Allenton, Wis.

Location.--SW¼SW¼ sec. 15, T. 11 N., R. 18 E., Washington County, at County Trunk W, 0.3 mi south of Allenton.

Drainage area.--27.4 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--2.95 ft^3/s, Aug. 15, 1967.

Low-flow frequency.--$Q_{7,2}$ = 2.3 ft^3/s, $Q_{7,10}$ = 1.3 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River at Mayville using 7 discharge measurements made in the period 1967-76.

Accuracy.--$SE_{7,10}$ = 61 percent.

05423840 East Branch Rock River tributary near Nenno, Wis.

Location.--SW¼NE¼ sec. 31, T. 12 N., R. 18 E., Washington County, at country road, 1.2 mi north of Nenno.

Drainage area.--17.3 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.30 ft^3/s.

05423850 Kohlsville River near Kohlsville, Wis.

Location.--NW¼NW¼ sec. 28, T. 12 N., R. 18 E., Washington County, at country road, 2.2 mi northwest of Kohlsville.

Drainage area.--19.8 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.78 ft^3/s.

05423890 East Branch Rock River tributary near Lomira, Wis.

Location.--SE¼NE¼ sec. 27, T. 13 N., R. 17 E., Dodge County, at culvert on country road, 1.5 mi south of Lomira.

Drainage area.--3.66 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.57 ft^3/s, Nov. 11, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0.42 ft^3/s, $Q_{7,10}$ = 0.22 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River near Mayville using 6 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 51 percent.

05423935 Kummel Creek at Brownsville, Wis.

Location.--SW¼NE¼ sec. 8, T. 13 N., R. 17 E., Dodge County, just upstream from sewage-treatment plant at Brownsville.

Drainage area.--15.3 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 2.08 ft^3/s; July 18, 1973, 5.21 ft^3/s; Sept. 12, 1973, 1.29 ft^3/s; Sept. 26, 1975, 0.591 ft^3/s; July 22, 1976, 1.11 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.13 ft^3/s, $Q_{7,10}$ = 0.02 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River near Mayville using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05423947 Kummel Creek near Theresa, Wis.

Location.--NE¼NE¼ sec. 3, T. 12 N., R. 17 E., Dodge County, at State Highway 175, 1.7 mi north of Theresa.

Drainage area.--28.3 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 14, 1967, 2.25 ft^3/s.

05423960 East Branch Rock River at Theresa, Wis.

Location.--NE¼SW¼ sec. 10, T. 12 N., R. 17 E., Dodge County, just downstream from dam, at Theresa.

Drainage area.--140 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--3.84 ft^3/s, Sept. 26, 1975.

Low-flow frequency.--No estimate possible because of storage in Theresa Marsh.

05423988 East Branch Rock River at Mayville, Wis.

Location.--NE¼SE¼ sec. 14, T. 12 N., R. 16 E., Dodge County, at bridge on County Trunk V, at Mayville.

Drainage area.--170 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 26, 1975, 6.49 ft^3/s; July 22, 1976, 14.9 ft^3/s; Nov. 11, 1976, 3.32 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements are required.

05424000 East Branch Rock River near Mayville, Wis.

Location.--NW¼NE¼ sec. 10, T. 12 N., R. 16 E., Dodge County, 500 ft downstream from Kekoskee dam, 2.0 mi northwest of Mayville.

Drainage area.--179 mi^2. Tributary to.--Rock River.

Type of site.--Gaging station.

Period of record.--May 1949 to September 1970.

Average discharge.--21 years, 82.6 ft^3/s.

Extremes.--Maximum discharge, 3,400 ft^3/s Apr. 3, 1959; minimum discharge, 0.1 ft^3/s June 6, 1949, Aug. 22 and 23, 1962.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years				
	2	5	10	20	50
7	5.8	2.7	1.6	1.1	0.62
14	7.2	3.5	2.2	1.4	.81
30	8.6	5.2	4.0	3.2	2.4
60	11	7.2	5.5	4.3	3.2
90	14	8.4	6.2	4.8	3.5

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	575	323	188	100	64	43	30
Percent	60	70	80	90	95	98	99.9
ft^3/s	21	16	11	7.0	4.6	3.1	0.60

Accuracy.--$SE_{7,2}$ = 18 percent, $SE_{7,10}$ = 36 percent.

Remarks.--Minor regulation by recreation dams.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05424004 Gill Creek near Leroy, Wis.

Location.--SW¼NW¼ sec. 24, T. 13 N., R. 16 E., Dodge County, 0.15 mi downstream from Dairy Road, 1.1 mi northeast of Leroy.

Drainage area.--6.16 mi^2. Tributary to.--East Branch Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 26, 1975, 0.698 ft^3/s; July 22, 1976, 0.800 ft^3/s; Nov. 11, 1976, 0.489 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.43 ft^3/s, $Q_{7,10}$ = 0.25 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River near Mayville using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05424060 Rock River near Horicon, Wis.

Location.--SE¼SE¼ sec. 13, T. 11 N., R. 16 E., Dodge County, at bridge on County Trunk S, 2.5 mi south of Horicon.

Drainage area.--332 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 28, 1972, 187 ft^3/s.

054240645 Dead Creek at Juneau, Wis.

Location.--SW¼SW¼ sec. 22, T. 11 N., R. 15 E., Dodge County, just upstream from Milbrew, Inc., at Juneau.

Drainage area.--1.39 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1975, 0 ft^3/s; July 23, 1976, 0 ft^3/s; Nov. 9, 1976, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River near Mayville using 3 discharge measurements.

Accuracy.--Not applicable.

05424065 Dead Creek at Juneau, Wis.

Location.--NW¼NW¼ sec. 27, T. 11 N., R. 15 E., Dodge County, at Juneau sewage-treatment plant at south edge of city, 0.3 mi south of State Highway 115 bridge.

Drainage area.--1.52 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.70 ft^3/s, June 1, 1972.

Low-flow frequency.--Unable to define relationship, discharge predominantly effluent from Milbrew, Inc.

05424071 Dead Creek tributary near Clyman, Wis.

Location.--NW¼NE¼ sec. 15, T. 10 N., R. 15 E., Dodge County, at culvert on State Highway 60, 2.2 mi northeast of Clyman.

Drainage area.--5.25 mi^2. Tributary to.--Dead Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--July 18, 1973, 0.138 ft^3/s; Sept. 13, 1973, 0 ft^3/s; Sept. 25, 1975, 0.037 ft^3/s; July 22, 1976, 0 ft^3/s; Nov. 9, 1976, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 5 discharge measurements.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05424075 Dead Creek near Hustisford, Wis.

Location.--NE¼NE¼ sec. 7, T. 10 N., R. 16 E., Dodge County, at bridge on town road, 2.0 mi west of Hustisford.

Drainage area.--27.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 28, 1972, 19.7 ft^3/s.

05424085 Wildcat Creek near Iron Ridge, Wis.

Location.--SE¼SE¼ sec. 26, T. 11 N., R. 16 E., Dodge County, at town road bridge, about 1.1 mi southwest of Iron Ridge.

Drainage area.--21.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.37 ft^3/s, Nov. 12, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0.21 ft^3/s, $Q_{7,10}$ = 0.03 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 6 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 69 percent.

05424090 Rock River at Hustisford, Wis.

Location.--NW¼SW¼ sec. 10, T. 10 N., R. 16 E., Dodge County, just downstream from Wildcat Creek, at Hustisford.

Drainage area.--424 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.91 ft^3/s, Nov. 12, 1976.

Low-flow frequency.--Unable to define relationship, additional discharge measurements required.

Accuracy.--Not applicable.

05424091 Rock River at Hustisford, Wis.

Location.--NW¼NW¼ sec. 15, T. 10 N., R. 16 E., Dodge County, at Hustisford sewage-treatment plant, 0.6 mi southeast of Hustisford.

Drainage area.--424 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 26, 1966, 1.24 ft^3/s.

05424093 Rubicon River near Slinger, Wis.

Location.--NW¼SE¼ sec. 13, T. 10 N., R. 18 E., Washington County, at culvert on Hartford Road, 1.1 mi west of Slinger.

Drainage area.--4.03 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.14 ft^3/s, Nov. 12, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0.08 ft^3/s, $Q_{7,10}$ = 0.01 ft^3/s.

Basis of estimate.--Correlated with Milwaukee River at Milwaukee using 6 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 34 percent.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05424097 Rubicon River at Hartford, Wis.

Location.--SE¼NW¼ sec. 20, T. 10 N., R. 18 E., Washington County, at sewage-treatment plant outfall, at west city limits of Hartford.

Drainage area.--27.4 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--2.20 ft^3/s, Sept. 26, 1975.

Low-flow frequency.--$Q_{7,2}$ = 1.8 ft^3/s, $Q_{7,10}$ = 1.1 ft^3/s.

Basis of estimate.--Correlated with Milwaukee River at Milwaukee using 7 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 54 percent.

05424100 Rubicon River near Hartford, Wis.

Location.--NW¼NW¼ sec. 35, T. 10 N., R. 17 E., Dodge County, at County Trunk P, 4.3 mi southwest of Hartford.

Drainage area.--59.8 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--2.75 ft^3/s, Aug. 13, 1964.

Low-flow frequency.--$Q_{7,2}$ = 3.0 ft^3/s, $Q_{7,10}$ = 1.2 ft^3/s.

Basis of estimate.--Correlated with Cedar Creek near Cedarburg using 11 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 30 percent, $SE_{7,10}$ = 38 percent.

05424150 Rubicon River near Hustisford, Wis.

Location.--NW¼NE¼ sec. 23, T. 10 N., R. 16 E., Dodge County, at County Trunk EE, 2.3 mi southeast of Hustisford.

Drainage area.--79.7 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 6.51 ft^3/s.

05424158 Baker Creek near Lebanon, Wis.

Location.--NE¼SW¼ sec. 9, T. 9 N., R. 16 E., Dodge County, just upstream of tributary upstream of County Trunk MM, 1.0 mi east of Lebanon.

Drainage area.--8.56 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 26, 1975, 0.507 ft^3/s; July 21, 1976, 0 ft^3/s; Nov. 12, 1976, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--Not applicable.

05424190 Ashippun River near Alderly, Wis.

Location.--SE¼NW¼ sec. 13, T. 9 N., R. 17 E., Dodge County, at County Trunk O, 2.2 mi northeast of Alderly.

Drainage area.--18.9 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 2.96 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05424200 Ashippun River near Oconomowoc, Wis.

Location.--SW¼NW¼ sec. 11, T. 8 N., R. 17 E., Waukesha County, at County Trunk P, 4.7 mi northeast of Oconomowoc.

Drainage area.--32.9 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.77 ft^3/s, Aug. 13, 1964.

Low-flow frequency.--$Q_{7,2}$ = 3.4 ft^3/s, $Q_{7,10}$ = 1.7 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 11 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 31 percent, $SE_{7,10}$ = 39 percent.

05424250 Ashippun River near Monterey, Wis.

Location.--NW¼SE¼ sec. 12, T. 8 N., R. 16 E., Jefferson County, at County Trunk S, 2.4 mi west of Monterey.

Drainage area.--43.1 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 16. 1967, 5.59 ft^3/s.

05424270 Rock River tributary near Ixonia, Wis.

Location.--NE¼NE¼ sec. 16, T. 8 N., R. 16 E., Jefferson County, at bridge on Triangle Road, 1.4 mi north of Ixonia.

Drainage area.-- Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 0.23 ft^3/s; July 19, 1973, 0.041 ft^3/s; Sept. 12, 1973, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 3 discharge measurements.

Accuracy.--Not applicable.

05424285 Rock River tributary near Ixonia, Wis.

Location.--SW¼NW¼ sec. 14, T. 8 N., R. 16 E., Jefferson County, at mouth, 1.7 mi northeast of Ixonia.

Drainage area.-- Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 2, 1972, 0.44 ft^3/s.

05424338 Tributary to Rock River tributary at Ixonia, Wis.

Location.--SW¼SW¼ sec. 22, T. 8 N., R. 16 E., Jefferson County, at sewage-treatment plant in Ixonia.

Drainage area.--0.75 mi^2. Tributary to.--Rock River tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 7, 1973, 0.029 ft^3/s; Sept. 24, 1975, 0.020 ft^3/s; July 21, 1976, 0 ft^3/s; Oct. 4, 1976, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425030 Oconomowoc River at Stonebank, Wis.

Location.--SW¼NE¼ sec. 19, T. 8 N., R. 18 E., Waukesha County, at bridge on County Trunk K, 0.2 mi east of Stonebank.

Drainage area.--74.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--July 2, 1968, 57.4 ft^3/s; June 7, 1966, 24.0 ft^3/s; Nov. 30, 1972, 41.1 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements required.

05425042 Oconomowoc River near Oconomowoc, Wis.

Location.--SE¼SW¼ sec. 35, T. 8 N., R. 17 E., Waukesha County, at U.S. Highway 16, 2.3 mi east of Oconomowoc.

Drainage area.--83.8 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 29, 1972, 36.0 ft^3/s; Nov. 30, 1972, 38.2 ft^3/s.

05425080 Oconomowoc River near Oconomowoc, Wis.

Location.--NW¼NE¼ sec. 3, T. 7 N., R. 17 E., Waukesha County, at U.S. Highway 16, 1.5 mi east of Oconomowoc.

Drainage area.--88.8 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 82.2 ft^3/s.

05425200 Oconomowoc River near Oconomowoc, Wis.

Location.--NW¼NW¼ sec. 32, T. 8 N., R. 17 E., Waukesha County, at U.S. Highway 16, 1.1 mi northwest of Oconomowoc.

Drainage area.--103 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 2.42 ft^3/s; Nov. 29, 1972, 107 ft^3/s.

05425210 Oconomowoc River at Oconomowoc, Wis.

Location.--NE¼NW¼ sec. 5, T. 7 N., R. 17 E., Waukesha County, at bridge on County Trunk BB, just south of Oconomowoc.

Drainage area.--104 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--5.60 ft^3/s, June 2, 1972.

Low-flow frequency.--$Q_{7,2}$ = 1.2 ft^3/s, $Q_{7,10}$ = 0.18 ft^3/s.

Basis of estimate.--Correlated with Milwaukee River at Milwaukee using 9 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 164 percent.

05425240 Battle Creek near Oconomowoc, Wis.

Location.--NW¼NE¼ sec. 13, T. 7 N., R. 16 E., Jefferson County, at bridge on County Trunk B, 3.3 mi southwest of Oconomowoc.

Drainage area.--8.31 mi^2. Tributary to.--Oconomowoc River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 8.66 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425260 Oconomowoc River near Oconomowoc, Wis.

Location.--NE¼SE¼ sec. 11, T. 7 N., R. 16 E., Jefferson County, at bridge on town road, 3.4 mi southwest of Oconomowoc.

Drainage area.--122 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 110 ft^3/s.

05425270 Oconomowoc River near Oconomowoc, Wis.

Location.--NW¼SE¼ sec. 10, T. 7 N., R. 16 E., Jefferson County, at bridge on State Highway 135, 4.5 mi southwest of Oconomowoc.

Drainage area.--124 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 101 ft^3/s.

05425300 Oconomowoc River near Pipersville, Wis.

Location.--SW¼SW¼ sec. 33, T. 8 N., R. 16 E , Jefferson County, at country road, 2.9 mi southeast of Pipersville.

Drainage area.--128 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 16, 1967, 12.4 ft^3/s.

05425320 Rock River tributary near Pipersville, Wis.

Location.--NW¼NE¼ sec. 36, T. 8 N., R. 15 E., Jefferson County, at country road, 1.6 mi southwest of Pipersville.

Drainage area.--5.31 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 0.421 ft^3/s.

05425330 Tributary to Rock River tributary near Pipersville, Wis.

Location.--NE¼NE¼ sec. 35, T. 8 N., R. 15 E., Jefferson County, at country road, 1.9 mi southwest of Pipersville.

Drainage area.--1.34 mi^2. Tributary to.--Rock River tributary.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 0.010 ft^3/s.

05425340 Rock River tributary near Watertown, Wis.

Location.--SW¼NW¼ sec. 24, T. 8 N., R. 15 E., Jefferson County, at bridge on County Trunk E, 4.2 mi southeast of Watertown.

Drainage area.--8.39 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 1.06 ft^3/s.

05425392 Clyman Creek near Clyman, Wis.

Location.--SW¼SE¼ sec. 4, T. 9 N., R. 15 E., Dodge County, at culvert on County Trunk JM, 3.0 mi south of Clyman.

Drainage area.--2.38 mi^2. Tributary to.--Silver Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1975, 1.08 ft^3/s; July 22, 1976, 0.078 ft^3/s; Nov. 9, 1976, 0.078 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements are required.

05425400 Silver Creek near Watertown, Wis.

Location.--SW¼SW¼ sec. 21, T. 9 N., R. 15 E., Dodge County, at country road, 2.2 mi north of downtown Watertown.

Drainage area.--21.3 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.02 ft^3/s, Aug. 10, 1962.

Low-flow frequency.--$Q_{7,2}$ = 0.38 ft^3/s, $Q_{7,10}$ = 0.12 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 14 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 105 percent, $SE_{7,10}$ = 107 percent.

05425500 Rock River at Watertown, Wis.

Location.--NE¼SW¼ sec. 4, T. 8 N., R. 15 E., Jefferson County, 700 ft downstream from Milwaukee Street bridge, at Watertown.

Drainage area.--971 mi^2. Tributary to.--Mississippi River.

Type of site.--Gaging station.

Period of record.--June 1931 to September 1970.

Average discharge.--39 years, 412 ft^3/s.

Extremes.--Maximum discharge, 5,030 ft^3/s Apr. 4, 1959; minimum daily, 0.9 ft^3/s Oct. 15, 1939 and Sept. 9, 1944.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	26	9.6	5.3	3.2	1.7	1.1
14	30	11	6.3	3.8	2.1	1.3
30	36	14	8.3	5.2	3.0	2.1
60	45	21	14	9.8	6.6	5.2
90	57	26	18	13	9.0	7.1

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	2,130	1,580	1,120	665	425	290	190
Percent	60	70	80	90	95	98	99.9
ft^3/s	120	80	52	30	19	8.7	1.0

Accuracy.--$SE_{7,2}$ = 18 percent, $SE_{7,10}$ = 31 percent.

Remarks.--Slight intermittent regulation caused by a small feed mill 0.2 mi upstream; considerable diurnal regulation caused by powerplant 1.6 mi upstream.

05425515 Rock River tributary near Milford, Wis.

Location.--NE¼NW¼ sec. 23, T. 8 N., R. 14 E., Jefferson County, at bridge on town road, 4.3 mi northeast of Milford.

Drainage area.--5.47 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 2.07 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425520 Rock River tributary near Milford, Wis.

Location.--NE¼NW¼ sec. 24, T. 8 N., R. 14 E., Jefferson County, at bridge on town road, 4.9 mi northeast of Milford.

Drainage area.--9.88 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 5.20 ft^3/s.

05425535 Johnson Creek near Farmington, Wis.

Location.--NW¼NE¼ sec. 3, T. 7 N., R. 15 E., Jefferson County, at bridge on town road, 2.6 mi northwest of Farmington.

Drainage area.--7.23 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 2.15 ft^3/s.

05425540 Johnson Creek near Farmington, Wis.

Location.--SE¼NE¼ sec. 15, T. 7 N., R. 15 E., Jefferson County, at bridge on County Trunk B, 1.5 mi west of Farmington.

Drainage area.--14.4 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 4.10 ft^3/s.

05425545 Johnson Creek near Helenville, Wis.

Location.--SW¼NW¼ sec. 27, T. 7 N., R. 15 E., Jefferson County, at bridge on County Trunk X, 2.5 mi northwest of Helenville.

Drainage area.--23.0 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 8.20 ft^3/s.

05425547 Johnson Creek near Johnson Creek, Wis.

Location.--NE¼NE¼ sec. 31, T. 7 N., R. 15 E., Jefferson County, at town road, 3.0 mi south of Johnson Creek.

Drainage area.--27.6 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 15, 1973, 16.4 ft^3/s.

05425550 Johnson Creek at Johnson Creek, Wis.

Location.--SW¼SW¼ sec. 18, T. 7 N., R. 15 E., Jefferson County, at State Highway 26, 0.8 mi south of Johnson Creek.

Drainage area.--39.9 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--No flow on July 12, 1963, Aug. 26, 1963, Oct. 11, 1963, Oct. 13, 1964, July 29, 1965.

Low-flow frequency.--$Q_{7,2}$ = 0.04 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 13 discharge measurements made during the period 1962-67.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425563 Rock River at Johnson Creek, Wis.

Location.--NW¼SW¼ sec. 13, T. 7 N., R. 14 E., Jefferson County, at bridge on County Trunk B, 1.0 mi west of Johnson Creek.

Drainage area.--1,060 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1975, 376 ft^3/s; July 23, 1976, 65.2 ft^3/s.

05425580 Crawfish River near Fall River, Wis.

Location.--SW¼NW¼ sec. 2, T. 10 N., R. 12 E., Columbia County, at bridge on U.S. Highway 16, 1.6 mi south of Fall River.

Drainage area.--54.2 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--6.76 ft^3/s, Aug. 15, 1967.

Low-flow frequency.--$Q_{7,2}$ = 4.3 ft^3/s, $Q_{7,10}$ = 1.2 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 7 discharge measurements made in the period 1967-76.

Accuracy.--$SE_{7,10}$ = 40 percent.

05425600 North Branch Crawfish River near Columbus, Wis.

Location.--NW¼SW¼ sec. 14, T. 11 N., R. 12 E., Columbia County, at brodge on County Trunk DG, 5.6 mi north of Columbus.

Drainage area.--69.1 mi^2. Tributary to.--Crawfish River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--No flow, Aug. 13, 1964, Oct. 13, 1964.

Low-flow frequency.--$Q_{7,2}$ = 0.34 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 13 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 87 percent, $SE_{7,10}$ = not applicable.

05425640 North Branch Crawfish River at Fall River, Wis.

Location.--SE¼SE¼ sec. 27, T. 11 N., R. 12 E., Columbia County, at County Trunk D, at Fall River.

Drainage area.--76.2 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--1.35 ft^3/s, July 23, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0.40 ft^3/s, $Q_{7,10}$ = 0.02 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 7 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 77 percent.

05425650 North Branch Crawfish River near Fall River, Wis.

Location.--SE¼SE¼ sec. 34, T. 11 N., R 12 E., Columbia County, at country road, 1.1 mi south of Fall River.

Drainage area.--80.0 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.02 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425700 Robbins Creek near Columbus, Wis.

Location.--NE¼SE¼ sec. 11, T. 10 N., R. 12 E., Columbia County, at bridge on U.S. Highway 16, 1.1 mi northwest of Columbus.

Drainage area.--8.01 mi^2. Tributary to.--Crawfish River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--<0.01 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 0.09 ft^3/s, $Q_{7,10}$ = 0.01 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 24 discharge measurements made in the period 1960-67.

Accuracy.--$SE_{7,2}$ = 69 percent, $SE_{7,10}$ = 73 percent.

05425716 Crawfish River at Columbus, Wis.

Location.--NE¼SE¼ sec. 13, T. 10 N., R. 12 E., Columbia County, at bridge on U.S. Highway 16, 0.3 mi southeast of Columbus.

Drainage area.--164 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--14.3 ft^3/s, July 23, 1976.

Low-flow frequency.--$Q_{7,2}$ = 7.4 ft^3/s, $Q_{7,10}$ = 2.0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 7 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 34 percent.

05425718 Crawfish River tributary at Columbus, Wis.

Location.--NW¼SW¼ sec. 18, T. 10 N., R. 13 E., Dodge County, at culvert on State Highway 60, at Columbus.

Drainage area.--1.89 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 23, 1975, 0.032 ft^3/s; July 23, 1976, 0.076 ft^3/s; Nov. 9, 1976, 0.320 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements necessary.

05425830 Maunesha River near Sun Prairie, Wis.

Location.--SW¼NE¼ sec. 25, T. 9 N., R. 11 E., Dane County, at country road, 4.7 mi northeast of Sun Prairie.

Drainage area.--37.1 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.48 ft^3/s.

05425840 Maunesha River at Marshall, Wis.

Location.--NW¼NE¼ sec. 15, T. 8 N., R. 12 E., Dane County, at sewage-treatment plant, at Marshall.

Drainage area.--70.6 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--1.36 ft^3/s, Oct. 4, 1976.

Low-flow frequency.--$Q_{7,2}$ = 2.4 ft^3/s, $Q_{7,10}$ = 0.62 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 7 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 33 percent.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425846 Maunesha River at Waterloo, Wis.

Location.--NW¼NE¼ sec. 7, T. 8 N., R. 13 E., Jefferson County, at bridge on State Highway 19, at Waterloo.

Drainage area.--90.8 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1975, 11.4 ft^3/s; July 21, 1976, 3.75 ft^3/s; Oct. 4, 1976, 4.33 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements required.

05425847 Maunesha River at Waterloo, Wis.

Location.--NW¼SW¼ sec. 5, T. 8 N., R. 13 E., Jefferson County, at sewage-treatment plant outfall in Fireman Park, at Waterloo.

Drainage area.--91.3 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--4.54 ft^3/s, Oct. 4, 1976.

Low-flow frequency.--$Q_{7,2}$ = 4.3 ft^3/s, $Q_{7,10}$ = 1.3 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 7 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 69 percent.

05425850 Maunesha River at Portland, Wis.

Location.--NW¼NE¼ sec. 5, T. 8 N., R. 13 E., Jefferson County, at State Highway 19, at Portland.

Drainage area.--94.4 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.31 ft^3/s.

05425853 Stony Brook near Kroghville, Wis.

Location.--NW¼NW¼ sec. 8, T. 7 N., R. 13 E., Jefferson County, at town road, 2.6 mi northeast of Kroghville.

Drainage area.--5.08 mi^2. Tributary to.--Maunesha River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 2.06 ft^3/s.

05425857 Stony Brook near Waterloo, Wis.

Location.--SW¼NE¼ sec. 29, T. 8 N., R. 13 E., Jefferson County, at bridge on County Trunk OB, 3.4 mi south of Waterloo.

Drainage area.--11.2 mi^2. Tributary to.--Maunesha River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 5.27 ft^3/s.

05425860 Stony Brook near Waterloo, Wis.

Location.--SE¼SW¼ sec. 17, T. 8 N., R. 13 E., Jefferson County, at bridge on town road, 1.7 mi south of Waterloo.

Drainage area.--14.2 mi^2. Tributary to.--Maunesha River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 7.19 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425891 Beaverdam River at Fox Lake, Wis.

Location.--NE¼NW¼ sec. 35, T. 13 N., R. 13 E., Dodge County, at bridge on County Trunk P, at Fox Lake.

Drainage area.--58.1 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 5.93 ft^3/s.

05425892 Beaverdam River near Fox Lake, Wis.

Location.--SE¼SW¼ sec. 34, T. 18 N., R. 13 E., Dodge County, at country road, 1.9 mi southwest of Fox Lake.

Drainage area.--58.9 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 0.04 ft^3/s

05425894 Beaverdam River tributary near Fox Lake, Wis.

Location.--SE¼SW¼ sec. 34, T. 13 N., R. 13 E., Dodge County, at country road, 1.9 mi southwest of Fox Lake.

Drainage area.--1.11 mi^2. Tributary to.--Beaverdam River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 14, 1967, 0.15 ft^3/s

05425898 Beaver Creek tributary near Randolph, Wis.

Location.--SW¼SW¼ sec. 13, T. 12 N., R. 12 E., Columbia County, at bridge on County Trunk G, 2.4 mi southwest of Randolph.

Drainage area.--4.58 mi^2. Tributary to.--Beaver Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.17 ft^3/s, Nov. 10, 1976, $Q_{7,10}$ = 0.03 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.12 ft^3/s, $Q_{7,10}$ = 0.03 ft^3/s.

Basis of estimate.--Correlated with South Branch Rock River at Waupun using 6 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 47 percent.

05425900 Beaver Creek near Randolph, Wis.

Location.--NW¼NE¼ sec. 17, T. 12 N., R. 13 E., Dodge County, at County Trunk G, 2.3 mi southeast of Randolph.

Drainage area.--34.3 mi^2. Tributary to.--Beaverdam River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1967, 0.06 ft^3/s; Nov. 29, 1972, 24.4 ft^3/s.

05425903 Beaverdam Lake tributary No. 1 near Beaver Dam, Wis.

Location.--SE¼SW¼ sec. 27, T. 12 N., R. 13 E., Dodge County, at bridge on County Trunk CC, 5.1 mi northwest of Beaver Dam.

Drainage area.--4.27 mi^2. Tributary to.--Beaverdam River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 0.142 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

054259047 Tributary to Beaverdam River tributary at Fox Lake, Wis.

Location.--NE¼NE¼ sec. 35, T. 13 N., R. 13 E., Dodge County, at culvert on Trenton Street, at Fox Lake.

Drainage area.--0.27 mi^2. Tributary to.--Beaverdam River tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 23, 1975, 0.331 ft^3/s; July 21, 1976, 0.252 ft^3/s; Nov. 10, 1976, 0.294 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements are required.

05425905 Beaverdam River tributary at Fox Lake, Wis.

Location.--SE¼NE¼ sec. 35, T. 13 N., R. 13 E., Dodge County, at sewage-treatment plant, 0.1 mi downstream from Chicago, Milwaukee, St. Paul, & Pacific Railroad, in Fox Lake.

Drainage area.--1.28 mi^2. Tributary to.--Beaverdam River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.13 ft^3/s, Nov. 10, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0.12 ft^3/s, $Q_{7,10}$ = 0.05 ft^3/s.

Basis of estimate.--Correlated with South Branch Rock River at Waupun using 6 discharge measurements made in the period 1972-76.

Accuracy.--$SE_{7,10}$ = 43 percent.

05425912 Beaverdam River at Beaver Dam, Wis.

Location.--NE¼SW¼ sec. 4, T. 11 N., R. 14 E., Dodge County, at bridge on Davis Street, in Beaver Dam.

Drainage area.--157 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.24 ft^3/s, Nov. 11, 1976.

Low-flow frequency.--Unable to define relationship using 7 discharge measurements made in the period 1967-76.

05425924 Beaverdam River at Lowell, Wis.

Location.--SW¼NE¼ sec. 15, T. 10 N., R. 14 E., Dodge County, at bridge on U.S. Highway 16, in Lowell.

Drainage area.--237 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 26, 1966, 7.35 ft^3/s.

05425926 Beaverdam River tributary at Reeseville, Wis.

Location.--NW¼SE¼ sec. 28, T. 10 N., R. 14 E., Dodge County, at bridge on County Trunk J, 0.2 mi east of Reeseville.

Drainage area.--3.51 mi^2. Tributary to.--Beaverdam River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0 ft^3/s, Nov. 9, 1976.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with South Branch Rock River at Waupun using 6 discharge measurements made in the period 1972-75.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05425930 Pratt Creek near Lowell, Wis.

Location.--SW¼SW¼ sec. 13, T. 10 N., R. 14 E., Dodge County, at bridge on U.S. Highway 16, 1.5 mi scutheast of Lowell.

Drainage area.--21.8 mi^2. Tributary to.--Beaverdam River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.01 ft^3/s, Oct. 11, 1963.

Low-flow frequency.--$Q_{7,2}$ = 0.29 ft^3/s, $Q_{7,10}$ = 0.05 ft^3/s.

Basis of estimate.--Correlated with East Branch Rock River near Mayville using 14 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 51 percent, $SE_{7,10}$ = 60 percent.

05425960 Crawfish River tributary near Lake Mills, Wis.

Location.--NE¼SW¼ sec. 31, T. 8 N., R. 14 E., Jefferson County, at town road, 3.3 mi northeast of post office at Lake Mills.

Drainage area.--5.11 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 2.61 ft^3/s.

05425967 Rock Creek above Rock Lake near Lake Mills, Wis.

Location.--NW¼NW¼ sec. 1, T. 6 N., R. 13 E., Jefferson County, at Town Line Road, 4.1 mi south of Lake Mills.

Drainage area.--3.10 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 18, 1973, 0.45 ft^3/s.

05425970 Rock Creek near Lake Mills, Wis.

Location.--SE¼SW¼ sec. 23, T. 7 N., R. 13 E., Jefferson County, at bridge on County Trunk A, 2.0 mi south of Lake Mills.

Drainage area.--7.94 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 3.66 ft^3/s.

05425980 Rock Creek at Lake Mills, Wis.

Location.--NE¼NE¼ sec. 14, T. 7 N., R. 13 E., Jefferson County, at bridge in Lakeside Park, at outlet of Rock Lake, at Lake Mills.

Drainage area.--14.1 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 28, 1972, 1.98 ft^3/s.

05425983 Rock Creek at Lake Mills, Wis.

Location.--NW¼NW¼ sec. 13, T. 7 N., R. 13 E., Jefferson County, at State Highway 89 (Main Street), in Lake Mills.

Drainage area.--15.0 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Discharge measurements.--Oct. 17, 1973, 0.622 ft^3/s; Sept. 22, 1975, 0.341 ft^3/s; July 21, 1976, 0.230 ft^3/s; Oct. 4, 1976, 0.185 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.22 ft^3/s, $Q_{7,10}$ = 0.13 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05425988 Rock Creek at Lake Mills, Wis.

Location.--NW¼NE¼ sec. 13, T. 7 N., R. 13 E., Jefferson County, at County Trunk B (Lake Street), in Lake Mills.

Drainage area.--15.7 mi^2. Tributary to.--Crawfish River.

Type of site.--Miscellaneous site.

Minimum measured discharge.--1.08 ft^3/s, Sept. 13, 1973.

Low-flow frequency.--No relationship defined using 7 discharge measurements made in the period 1972-76.

05426000 Crawfish River at Milford, Wis.

Location.--NW¼SW¼ sec. 4, T. 7 N., R. 14 E., Jefferson County, at County Trunk A, at Milford.

Drainage area.--732 mi^2. Tributary to.--Rock River.

Type of site.--Gaging station.

Period of record.--June 1931 to September 1975.

Average discharge.--44 years, 357 ft^3/s.

Extremes.--Maximum discharge, 6,140 ft^3/s Apr. 6, 1959; minimum observed, 0.2 ft^3/s Sept. 15, 1958.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	33	16	10	6.4	3.6	2.4
14	35	19	14	10	7.2	5.6
30	41	23	17	13	9.6	7.9
60	48	28	22	17	13	11
90	58	33	25	20	15	13

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	2,200	1,500	980	500	300	203	142
Percent	60	70	80	90	95	98	99.9
ft^3/s	100	69	49	31	23	16	4.5

Accuracy.--$SE_{7,2}$ = 11 percent, $SE_{7,10}$ = 26 percent.

Remarks.--Some diurnal fluctuation at low flow possible due to small dams upstream.

05426040 Deer Creek near Fort Atkinson, Wis.

Location.--SE¼SE¼ sec. 20, T. 6 N., R. 15 E., Jefferson County, at bridge on town road, 3.8 mi east of Fort Atkinson.

Drainage area.--19.6 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 12.6 ft^3/s.

05426045 Deer Creek near Fort Atkinson, Wis.

Location.--SE¼SW¼ sec. 26, T. 6 N., R. 14 E., Jefferson County, at bridge on town road, 2.1 mi northeast of Fort Atkinson.

Drainage area.--23.9 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 16.6 ft^3/s.

05426051 Bark River near Hubertus, Wis.

Location.--SW¼NW¼ sec. 26, T. 9 N., R. 19 E., Washington County, at culvert on Lake View Road, 1.5 mi south of Hubertus.

Drainage area.--7.92 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 26, 1975, 1.03 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05426060 Bark River at Hartland, Wis.

Location.--SE¼SW¼ sec. 26, T. 8 N., R. 18 E., Waukesha County, at County Trunk K, 1.1 mi north of Hartland.

Drainage area.--30.1 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--3.77 ft^3/s, Oct. 10, 1963.

Low-flow frequency.--$Q_{7,2}$ = 5.6 ft^3/s, $Q_{7,10}$ = 3.7 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 13 discharge measurements made in the period 1962-75.

Accuracy.--$SE_{7,2}$ = 34 percent, $SE_{7,10}$ = 41 percent.

05426063 Bark River at Hartland, Wis.

Location.--NE¼SE¼ sec. 3, T. 7 N., R. 18 E., Waukesha County, at bridge on County Trunk E, 0.7 mi south of Hartland.

Drainage area.--32.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 18.0 ft^3/s; July 23, 1973, 23.9 ft^3/s; Nov. 7, 1973, 27.6 ft^3/s; Sept. 23, 1975, 25.2 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05426065 Bark River near Hartland, Wis.

Location.--SW¼NW¼ sec. 10, T. 7 N., R. 18 E., Waukesha County, at bridge on State Highway 83, 1.5 mi southwest of Hartland.

Drainage area.--34.9 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 28, 1972, 31.3 ft^3/s.

05426070 Bark River at Delafield, Wis.

Location.--SW¼SW¼ sec. 17, T. 7 N., R. 18 E., Waukesha County, at dam on outlet of Nagawicka Lake, in Delafield.

Drainage area.--44.6 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 18.2 ft^3/s; Nov. 24, 1972, 6.89 ft^3/s; July 23, 1973, 21.1 ft^3/s; Nov. 7, 1973, 91.2 ft^3/s; Sept. 23, 1975, 20.3 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05426075 Bark River near Delafield, Wis.

Location.--SW¼NW¼ sec. 24, T. 7 N., R. 17 E., Waukesha County, at country road, 2.0 mi west of Delafield.

Drainage area.--52.9 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 3.53 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05426082 Bark River at Dousman, Wis.

Location.--SE¼SW¼ sec. 34, T. 7 N., R. 17 E., Waukesha County, at bridge on County Trunk Z, 0.4 mi north of Dousman.

Drainage area.--56.9 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 19.7 ft^3/s; July 23, 1973, 32.1 ft^3/s; Aug. 15, 1973, 31.4 ft^3/s; Nov. 7, 1973, 32.7 ft^3/s; Sept. 23, 1975, 28.6 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05426088 Bark River near Dousman, Wis.

Location.--NW¼ sec. 4, T. 6 N., R. 17 E., Waukesha County, at old U.S. Highway 18 bridge, 1.2 mi west of Dousman.

Drainage area.--64.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--May 17, 1935, 37 ft^3/s.

05426096 Scuppernong Creek near Wales, Wis.

Location.--SE¼SE¼ sec. 32, T. 7 N., R. 18 E., Waukesha County, at culvert on private road, 1.1 mi northwest of Wales.

Drainage area.--2.17 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 0.70 ft^3/s; July 23, 1973, 1.75 ft^3/s; Nov. 7, 1973, 1.36 ft^3/s; Sept. 23, 1975, 0.907 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.18 ft^3/s, $Q_{7,10}$ = 0.09 ft^3/s.

Basis of estimate.--Correlated with Turtle River near Clinton using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05426100 Scuppernong Creek near Wales, Wis.

Location.--NE¼NE¼ sec. 6, T. 6 N., R. 18 E., Waukesha County, at U.S. Highway 18, 1.8 mi northwest of Wales.

Drainage area.--8.28 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 17, 1963, 0.16 ft^3/s; Aug. 13, 1965, 0.47 ft^3/s.

05426200 Bark River near Sullivan, Wis.

Location.--SE¼NW¼ sec. 14, T. 6 N., R. 16 E., Jefferson County, at country road, 2.1 mi south of Sullivan.

Drainage area.--106 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.91 ft^3/s, Oct. 11, 1963.

Low-flow frequency.--$Q_{7,2}$ = 8.2 ft^3/s, $Q_{7,10}$ = 3.8 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 15 discharge measurements made in the period 1962-73.

Accuracy.--$SE_{7,2}$ = 63 percent, $SE_{7,10}$ = 67 percent.

05426230 Bark River at Rome, Wis.

Location.--NW¼SE¼ sec. 17, T. 6 N., R. 16 E., Jefferson County, at bridge on State Highway 135, at Rome.

Drainage area.--115 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 28, 1972, 102 ft^3/s.

05426260 Duck Creek near Sullivan, Wis.

Location.--SE¼NE¼ sec. 27, T. 7 N., R. 16 E., Jefferson County, at culvert on State Highway 135, 1.9 mi north of Sullivan.

Drainage area.--7.44 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 1.24 ft^3/s; July 23, 1973, 0.305 ft^3/s; Oct. 17, 1973, 0.399 ft^3/s; Nov. 7, 1973, 0.863 ft^3/s; Sept. 23, 1975, 0.255 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.09 ft^3/s, $Q_{7,10}$ = 0.02 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05426270 Duck Creek at Sullivan, Wis.

Location.--SW¼SW¼ sec. 34, T. 7 N., R. 16 E., Jefferson County, at bridge on Baker Town Drive, 0.6 mi northwest of Sullivan.

Drainage area.--11.0 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 3.29 ft^3/s.

05426300 Duck Creek near Sullivan, Wis.

Location.--SW¼SW¼ sec. 24, T. 6 N., R. 15 E., Jefferson County, at country road, 5.7 mi southwest of Sullivan.

Drainage area.--31.4 mi^2. Tributary to.--Bark River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.22 ft^3/s, Oct. 11, 1963.

Low-flow frequency.--$Q_{7,2}$ = 0.68 ft^3/s, $Q_{7,10}$ = 0.23 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 13 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 70 percent, $SE_{7,10}$ = 73 percent.

05426330 Bark River at Hebron, Wis.

Location.--NW¼NE¼ sec. 2, T. 5 N., R. 15 E., Jefferson County, at bridge on State Highway 106, at Hebron.

Drainage area.--161 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 15.9 ft^3/s; Oct. 18, 1973, 125.0 ft^3/s.

05426400 Scuppernong River near Palmyra, Wis.

Location.--NW¼NW¼ sec. 19, T. 5 N., R 17 E., Waukesha County, at County Trunk Z, 2.4 mi east of Palmyra.

Drainage area.--23.6 mi^2. Tributary to.--Bark River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--2.34 ft^3/s, July 29, 1965.

Low-flow frequency.--$Q_{7,2}$ = 4.2 ft^3/s, $Q_{7,10}$ = 2.3 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 13 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 28 percent, $SE_{7,10}$ = 36 percent.

05426405 Scuppernong River near Palmyra, Wis.

Location.--NW¼NW¼ sec. 24, T. 5 N., R. 16 E., Jefferson County, at Upper Spring Lake spillway, 1.6 mi east of Palmyra.

Drainage area.--25.8 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site,

Discharge measurement.--Oct. 15, 1973, 42.7 ft^3/s.

05426415 Scuppernong River at Palmyra, Wis.

Location.--NE¼NE¼ sec. 22, T. 5 N., R. 16 E., Jefferson County, at bridge at County Trunk E, at Palmyra sewage-treatment plant.

Drainage area.--27.8 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 13.2 ft^3/s; July 23, 1973, 19.6 ft^3/s; Nov. 7, 1973, 22.3 ft^3/s; Sept. 23, 1975, 13.7 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 6.8 ft^3/s, $Q_{7,10}$ = 3.4 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05426425 Scuppernong River above Mud Creek near Palmyra, Wis.

Location.--NE¼NE¼ sec. 17, T. 5 N., R. 16 E., Jefferson County, at State Highway 135, upstream from Mud Creek, 2.4 mi northwest of Palmyra.

Drainage area.--32.9 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 8.53 ft^3/s; Oct. 15, 1973, 57.4 ft^3/s.

05426427 Mud Creek near Palmyra, Wis.

Location.--SE¼NW¼ sec. 34, T. 6 N., R. 16 E., Jefferson County, at bridge on State Highway 106, 4.2 mi north of Palmyra.

Drainage area.--5.01 mi^2. Tributary to.--Scuppernong River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 15, 1973, 0.655 ft^3/s.

05426430 Scuppernong River below Mud Creek near Palmyra, Wis.

Location.--NW¼NE¼ sec. 17, T. 5 N., R. 16 E., Jefferson County, near State Highway 135, 25 ft downstream from Mud Creek, 2.5 mi northwest of Palmyra.

Drainage area.--53.5 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 9.84 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05426435 Spring Creek near Palmyra, Wis.

Location.--SW¼SE¼ sec. 28, T. 5 N., R. 16 E., Jefferson County, at bridge on County Trunk H, 1.8 mi southwest of Palmyra.

Drainage area.--4.16 mi^2. Tributary to.--Scuppernong River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 15, 1973, 9.42 ft^3/s.

05426437 Spring Creek near Whitewater, Wis.

Location.--SW¼SW¼ sec. 20, T. 5 N., R. 16 E., Jefferson County, at bridge on State Highway 59, 5.6 mi northeast of Whitewater.

Drainage area.--10.1 mi^2. Tributary to.--Scuppernong River.

Type of site.--Miscellaneous site.

Discharge measurements.--Oct. 18, 1973, 15.2 ft^3/s; Sept. 23, 1975, 12.7 ft^3/s.

05426450 Steel Brook tributary near Whitewater, Wis.

Location.--SE¼SW¼ sec. 1, T. 4 N., R. 15 E., Walworth County, at bridge on town road, 3.3 mi east of Whitewater.

Drainage area.--3.26 mi^2. Tributary to.--Steel Brook.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 1.45 ft^3/s.

05426460 Bark River near Hebron, Wis.

Location.--SE¼NE¼ sec. 15, T. 5 N., R. 15 E., Jefferson County, at County Trunk D, 2.2 mi south of Hebron.

Drainage area.--251 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 34.4 ft^3/s; Oct. 18, 1973, 280 ft^3/s.

05426498 Whitewater Creek near Whitewater, Wis.

Location.--NW¼NW¼ sec. 35, T. 4 N., R. 15 E., Walworth County, at town road, 4.8 mi south of Whitewater.

Drainage area.--10.8 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 24, 1971, no flow.

Table 1.--Low-flow characteristics for site in the Rock-Fox River basin--Continued

05426500 Whitewater Creek near Whitewater, Wis.

Location.--SW¼NW¼ sec. 26, T. 4 N., R. 15 E., Walworth County, at country road at outlet of Rice Lake, 4.1 mi south of Whitewater.

Drainage area.--12.0 mi^2. Tributary to.--Bark River.

Type of site.--Gaging station.

Period of record.--March 1926 to July 1928. July 1946 to September 1954.

Average discharge.--9 years, 1.75 ft^3/s.

Extremes.--Maximum discharge, 24.8 ft^3/s May 28, 1927; no flow, July 18-28, 1954 (result of bridge construction).

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years		
	2	5	10
7	0.43	0.23	0.17
14	.50	.30	.25
30	.55	.34	.28
60	.62	.40	.35
90	.74	.47	.40

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time

Percent	2	5	10	20	30	40	50
ft^3/s	9.0	6.6	4.6	2.4	1.7	1.3	1.1
Percent	60	70	80	90	95	98	99.9
ft^3/s	0.94	0.78	0.62	0.46	0.36	0.28	0.00

Accuracy.--$SE_{7,2}$ = 28 percent, $SE_{7,10}$ = 32 percent.

05426700 Whitewater Creek tributary near Whitewater, Wis.

Location.--NW¼NW¼ sec. 27, T. 4 N., R. 15 E., Walworth County, at town road, 3.5 mi south of Whitewater.

Drainage area.--4.10 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, 1.54 ft^3/s; Sept. 18, 1975, 3.65 ft^3/s.

05426900 Whitewater Creek near Whitewater, Wis.

Location.--NE¼SE¼ sec. 15, T. 4 N., R. 15 E., Walworth County, at town road, 2.5 mi southeast of Whitewater.

Drainage area.--20.6 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, 11.6 ft^3/s; June 27, 1972, 11.7 ft^3/s; Sept. 17, 1975, 15.9 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 9.0 ft^3/s, $Q_{7,10}$ = 6.8 ft^3/s.

Basis of estimate.--Correlated with Whitewater Creek at Whitewater using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427000 Whitewater Creek at Whitewater, Wis.

Location.--NE¼SW¼ sec. 10, T. 4 N., R. 15 E., Walworth County, at country road, 1.5 mi southeast of Whitewater.

Drainage area.--22.7 mi^2. Tributary to.--Bark River.

Type of site.--Gaging station.

Period of record.--June 1926 to July 1928. July 1946 to September 1954.

Average discharge.--9 years, 19.1 ft^3/s.

Extremes.--Maximum discharge, 451 ft^3/s June 13, 1950; minimum daily, 6.6 ft^3/s Jan. 17, 1950.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years		
	2	5	10
7	10	8.5	7.6
14	11	9.8	9.2
30	11	10	9.7
60	12	11	10
90	13	11	11

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	64	39	28	22	18	16	15
Percent	60	70	80	90	95	98	99.9
ft^3/s	14	13	12	11	11	10	7.4

Accuracy.--$SE_{7,2}$ = 7 percent, $SE_{7,10}$ = 13 percent.

05427002 Spring Brook at Lima Center, Wis.

Location.--SE¼NE¼ sec. 22, T. 4 N., R. 14 E., Rock County, at bridge on State Highway 59, at junction with country road, 0.5 mi northeast of Lima Center.

Drainage area.--0.18 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, dry; Sept. 18, 1975, 0 ft^3/s.

05427003 Spring Brook near Whitewater, Wis.

Location.--NE¼SE¼ sec. 24, T. 4 N., R. 14 E., Rock County, at bridge on town road, 3.0 mi southwest of Whitewater.

Drainage area.--3.00 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, 1.57 ft^3/s; Sept. 19, 1975, 3.09 ft^3/s.

05427005 Spring Brook tributary near Whitewater, Wis.

Location.--SE¼NE¼ sec. 36, T. 4 N., R. 14 E., Rock County, at bridge on country road, 5.4 mi southwest of Whitewater.

Drainage area.--3.77 mi^2. Tributary to.--Spring Brook.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 19, 1975, 0.52 ft^3/s.

05427006 Spring Brook tributary near Whitewater, Wis.

Location.--NE¼NE¼ sec. 31, T. 4 N., R. 15 E., Walworth County, at bridge on town road, 4.7 mi south of post office in Whitewater.

Drainage area.--4.99 mi^2. Tributary to.--Spring Brook.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, 0.08 ft^3/s; Sept. 18, 1975, 1.11 ft^3/s.

05427008 Spring Brook near Whitewater, Wis.

Location.--NW¼SW¼ sec. 20, T. 4 N., R. 15 E., Walworth County, at culvert on country road, 3.1 mi southwest of post office in Whitewater.

Drainage area.--10.9 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 29, 1971, 1.64 ft^3/s; Sept. 18, 1975, 4.66 ft^3/s.

05427009 Spring Brook tributary near Whitewater, Wis.

Location.--NE¼SE¼ sec. 18, T. 4 N., R. 15 E., Walworth County, at culvert on town road, 2.5 mi southwest of Whitewater.

Drainage area.--2.06 mi^2. Tributary to.--Spring Brook.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, dry; June 26, 1972, 2.51 ft^3/s; Sept. 19, 1975, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--Not applicable.

05427010 Spring Brook at Whitewater, Wis.

Location.--NW¼SE¼ sec. 8, T. 4 N., R. 15 E., Walworth County, at State Highway 89, 1.2 mi southwest of post office in Whitewater.

Drainage area.--16.2 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, 2.38 ft^3/s; June 26, 1972, 4.95 ft^3/s; Sept. 18, 1975, 4.96 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 1.5 ft^3/s, $Q_{7,10}$ = 0.80 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05427013 Whitewater Creek at Whitewater, Wis.

Location.--NW¼NW¼ sec. 4, T. 4 N., R. 15 E., Walworth County, at bridge on private road on county line, 0.6 mi north of post office at Whitewater.

Drainage area.--42.6 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--14.3 ft^3/s, Sept. 25, 1971.

Low-flow frequency.--$Q_{7,2}$ = 13 ft^3/s, $Q_{7,10}$ = 10 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 7 discharge measurements made in the period 1965-75.

Accuracy.--$SE_{7,10}$ = 16 percent.

05427014 Whitewater Creek tributary near Whitewater, Wis.

Location.--NW¼NW¼ sec. 34, T. 5 N., R. 15 E., Jefferson County, at State Highway 59, 1.7 mi northeast of post office in Whitewater.

Drainage area.--3.95 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, 0.236 ft^3/s; Oct. 17, 1973, 2.14 ft^3/s; Sept. 17, 1975, 0.355 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.09 ft^3/s, $Q_{7,10}$ = 0.04 ft^3/s.

Basis of estimate.--Correlated with Turtle River near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427015 Tributary to Whitewater Creek tributary near Whitewater, Wis.

Location.--SE¼SW¼ sec. 28, T. 5 N., R. 15 E., Jefferson County, at County Trunk U, 1.7 mi north of post office in Whitewater.

Drainage area.--0.85 mi^2. Tributary to.--Whitewater Creek tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, no flow; Sept. 17, 1975, 0 ft^3/s.

05427017 Whitewater Creek near Whitewater, Wis.

Location.--SE¼SE¼ sec. 29, T. 5 N., R. 15 E., Jefferson County, at bridge on County Trunk U, 1.7 mi north of post office in Whitewater.

Drainage area.--55.4 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 14, 1966, 15.4 ft^3/s; Oct. 17, 1973, 43.6 ft^3/s; Sept. 16, 1975, 24.7 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 14 ft^3/s, $Q_{7,10}$ = 11 ft^3/s.

Basis of estimate.--Correlated with Turtle River near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05427019 Galloway Creek near Whitewater, Wis.

Location.--NE¼SE¼ sec. 35, T. 5 N., R. 14 E., Jefferson County, at culvert on town road, 3.5 mi west of post office in Whitewater.

Drainage area.--5.95 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, dry; Sept. 18, 1975, 0.283 ft^3/s.

05427020 Galloway Creek tributary near Whitewater, Wis.

Location.--NW¼NW¼ sec. 36, T. 5 N., R. 14 E., Jefferson County, at bridge on U.S. Highway 12 and State Highway 89, 3.6 mi west of post office in Whitewater.

Drainage area.--0.80 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, dry; Sept. 18, 1975, 0 ft^3/s.

05427022 Galloway Creek tributary near Whitewater, Wis.

Location.--NE¼NW¼ sec. 12, T. 4 N., R. 14 E., Rock County, at bridge on County Trunk N, 3.0 mi west of post office in Whitewater.

Drainage area.--0.28 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, <0.01 ft^3/s; Sept. 19, 1975, 0.01 ft^3/s.

05427023 Galloway Creek tributary near Whitewater, Wis.

Location.--NW¼NE¼ sec. 1, T. 4 N., R. 14 E., Rock County, at bridge on town road, 2.8 mi west of post office in Whitewater.

Drainage area.--1.31 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, 0.097 ft^3/s; Sept. 19, 1975, 0.190 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427026 Galloway Creek near Whitewater, Wis.

Location.--SE¼NW¼ sec. 30, T. 5 N., R. 15 E., Jefferson County, at County Trunk N, 2.9 mi northwest of post office in Whitewater.

Drainage area.--9.71 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25. 1971, 1.50 ft^3/s; Sept. 18, 1975, 2.31 ft^3/s.

05427027 Galloway Creek tributary near Whitewater, Wis.

Location.--SE¼SW¼ sec. 24, T. 5 N., R. 14 E., Jefferson County, at bridge on town road (Buckingham Road), 4.0 mi northwest of post office in Whitewater.

Drainage area.--0.68 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, dry; Sept. 18, 1975, 0 ft^3/s.

05427028 Galloway Creek tributary near Whitewater, Wis.

Location.--SE¼NW¼ sec. 30, T. 5 N., R. 15 E., Jefferson County, at County Trunk N, 2.8 mi northwest of post office in Whitewater.

Drainage area.--1.30 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, <0.01 ft^3/s; Sept. 18, 1975, <0.01 ft^3/s.

05427029 Galloway Creek near Whitewater, Wis.

Location.--SE¼NW¼ sec. 30, T. 5 N., R. 15 E., Jefferson County, at bridge on County Trunk N, 2.9 mi northwest of Whitewater.

Drainage area.--11.0 mi^2. Tributary to.--Whitewater Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 0.02 ft^3/s.

05427030 Galloway Creek tributary near Whitewater, Wis.

Location.--SE¼NW¼ sec. 6, T. 4 N., R. 15 E., Walworth County, at bridge on U.S. Highway 12 and State Highway 89, 1.8 mi west of post office in Whitewater.

Drainage area.--1.39 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 24, 1971, dry; Sept. 19, 1975, 0.037 ft^3/s.

05427032 Tributary to Galloway Creek tributary at Whitewater, Wis.

Location.--SW¼NE¼ sec. 6, T. 4 N., R. 16 E., Walworth County, at bridge on U.S. Highway 12 and State Highway 89, 1.5 mi west of post office in Whitewater.

Drainage area.--0.28 mi^2. Tributary to.--Galloway Creek tributary.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 25, 1971, <0.01 ft^3/s; Sept. 19, 1975, 0.118 ft^3/s.

05427033 Galloway Creek tributary near Whitewater, Wis.

Location.--NE¼SE¼ sec. 30, T. 5 N., R. 15 E., Jefferson County, at culvert on County Trunk N, 2.5 mi northwest of post office in Whitewater.

Drainage area.--3.94 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, 0.58 ft^3/s; Sept. 18, 1975, 1.05 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427035 Galloway Creek tributary near Whitewater, Wis.

Location.--SE¼SW¼ sec. 19, T. 5 N., R. 15 E., Jefferson County, at culvert on County Trunk N, 3.4 mi northwest of post office in Whitewater.

Drainage area.--0.29 mi^2. Tributary to.--Galloway Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 25, 1971, <0.01 ft^3/s; Sept. 16, 1975, 0 ft^3/s.

05427037 Whitewater Creek at Cold Spring, Wis.

Location.--NE¼SW¼ sec. 18, T. 5 N., R. 15 E., Jefferson County, at bridge on County Trunk DN, at Cold Spring.

Drainage area.--68.6 mi^2. Tributary to.--Bark River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 16.8 ft^3/s; Oct. 17, 1973, 54.9 ft^3/s; Sept. 16, 1975, 25.2 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 17 ft^3/s, $Q_{7,10}$ = 13 ft^3/s.

Basis of estimate.--Correlated with Turtle River near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05427080 Rock River at Fort Atkinson, Wis.

Location.--SW¼NW¼ sec. 3, T. 5 N., R. 14 E., Jefferson County, at U.S. Highway 12, at Fort Atkinson.

Drainage area.--2,190 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurements.--Oct. 27, 1966, 146 ft^3/s; Nov. 29, 1972, 1,115 ft^3/s; Sept. 24, 1975, 579 ft^3/s.

05427130 Rock River tributary near Busseyville, Wis.

Location.--NE¼NW¼ sec. 1, T. 5 N., R. 13 E., Jefferson County, at bridge on County Trunk J, 4.6 mi northeast of Busseyville.

Drainage area.--8.73 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 2.97 ft^3/s.

05427140 Rock River tributary near Fort Atkinson, Wis.

Location.--SE¼SW¼ sec. 5, T. 5 N., R. 14 E., Jefferson County, at bridge on town road, 1.8 mi west of Fort Atkinson.

Drainage area.--13.8 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 4.59 ft^3/s.

05427160 Allen Creek near Whitewater, Wis.

Location.--NW¼SE¼ sec. 27, T. 5 N., R. 14 E., Jefferson County, at bridge on town road (Creamery Road), 5.3 mi northwest of Whitewater.

Drainage area.--2.35 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 1.50 ft^3/s.

05427200 Allen Creek near Fort Atkinson, Wis.

Location.--SE¼NE¼ sec. 17, T. 5 N., R. 14 E., Jefferson County, at State Highway 26, 2.5 mi southwest of Fort Atkinson.

Drainage area.--10.2 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.16 ft^3/s, June 30, 1964 and Aug. 14, 1964.

Low-flow frequency.--$Q_{7,2}$ = 0.31 ft^3/s, $Q_{7,10}$ = 0.11 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 21 discharge measurements made in the period 1961-73.

Accuracy.--$SE_{7,2}$ = 58 percent, $SE_{7,10}$ = 59 percent.

05427223 Rock River tributary near Busseyville, Wis.

Location.--NW¼SW¼ sec. 3, T. 5 N., R. 13 E., Jefferson County, at bridge on State Highway 106, 2.5 mi northeast of Busseyville.

Drainage area.--9.83 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 17, 1973, 3.94 ft^3/s.

05427230 Otter Creek near Milton, Wis.

Location.--NW¼SW¼ sec. 11, T. 4 N., R. 13 E., Rock County, at State Highway 26, 3.4 mi north of Milton.

Drainage area.--41.5 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.13 ft^3/s, Oct. 14, 1964.

Low-flow frequency.--$Q_{7,2}$ = 0.39 ft^3/s, $Q_{7,10}$ = 0.12 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 11 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 71 percent, $SE_{7,10}$ = 75 percent.

05427233 Otter Creek near Newville, Wis.

Location.--NE¼NE¼ sec. 3, T. 4 N., R. 13 E., Rock County, at bridge on country road, 4.4 mi east of Newvill

Drainage area.--44.0 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 8.83 ft^3/s.

05427255 Koshkonong Creek at Sun Prairie, Wis.

Location.--NW¼NE¼ sec. 8, T. 8 N., R. 11 E., Dane County, just upstream from sewage-treatment plant, at Sun Prairie.

Drainage area.--2.85 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 0.246 ft^3/s; July 23, 1973, 0.537 ft^3/s; Nov. 5, 1973, 0.130 ft^3/s; Sept. 26, 1975, 0.092 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.05 ft^3/s, $Q_{7,10}$ = 0.01 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427265 Koshkonong Creek near Sun Prairie, Wis.

Location.--NW¼SW¼ sec. 18, T. 8 N., R. 11 E., Dane County, 2.7 mi downstream from sewage-treatment plant at Sun Prairie.

Drainage area.--7.16 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 25, 1975, 2.68 ft^3/s.

05427266 Tributary to Koshkonong Creek tributary at Sun Prairie, Wis.

Location.--SW¼NE¼ sec. 12, T. 8 N., R. 10 E., Dane County, at culvert on Thompson Road, at Sun Prairie.

Drainage area.--1.30 mi^2. Tributary to.--Koshkonong Creek tributary.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 25, 1975, 0.222 ft^3/s.

05427350 Koshkonong Creek near Deerfield, Wis.

Location.--SE¼NE¼ sec. 16, T. 7 N., R. 12 E., Dane County, at State Highway 73, 1.5 mi north of Deerfield.

Drainage area.--64.3 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--2.66 ft^3/s, Aug. 14, 1964.

Low-flow frequency.--$Q_{7,2}$ = 5.1 ft^3/s, $Q_{7,10}$ = 2.8 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 12 discharge measurements made in the period 1962-66.

Accuracy.--$SE_{7,2}$ = 33 percent, $SE_{7,10}$ = 40 percent.

05427369 Mud Creek tributary at Deerfield, Wis.

Location.--SW¼SW¼ sec. 22, T. 7 N., R. 12 E., Dane County, at sewage-treatment plant, at Deerfield.

Drainage area.--0.10 mi^2. Tributary to.--Mud Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 24, 1975, 0 ft^3/s.

05427370 Mud Creek tributary at Deerfield, Wis.

Location.--NW¼SW¼ sec. 22, T. 7 N., R. 12 E., Dane County, 0.3 mi downstream from Deerfield sewage-treatment plant outfall, at Deerfield.

Drainage area.--0.74 mi^2. Tributary to.--Mud Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 0.426 ft^3/s; July 24, 1973, 0.205 ft^3/s; Nov. 5, 1973, 0.655 ft^3/s; June 24, 1974, 0.43 ft^3/s.

Low-flow frequency.--Unable to define relationship, discharge predominantly effluent from sewage-treatment plant.

05427430 Koshkonong Creek at London, Wis.

Location.--NW¼SW¼ sec. 19, T. 7 N., R. 13 E., Jefferson County, at County Trunk O, 0.7 mi north of London.

Drainage area.--109 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 16, 1967, 18.0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427485 Koshkonong Creek tributary near Cambridge, Wis.

Location.--SE¼SW¼ sec. 3, T. 6 N., R. 13 E., Jefferson County, at bridge on U.S. Highway 18, 3.7 mi east of Cambridge.

Drainage area.--0.85 mi^2. Tributary to.--Koshkonong Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 18, 1973, 0.542 ft^3/s.

05427490 Koshkonong Creek tributary near Cambridge, Wis.

Location.--NW¼SW¼ sec. 9, T. 6 N., R. 13 E., Jefferson County, at bridge on County Trunk A, 2.3 mi east of Cambridge.

Drainage area.--5.09 mi^2. Tributary to.--Koshkonong Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 18, 1973, 2.05 ft^3/s.

05427502 Koshkonong Creek tributary at Cambridge, Wis.

Location.--NW¼NE¼ sec. 7, T. 6 N., R. 13 E., Jefferson County, 0.8 mi northeast of Cambridge.

Drainage area.--7.71 mi^2. Tributary to.--Koshkonong Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 18, 1973, 4.81 ft^3/s.

05427505 Koshkonong Creek at Cambridge, Wis.

Location.--NW¼NE¼ sec. 12, T. 6 N., R. 12 E., Dane County, at bridge on U.S. Highway 12, at Cambridge.

Drainage area.--151 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 23.2 ft^3/s; July 24, 1973, 37.7 ft^3/s; Nov. 5, 1973, 45.1 ft^3/s; Sept. 24, 1975, 26.8 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 15 ft^3/s, $Q_{7,10}$ = 8.4 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--59 percent (basin average).

05427506 Koshkonong Creek at Rockdale, Wis.

Location.--SW¼NW¼ sec. 24, T. 6 N., R. 12 E., Dane County, at sewage-treatment plant in Rockdale, just downstream from dam on Rockdale Millpond.

Drainage area.-- Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 27.6 ft^3/s; July 24, 1973, 38.2 ft^3/s; Nov. 5, 1973, 49.0 ft^3/s; Sept. 24, 1975, 35.2 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 17 ft^3/s, $Q_{7,10}$ = 9.2 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--59 percent (basin average).

05427508 Koshkonong Creek tributary near Rockdale, Wis.

Location.--SE¼SE¼ sec. 30, T. 6 N., R. 13 E., Jefferson County, at county road, 2.3 mi southeast of Rockdale.

Drainage area.--0.62 mi^2. Tributary to.--Koshkonong Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 0.460 ft^3/s.

05427509 Koshkonong Creek tributary near Rockdale, Wis.

Location.--SE¼NW¼ sec. 6, T. 5 N., R. 13 E., Jefferson County, at bridge on town road, 3.1 mi south of Rockdale.

Drainage area.--2.17 mi^2. Tributary to.--Koshkonong Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 16, 1973, 1.33 ft^3/s.

05427510 Koshkonong Creek near Busseyville, Wis.

Location.--NE¼SW¼ sec. 7, T. 5 N., R. 13 E., Jefferson County, at country road, 1.2 mi northwest of Busseyville.

Drainage area.--163 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Oct. 27, 1966, 24.0 ft^3/s; Aug. 16, 1967, 26.6 ft^3/s.

05427512 Koshkonong Creek at Busseyville, Wis.

Location.--SE¼NW¼ sec. 17, T. 5 N., R. 13 E., Jefferson County, at bridge on State Highway 106, at Busseyville.

Drainage area.--168 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 64.6 ft^3/s.

05427550 Saunders Creek at Albion, Wis.

Location.--NW¼SW¼ sec. 22, T. 5 N., R. 12 E., Dane County, at State Highway 106, at Albion.

Drainage area.--21.2 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.34 ft^3/s, Oct. 14, 1964.

Low-flow frequency.--$Q_{7,2}$ = 2.1 ft^3/s, $Q_{7,10}$ = 1.1 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 12 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 29 percent, $SE_{7,10}$ = 30 percent.

05427562 Rock River near Edgerton, Wis.

Location.--NE¼NE¼ sec. 16, T. 4 N., R. 12 E., Rock County, at bridge on U.S. Highway 51, 1.2 mi south of Edgerton.

Drainage area.--2,630 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 2,000 ft^3/s.

05427616 Yahara River tributary at Morrisonville, Wis.

Location.--NW¼SE¼ sec. 1, T. 9 N., R. 9 E., Dane County, at sewage-disposal pond, 0.9 mi northwest of Morrisonville.

Drainage area.--18.7 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 0 ft^3/s; July 23, 1973, 0 ft^3/s; Nov. 5, 1973, 0 ft^3/s; Sept. 25, 1975 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements made in the period 1972-75.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427640 Yahara River at De Forest, Wis.

Location.--NW¼NW¼ sec. 17, T. 9 N., R. 10 E., Dane County, at bridge on County Trunk CV, at De Forest.

Drainage area.--39.2 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 4.03 ft^3/s; July 23, 1973, 10.8 ft^3/s; Nov. 5, 1973, 13.5 ft^3/s; Sept. 25, 1975, 7.36 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 2.6 ft^3/s, $Q_{7,10}$ = 1.6 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 4 discharge measurements.

Accuracy.--59 percent (basin average).

05427700 Yahara River near De Forest, Wis.

Location.--SW¼NE¼ sec. 30, T. 9 N., R. 10 E., Dane County, at Windsor Road, 2.3 mi south of De Forest.

Drainage area.--48.6 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--2.48 ft^3/s, Aug. 13, 1964.

Low-flow frequency.--$Q_{7,2}$ = 2.8 ft^3/s, $Q_{7,10}$ = 1.7 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 11 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 19 percent, $SE_{7,10}$ = 20 percent.

05427800 Token Creek near Madison, Wis.

Location.--SW¼SW¼ sec. 4, T. 8 N., R. 10 E., Dane County, at U.S. Highway 51, 7.9 mi northeast of capitol at Madison.

Drainage area.--24.3 mi^2. Tributary to.--Yahara River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--8.87 ft^3/s, June 1, 1966.

Low-flow frequency.--$Q_{7,2}$ = 12 ft^3/s, $Q_{7,10}$ = 9.6 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 39 discharge measurements made in the period 1961-69.

Accuracy.--$SE_{7,10}$ = 13 percent.

05427895 Sixmile Creek at Waunakee, Wis.

Location.--SW¼NE¼ sec. 8, T. 8 N., R. 9 E., Dane County, at sewage-treatment plant, at Waunakee.

Drainage area.--38.3 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 2.91 ft^3/s; July 23, 1973, 9.89 ft^3/s; Nov. 5, 1973, 13.5 ft^3/s; Sept. 25, 1975, 8.01 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.60 ft^3/s, $Q_{7,10}$ = 0.23 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 4 discharge measurements.

Accuracy.--59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05427900 Sixmile Creek near Waunakee, Wis.

Location.--NE¼NW¼ sec. 16, T. 8 N., R. 9 E., Dane County, at country road, 1.5 mi southeast of Waunakee.

Drainage area.--41.1 mi^2. Tributary to.--Yahara River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.38 ft^3/s, July 31, 1965.

Low-flow frequency.--$Q_{7,2}$ = 0.74 ft^3/s, $Q_{7,10}$ = 0.28 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 17 discharge measurements made in the period 1962-76.

Accuracy.--$SE_{7,10}$ = 47 percent.

05427910 Sixmile Creek near Waunakee, Wis.

Location.--NE¼NW¼ sec. 28, T. 8 N., R. 9 E., Dane County, at County Trunk M, 3.2 mi south of Waunakee.

Drainage area.--48.3 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 14, 1967, 3.51 ft^3/s.

05427927 Spring Creek near Waunakee, Wis.

Location.--NE¼NW¼ sec. 30, T. 8 N., R. 9 E., Dane County, at culverts on County Trunk Q, 3.4 mi southwest of Waunakee.

Drainage area.--9.94 mi^2. Tributary to.--Sixmile Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 25, 1975, 3.80 ft^3/s.

05427930 Spring Creek near Waunakee, Wis.

Location.--NW¼SW¼ sec. 28, T. 8 N., R. 9 E., Dane County, at County Trunk M, 3.6 mi south of Waunakee.

Drainage area.--12.6 mi^2. Tributary to.--Sixmile Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--1.56 ft^3/s, Aug. 14, 1967.

Low-flow frequency.--$Q_{7,2}$ = 1.6 ft^3/s, $Q_{7,10}$ = 1.0 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 11 discharge measurements in the 1967-76 period.

Accuracy.--$SE_{7,10}$ = 21 percent.

05427940 Pheasant Branch near Ashton, Wis.

Location.--NE¼SW¼ sec. 33, T. 8 N., R. 8 E., Dane County, at culvert on Schneider Road, 1.0 mi south of church in Ashton.

Drainage area.--4.83 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 7, 1975, 0.112 ft^3/s.

05427948 Pheasant Branch at Middleton, Wis.

Location.--NE¼NW¼ sec. 11, T. 7 N., R. 8 E., Dane County, at U.S. Highway 12, 0.4 mi north of St. Bernard's Church in Middleton.

Drainage area.--18.3 mi^2. Tributary to.--Yahara River.

Type of site.--Gaging station.

Period of record.--July 1974 to September 1975.

Extremes.--Maximum discharge, 516 ft^3/s Mar. 21, 1975; minimum, 0.62 ft^3/s Feb. 25 and 26, 1975.

Low-flow frequency.--$Q_{7,2}$ = 0.38 ft^3/s, $Q_{7,10}$ = 0.25 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 14 mean daily discharges in the 1974-76 period.

Accuracy.--$SE_{7,10}$ = 45 percent.

05427950 Pheasant Branch at Century Avenue at Middleton, Wis.

Location.--SE¼SW¼ sec. 1, T. 7 N., R. 8 E., Dane County, at bridge on County Highway M, in Middleton.

Drainage area.--20.8 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 8, 1975, 1.54 ft^3/s.

05427952 Pheasant Branch at mouth at Middleton, Wis.

Location.--SE¼SE¼ sec. 1, T. 7 N., R. 8 E., Dane County, at County Trunk M, 500 ft upstream from mouth, at Middleton.

Drainage area.--24.5 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--2.63 ft^3/s, Aug. 14, 1967.

Low-flow frequency.--$Q_{7,2}$ = 2.7 ft^3/s, $Q_{7,10}$ = 2.0 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 23 discharge measurements made in the period 1967-76.

Accuracy.--$SE_{7,10}$ = 21 percent.

05428470 Yahara River at Madison, Wis.

Location.--SE¼SE¼ sec. 12, T. 7 N., R. 9 E., Dane County, at Johnson Street bridge, 1.5 mi northeast of capitol, at Madison.

Drainage area.--233 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 20, 1931, 66.2 ft^3/s.

05428500 Yahara River at Madison, Wis.

Location.--NW¼NW¼ sec. 7, T. 7 N., R. 10 E., Dane County, at Main Street bridge, 1.5 mi northeast of capitol, at Madison.

Drainage area.--235 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--12.7 ft^3/s, Oct. 19, 1975.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

Remarks.--Flow regulated by dam at outlet of Lake Mendota.

05429120 Lake Wingra Outlet at Madison, Wis.

Location.--NE¼NE¼ sec. 27, T. 7 N., R. 9 E., Dane County, on right bank at outlet of Lake Wingra, in Madison.

Drainage area.--6.08 mi^2. Tributary to.--Yahara River.

Type of site.--Gaging station.

Period of record.--October 1970 to September 1975.

Average discharge.--5 years, 4.23 ft^3/s.

Extremes.--Maximum discharge, 45 ft^3/s Mar. 7, 1973; minimum, no flow many days in 1971-75.

Low-flow frequency.--$Q_{7,2}$ = 0.00 ft^3/s, $Q_{7,10}$ = 0.00 ft^3/s.

Accuracy.--Not applicable.

Remarks.--Water from Lake Wingra lagoons bypasses gage through a 30-inch storm sewer.

05429150 Murphy Creek at Madison, Wis.

Location.--SW¼SE¼ sec. 26, T. 7 N., R. 9 E., Dane County, at Beld Street, in Madison.

Drainage area.--8.10 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--No flow many days in 1972 and 1973.

Low-flow frequency.--$Q_{7,2}$ = 0.00 ft^3/s, $Q_{7,10}$ = 0.00 ft^3/s.

Accuracy.--Not applicable.

05429500 Yahara River at McFarland, Wis.

Location.--NW¼SW¼ sec. 3, T. 6 N., R. 10 E., Dane County, at U.S. Highway 51, 0.9 mi southwest of McFarland.

Drainage area.--327 mi^2. Tributary to.--Rock River.

Type of site.--Gaging station.

Period of record.--September 1930 to September 1975.

Average discharge.--45 years, 152 ft^3/s.

Extremes.--Maximum discharge, 867 ft^3/s Apr. 10, 1959; minimum, 1.0 ft^3/s Oct. 18, 1964.

1932-59 CY

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	36	22	16	13	9.0	7.1
14	39	24	18	13	9.3	7.2
30	49	29	21	16	11	8.3
60	59	38	30	24	18	15
90	67	46	37	31	25	21

1960-75 CY

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years			
	2	5	10	20
7	17	7.9	5.5	4.1
14	20	9.1	6.1	4.4
30	28	13	8.3	5.7
60	37	18	12	8.6
90	47	24	17	12

1932-75 CY

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	29	14	9.6	6.7	4.3	3.2
14	32	16	11	7.4	4.7	3.4
30	41	21	14	9.5	6.0	4.3
60	52	29	20	14	9.5	7.1
90	62	36	26	19	13	10

Period of record

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	470	398	318	234	183	149	123
Percent	60	70	80	90	95	98	99.9
ft^3/s	100	79	60	38	26	16	4.5

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05429500 Yahara River at McFarland, Wis.--Continued

Accuracy.--Not applicable due to large amount of regulation.

Remarks.--Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District has been diverting effluent into Badfish Creek since December 29, 1958. Prior to December 29, 1958, the effluent was discharged into the Yahara River upstream from McFarland. The low-flow frequency analyses were run for three periods:

(1) Effluent from Madison Metropolitan Sewerage District discharged into Yahara River upstream from McFarland (1932-59 CY).
(2) Effluent discharged into Badfish Creek (1960-75 CY).
(3) Total period of record (1932-75 CY).

05429570 Door Creek tributary at Cottage Grove, Wis.

Location.--SW¼NE¼ sec. 17, T. 7 N., R. 11 E., Dane County, just upstream from sewage-disposal ponds, 0.8 mi west of Cottage Grove.

Drainage area.--2.73 mi^2. Tributary to.--Door Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 1, 1972, 0.74 ft^3/s; July 24, 1973, 0.74 ft^3/s; Nov. 5, 1973, 1.59 ft^3/s; Sept. 26, 1975, 0.630 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.31 ft^3/s, $Q_{7,10}$ = 0.13 ft^3/s.

Basis of estimate.--Correlated with Crawfish River at Milford using 4 discharge measurements.

Accuracy.--59 percent (basin average).

05429600 Door Creek near McFarland, Wis.

Location.--SW¼NE¼ sec. 6, T. 6 N., R. 11 E., Dane County, at County Trunk MN, 2.7 mi east of McFarland.

Drainage area.--26.7 mi^2. Tributary to.--Yahara River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.98 ft^3/s, Sept. 14, 1966.

Low-flow frequency.--$Q_{7,2}$ = 3.1 ft^3/s, $Q_{7,10}$ = 1.8 ft^3/s.

Basis of estimate.--Correlated with Black Earth Creek at Black Earth using 11 discharge measurements made in the period 1966-72.

Accuracy.--$SE_{7,10}$ = 38 percent.

05429650 Yahara River near Stoughton, Wis.

Location.--NE¼SW¼ sec. 20, T. 6 N., R. 11 E., Dane County, at county road bridge near La Follette County Park, 3.6 mi north of post office in Stoughton.

Drainage area.--387 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 30, 1972, 200 ft^3/s.

05429710 Yahara River at Stoughton, Wis.

Location.--SE¼NE¼ sec. 8, T. 5 N., R. 11 E., Dane County, at sewage-treatment plant, at Stoughton.

Drainage area.--410 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 120 ft^3/s; July 26, 1973, 196 ft^3/s; Nov. 8, 1973, 283 ft^3/s; Sept. 23, 1975, 195 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional measurements are required.

05430035 Oregon Branch at Oregon, Wis.

Location.--NW¼NE¼ sec. 12, T. 5 N., R. 9 E., Dane County, at sewage-treatment plant, at Oregon.

Drainage area.--11.1 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, <0.05 ft^3/s; July 23, 1973, 0.141 ft^3/s; Nov. 8, 1973, 0.172 ft^3/s; Sept. 26, 1975, 0.168 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.01 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 4 discharge measurements.

Accuracy.--59 percent (basin average).

05430040 Oregon Branch near Oregon, Wis.

Location.--NW¼SE¼ sec. 6, T. 5 N., R. 10 E., Dane County, just upstream from confluence with Madison Metropolitan aquaduct tributary, 1.5 mi east of Oregon.

Drainage area.--21.4 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 1.89 ft^3/s; July 26, 1973, 2.46 ft^3/s.

05430055 Oregon Branch near Oregon, Wis.

Location.--SE¼SE¼ sec. 4, T. 5 N., R. 10 E., Dane County, at State Highway 138, 3.6 mi east of Oregon.

Drainage area.--27.9 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 30, 1955, 2.31 ft^3/s.

05430085 Rutland Branch Badfish Creek near Brooklyn, Wis.

Location.--NE¼SW¼ sec. 16, T. 5 N., R. 10 E., Dane County, at County Trunk A, 3.8 mi northeast of Brooklyn.

Drainage area.--5.94 mi^2. Tributary to.--Badfish Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 30, 1955, 5.34 ft^3/s.

05430100 Badfish Creek near Stoughton, Wis.

Location.--SW¼SW¼ sec. 14, T. 5 N., R. 10 E., Dane County, at country road 4.1 mi southwest of Stoughton.

Drainage area.--41.3 mi^2. Tributary to.--Yahara River.

Type of site.--Gaging station.

Period of record.--May 1956 to September 1966.

Average discharge.--7 years (1959-66), 52.5 ft^3/s (unadjusted). The Madison Metropolitan Sewerage District began discharging effluent into the basin December 29, 1958.

Extremes.--Maximum discharge, 871 ft^3/s Jan. 13, 1960; minimum, 3.4 ft^3/s Nov. 26, 1958, result of freezeup.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years		
	2	5	10
7	37	32	30
14	37	34	33
30	39	36	34
60	41	38	37
90	42	39	38

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	123	78	63	56	52	48	46
Percent	60	70	80	90	95	98	99.9
ft^3/s	44	43	42	37	34	31	21

Accuracy.--$SE_{7,2}$ = 5 percent, $SE_{7,10}$ = 10 percent.

Remarks.--The low-flow frequency values and duration table values were determined for period after Madison Metropolitan Sewerage District began discharging effluent into the basin (1959-66).

05430150 Badfish Creek near Cooksville, Wis.

Location.--SW¼SE¼ sec. 4, T. 4 N., R. 11 E., Rock County, at State Highway 59, 2.2 mi east of Cooksville.

Drainage area.--82.6 mi^2. Tributary to.--Yahara River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--19.9 ft^3/s, Aug. 30, 1955.

Low-flow frequency.--$Q_{7,2}$ = 15 ft^3/s, $Q_{7,10}$ = 11 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 6 discharge measurements made in the period 1953-55. This estimate is for natural flow conditions prior to the addition of effluent from the Madison Metropolitan Sewerage District.

Accuracy.--$SE_{7,10}$ = 24 percent.

05430210 Yahara River at Fulton, Wis.

Location.--NE¼SW¼ sec. 18, T. 4 N., R. 12 E., Rock County, at County Trunk M, at Fulton.

Drainage area.--536 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1967, 144 ft^3/s; Oct. 1, 1975, 203 ft^3/s.

05430300 Marsh Creek at Janesville, Wis.

Location.--NW¼SE¼ sec. 15, T. 3 N., R. 12 E., Rock County, at City Route U.S. Highway 14, 3.1 mi northwest of downtown Janesville.

Drainage area.--27.3 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--4.64 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 6.6 ft^3/s, $Q_{7,10}$ = 4.3 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 13 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,10}$ = 21 percent.

05430377 Rock River at Janesville, Wis.

Location.--NW¼NE¼ sec. 1, T. 2 N., R. 12 E., Rock County, at bridge on Jackson Street, at Janesville.

Drainage area.--3,310 mi^2. Tributary to.--Mississippi River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 30, 1975, 960 ft^3/s.

05430400 Fisher Creek near Janesville, Wis.

Location.--NW¼SE¼ sec. 3, T. 2 N., R. 12 E., Rock County, at bridge on County Trunk D, 2.3 mi southwest of Janesville.

Drainage area.--3.93 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1968, 0.22 ft^3/s; Oct. 21, 1968, 0.22 ft^3/s.

05430405 Fisher Creek tributary near Janesville, Wis.

Location.--NW¼SE¼ sec. 3, T. 2 N., R. 12 E., Rock County, at bridge on County Trunk D, 2.2 mi southwest of Janesville.

Drainage area.--1.62 mi^2. Tributary to.--Fisher Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1968, 0.13 ft^3/s; Oct. 21, 1968, 0.18 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05430450 Markham Creek near Janesville, Wis.

Location.--NW¼SW¼ sec. 10, T. 2 N., R. 12 E., Rock County, at bridge on County Trunk D, 3.4 mi southwest of Janesville.

Drainage area.--9.99 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1968, 0.91 ft^3/s; Oct. 21, 1968, 1.19 ft^3/s.

05430500 Rock River at Afton, Wis.

Location.--SE¼NE¼ sec. 28, T. 2 N., R. 12 E., Rock County, 0.3 mi downstream from highway bridge, at Afton.

Drainage area.--3,340 mi^2. Tributary to.--Mississippi River.

Type of site.--Gaging station.

Period of record.--January 1914 to September 1975.

Average discharge.--61 years, 1,760 ft^3/s.

Extremes.--Maximum discharge, 13,000 ft^3/s Mar. 23 and 24, 1929; minimum daily, 42 ft^3/s Aug. 25 and 26, 1934.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	416	260	200	158	121	100
14	451	291	227	183	142	120
30	497	327	257	209	163	137
60	564	373	296	242	191	162
90	637	420	333	273	217	185

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time						
Percent	2	5	10	20	30	40
ft^3/s	7,200	5,300	3,900	2,680	1,910	1,450
Percent	50	60	70	80	90	95
ft^3/s	1,160	930	760	620	430	320
Percent	98	99.9				
ft^3/s	234	84				

Accuracy.--$SE_{7,2}$ = 7 percent, $SE_{7,10}$ = 11 percent.

Remarks.--Diurnal fluctuation caused by powerplants upstream from station.

05430510 Bass Creek near Footville, Wis.

Location.--NW¼NW¼ sec. 31, T. 3 N., R. 11 E., Rock County, at bridge on country road, 2.2 mi northwest of Footville.

Drainage area.--2.75 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.30 ft^3/s; Oct. 21, 1968, 0.19 ft^3/s.

05430515 Bass Creek tributary near Footville, Wis.

Location.--NW¼NW¼ sec. 31, T. 3 N., R. 11 E., Rock County, at bridge on country road, 2.2 mi northwest of Footville.

Drainage area.--2.53 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.61 ft^3/s; Oct. 21, 1968, 0.41 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05430520 Bass Creek tributary near Footville, Wis.

Location.--SW¼SE¼ sec. 30, T. 3 N., R. 11 E., Rock County, at bridge on County Trunk B, 1.8 mi northwest of Footville.

Drainage area.--2.50 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0 ft^3/s; Oct. 21, 1968, 0 ft^3/s.

05430525 Bass Creek at Footville, Wis.

Location.--NW¼SW¼ sec. 4, T. 2 N., R. 11 E., Rock County, at bridge on State Highway 11, 0.7 mi south of Footville.

Drainage area.--14.0 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--5.42 ft^3/s, July 27, 1976.

Low-flow frequency.--$Q_{7,2}$ = 4.2 ft^3/s, $Q_{7,10}$ = 3.3 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 7 discharge measurements made in the period 1968-76.

Accuracy.--$SE_{7,10}$ = 12 percent.

05430530 Stevens Creek near Footville, Wis.

Location.--SE¼SE¼ sec. 27, T. 3 N., R. 11 E., Rock County, at bridge on Mineral Point Road, 2.1 mi northeast of Footville.

Drainage area.--7.32 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.63 ft^3/s; Oct. 21, 1968, 0.52 ft^3/s.

05430535 Stevens Creek tributary near Footville, Wis.

Location.--SW¼SW¼ sec. 26, T. 3 N., R. 11 E., Rock County, at bridge on Mineral Point Road, 2.2 mi northeast of Footville.

Drainage area.--3.19 mi^2. Tributary to.--Stevens Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.41 ft^3/s; Oct. 21, 1968, 0.51 ft^3/s.

05430540 Stevens Creek near Footville, Wis.

Location.--SE¼SW¼ sec. 2, T. 2 N., R. 11 E., Rock County, at bridge on country road, 2.6 mi southeast of Footville.

Drainage area.--13.9 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 2.26 ft^3/s; Oct. 21, 1968, 2.49 ft^3/s; July 27, 1976, 2.24 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05430550 Bass Creek tributary near Footville, Wis.

Location.--NW¼NE¼ sec. 18, T. 2 N., R. 11 E., Rock County, at bridge on State Highway 11, 2.6 mi southwest of Footville.

Drainage area.--2.52 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.40 ft^3/s; Oct. 21, 1968, 0.51 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05430560 Bass Creek tributary at Hanover, Wis.

Location.--SW¼SE¼ sec. 10, T. 2 N., R. 11 E., Rock County, at bridge on country road, 0.6 mi west of Hanover.

Drainage area.--14.7 mi^2. Tributary to.--Bass Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 1.85 ft^3/s; Oct. 21, 1968, 2.63 ft^3/s; July 27, 1976, 1.47 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 1.2 ft^3/s, $Q_{7,10}$ = 0.82 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 3 discharge measurements.

Accuracy.--59 percent (basin average).

05430580 Bass Creek at Hanover, Wis.

Location.--NE¼NW¼ sec. 14, T. 2 N., R. 11 E., Rock County, at bridge on County Trunk H, at Hanover.

Drainage area.--47.0 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1967, 11.7 ft^3/s; Aug. 14, 1968, 14.7 ft^3/s; Oct. 21, 1968, 13.9 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05430600 Bass Creek near Janesville, Wis.

Location.--SE¼NE¼ sec. 24, T. 2 N., R. 11 E., Rock County, at country road, 6.7 mi southwest of Janesville.

Drainage area.--58.1 mi^2. Tributary to.--Rock River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--7.22 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 11 ft^3/s; $Q_{7,10}$ = 7.7 ft^3/s.

Basis of estimate.--Correlated with Sugar River near Brodhead using 16 discharge measurements made in the period 1962-76.

Accuracy.--$SE_{7,10}$ = 17 percent.

05430610 Bass Creek at Afton, Wis.

Location.--SW¼SE¼ sec. 27, T. 2 N., R. 12 E., Rock County, at Chicago and Northwestern Railroad crossing, 0.7 mi east of Afton.

Drainage area.--65.7 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1968, 18.7 ft^3/s, Oct. 21, 1968, 20.8 ft^3/s.

05430650 Rock River tributary near Beloit, Wis.

Location.--SW¼NW¼ sec. 11, T. 1 N., R. 12 E., Rock County, at bridge on private road, 4.0 mi north of Beloit.

Drainage area.--13.2 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1968, 1.14 ft^3/s; Oct. 21, 1968, 1.47 ft^3/s.

05431002 Turtle Creek near Delavan, Wis.

Location.--SE¼NW¼ sec. 14, T. 3 N., R. 15 E., Walworth County, at culvert on country road, 0.25 mi downstream from outlet of Turtle Lake, 6.4 mi north of Delavan.

Drainage area.--1.46 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.11 ft^3/s; Oct. 17, 1968, 0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431003 Turtle Creek tributary near Delavan, Wis.

Location.--NE¼NE¼ sec. 24, T. 3 N., R. 15 E., Walworth County, at bridge on County Trunk P, 5.2 mi north of Horton Park in Delavan.

Drainage area.--3.03 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 27, 1972, 1.08 ft^3/s.

05431005 Turtle Creek near Delavan, Wis.

Location.--NW¼NE¼ sec. 35, T. 3 N., R. 15 E., Walworth County, at bridge on Island Road, 4.5 mi northwest of Delavan.

Drainage area.--14.3 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 1, 1965, 10.8 ft^3/s; Aug. 14, 1968, 3.67 ft^3/s; Oct. 17, 1968, 3.39 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 2.5 ft^3/s, $Q_{7,10}$ = 1.6 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--59 percent (basin average).

05431008 Turtle Creek tributary near Delavan, Wis.

Location.--NW¼SW¼ sec. 31, T. 3 N., R. 16 E., Walworth County, at bridge on County Trunk P, 0.45 mi upstream from mouth, 3.0 mi north of Delavan.

Drainage area.--2.58 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0 ft^3/s; Oct. 17, 1968, 0 ft^3/s; June 28, 1972, 1.53 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.0 ft^3/s, $Q_{7,10}$ = 0.0 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--Not applicable.

05431010 Turtle Creek tributary near Delavan, Wis.

Location.--SW¼SE¼ sec. 5, T. 2 N., R. 16 E., Walworth County, at bridge on County Trunk O, 1.3 mi north of Delavan.

Drainage area.--9.00 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 28, 1972, 0.24 ft^3/s.

05431011 Turtle Creek at Delavan, Wis.

Location.--NE¼NW¼ sec. 18, T. 2 N., R. 16 E., Walworth County, at bridge on town road, at outlet of Comus Lake, at Delavan.

Drainage area.--33.1 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 6.43 ft^3/s; Aug. 14, 1968, 6.56 ft^3/s; Oct. 17, 1968, 5.99 ft^3/s; Oct. 17, 1968, 6.23 ft^3/s; June 26, 1972, 10.4 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 5.6 ft^3/s, $Q_{7,10}$ = 3.9 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 5 discharge measurements.

Accuracy.--59 percent (basin average).

05431015 Jackson Creek near Elkhorn, Wis.

Location.--NW¼SW¼ sec. 7, T. 2 N., R. 17 E., Walworth County, at bridge on State Highway 67, 1.7 mi south of Elkhorn.

Drainage area.--9.59 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--0.62 ft^3/s, Oct. 17, 1968.

Low-flow frequency.--$Q_{7,2}$ = 0.41 ft^3/s, $Q_{7,10}$ = 0.27 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 7 discharge measurements made in the period 1968-75.

Accuracy.--$SE_{7,10}$ = 46 percent.

05431016 Jackson Creek near Elkhorn, Wis.

Location.--SE¼SE¼ sec. 11, T. 2 N., R. 16 E., Walworth County, at bridge on town road at mouth, 2.3 mi south of post office, in Elkhorn

Drainage area.--15.3 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 29, 1972, 4.52 ft^3/s.

05431018 Tributary to Turtle Creek tributary near Delavan, Wis.

Location.--SE¼SE¼ sec. 32, T. 2 N., R. 16 E., Walworth County, at culvert on Shore Drive, 3.5 mi scuth of Delavan.

Drainage area.--9.54 mi^2. Tributary to.--Turtle Creek tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.21 ft^3/s; Oct. 17, 1968, 0.15 ft^3/s.

05431022 Turtle Creek tributary near Delavan, Wis.

Location.--SW¼SE¼ sec. 20, T. 2 N., R. 16 E., Walworth County, at bridge on country road, 1.4 mi southeast of Delavan.

Drainage area.--40.6 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 0.70 ft^3/s; Aug. 14, 1968, 0.85 ft^3/s; Oct. 17, 1968, 1.67 ft^3/s; June 27, 1972, 5.48 ft^3/s; Nov. 29, 1972, 2.60 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05431025 Turtle Creek tributary at Delavan, Wis.

Location.--SW¼SE¼ sec. 19, T. 2 N., R. 16 E., Walworth County, at bridge on County Trunk O, 1.0 mi south of Delavan.

Drainage area.-- Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site

Discharge measurement.--Nov. 2, 1965, 44.9 ft^3/s.

05431030 Turtle Creek tributary at Delavan, Wis.

Location.--SW¼NW¼ sec. 18, T. 2 N., R. 16 E., Walworth County, at bridge on County Trunk P, at Delavan.

Drainage area.--47.4 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 1.27 ft^3/s; Oct. 21, 1968, 2.41 ft^3/s; June 26, 1972, 5.26 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 1.4 ft^3/s, $Q_{7,10}$ = 0.66 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431032 Turtle Creek at Delavan, Wis.

Location.--NW¼NW¼ sec. 18, T. 2 N., R. 16 E., Walworth County, at sewage-treatment plant, at Delavan.

Drainage area.--80.7 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--15.3 ft^3/s, June 2, 1972.

Low-flow frequency.--$Q_{7,2}$ = 6.9 ft^3/s, $Q_{7,10}$ = 4.2 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 6 discharge measurements made in the period 1965-75.

Accuracy.--$SE_{7,10}$ = 37 percent.

05431050 Turtle Creek near Delavan, Wis.

Location.--NE¼SW¼ sec. 10, T. 2 N., R. 15 E., Walworth County, at bridge on State Highway 11, 3.5 mi west of post office in Delavan.

Drainage area.--87.8 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 1, 1965, 73.1 ft^3/s; June 26, 1972, 22.8 ft^3/s.

05431057 Turtle Creek near Darien, Wis.

Location.--SE¼ sec. 17, T. 2 N., R. 15 E., Walworth County, at U.S. Highway 14 bridge, 2.5 mi northwest of Darien.

Drainage area.-- Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 1, 1965, 76.5 ft^3/s; Sept. 12, 1966, 20.8 ft^3/s.

05431070 Turtle Creek near Allens Grove, Wis.

Location.--NW¼SW¼ sec. 18, T. 2 N., R. 15 E., Walworth County, at bridge on County Trunk C, 3.5 mi north of Allens Grove.

Drainage area.--107 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 42.0 ft^3/s.

05431100 Turtle Creek near Allens Grove, Wis.

Location.--SE¼SE¼ sec. 24, T. 2 N., R. 14 E., Rock County, at bridge on country road, 2.3 mi northwest of Allens Grove.

Drainage area.--113 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 1, 1965, 91.7 ft^3/s; Aug. 15, 1967, 30.6 ft^3/s; Aug. 14, 1968, 27.0 ft^3/s; Oct. 17, 1968, 29.8 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 22 ft^3/s, $Q_{7,10}$ = 14 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05431125 Little Turtle Creek at Sharon, Wis.

Location.--NW¼SE¼ sec. 32, T. 1 N., R. 15 E., Walworth County, at sewage-treatment plant, 1.0 mi west of Sharon.

Drainage area.--1.71 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 0.05 ft^3/s (estimated); July 25, 1973, 0.182 ft^3/s; Nov. 6, 1973, 0.438 ft^3/s; Sept. 22, 1975, 0.024 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = <0.01 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05431130 Little Turtle Creek near Sharon, Wis.

Location.--NE¼NE¼ sec. 36, T. 1 N., R. 14 E., Rock County, at bridge on private road, 2.5 mi west of Sharon.

Drainage area.--6.26 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 1.30 ft^3/s.

05431150 Little Turtle Creek near Allens Grove, Wis.

Location.--SE¼SE¼ sec. 26, T. 1 N., R. 14 E., Rock County, at bridge on County Trunk W, 5.4 mi south of Allens Grove.

Drainage area.--7.43 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 1.69 ft^3/s; Oct. 17, 1968, 1.31 ft^3/s.

05431200 Little Turtle Creek near Allens Grove, Wis.

Location.--SE¼SE¼ sec. 14, T. 1 N., R. 14 E., Rock County, at bridge on County Trunk J, 3.5 mi southwest of Allens Grove.

Drainage area.--18.4 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 4.31 ft^3/s; Oct. 17, 1968, 5.06 ft^3/s.

05431250 Ladd Creek near Allens Grove, Wis.

Location.--SW¼SE¼ sec. 17, T. 1 N., R. 15 E., Walworth County, at bridge on Salt Box Road, 3.0 mi south of Allens Grove.

Drainage area.--6.33 mi^2. Tributary to.--Little Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.75 ft^3/s; Oct. 17, 1968, 0.63 ft^3/s; June 26, 1972, 1.26 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.40 ft^3/s, $Q_{7,10}$ = 0.20 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05431300 Ladd Creek near Allens Grove, Wis.

Location.--NE¼SW¼ sec. 7, T. 1 N., R. 15 E., Walworth County, at mouth, 1.9 mi south of Allens Grove.

Drainage area.--12.1 mi^2. Tributary to.--Little Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 2.87 ft^3/s; Oct. 17, 1968, 2.10 ft^3/s; June 26, 1972, 3.64 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431350 Little Turtle Creek tributary near Allens Grove, Wis.

Location.--SE¼SE¼ sec. 1, T. 1 N., R. 14 E., Rock County, at culvert on County Line Road, 1.3 mi southwest of Allens Grove.

Drainage area.--6.04 mi^2. Tributary to.--Little Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.79 ft^3/s; Oct. 17, 1968, 0.97 ft^3/s.

05431400 Little Turtle Creek at Allens Grove, Wis.

Location.--SE¼NE¼ sec. 6, T. 1 N., R. 15 E., Walworth County, at country road, 0.2 mi south of Allens Grove.

Drainage area.--41.8 mi^2. Tributary to.--Turtle Creek.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.30 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 1.6 ft^3/s, $Q_{7,10}$ = 0.54 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 31 discharge measurements made in the period 1961-72.

Accuracy.--$SE_{7,10}$ = 47 percent.

05431420 Little Turtle Creek tributary near Allens Grove, Wis.

Location.--NE¼SE¼ sec. 32, T. 2 N., R. 15 E., Walworth County, at culvert on State Highway 15, 1.2 mi east of Allens Grove.

Drainage area.--11.0 mi^2. Tributary to.--Little Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 1.84 ft^3/s; Oct. 17, 1968, 1.69 ft^3/s; June 26, 1972, 2.16 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05431430 Little Turtle Creek tributary at Allens Grove, Wis.

Location.--SE¼NE¼ sec. 31, T. 2 N., R. 15 E., Walworth County, at bridge on country road, 0.7 mi north of Allens Grove.

Drainage area.--22.2 mi^2. Tributary to.--Little Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 4.14 ft^3/s.

05431450 Little Turtle Creek near Allens Grove, Wis.

Location.--SE¼SW¼ sec. 25, T. 2 N., R. 14 E., Rock County, at mouth, 1.8 mi northwest of Allens Grove.

Drainage area.--68.1 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 15.9 ft^3/s; Oct. 17, 1968, 10.8 ft^3/s.

05431480 Spring Brook near Clinton, Wis.

Location.--NE¼SW¼ sec. 27, T. 2 N., R. 14 E., Rock County, at bridge on north-south country road, 3.5 mi northeast of Clinton.

Drainage area.--9.29 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.77 ft^3/s; Oct. 17, 1968, 0.46 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431500 Turtle Creek near Clinton, Wis.

Location.--SW¼SE¼ sec. 29, T. 2 N., R. 14 E., Rock County, at State Highway 140, 2.5 mi north of Clinton.

Drainage area.--202 mi^2. Tributary to.--Rock River.

Type of site.--Gaging station.

Period of record.--September 1939 to September 1975.

Average discharge.--36 years, 116 ft^3/s.

Extremes.--Maximum discharge, 16,500 ft^3/s Apr. 21, 1973; minimum discharge, 8 ft^3/s Dec. 29, 1956, result of freezeup.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	38	29	26	23	21	20
14	40	31	27	25	22	21
30	43	32	29	26	24	23
60	48	36	31	28	25	23
90	53	39	33	30	26	24

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	520	320	220	142	109	88	72
Percent	60	70	80	90	95	98	99.9
ft^3/s	61	53	46	38	33	28	19

Accuracy.--$SE_{7,2}$ = 6 percent, $SE_{7,10}$ = 7 percent.

05431550 Turtle Creek tributary No. 3 near Shopiere, Wis.

Location.--SE¼SW¼ sec. 35, T. 2 N., R. 13 E., Rock County, at bridge on country road, 0.3 mi upstream from mouth, 1.1 mi northeast of Shopiere.

Drainage area.--7.28 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0 ft^3/s; Oct. 17, 1968, 0 ft^3/s.

05431600 Turtle Creek tributary at Shopiere, Wis.

Location.--SW¼NE¼ sec. 2, T. 1 N., R. 13 E., Rock County, at bridge on County Trunk J, 0.9 mi northeast of Shopiere.

Drainage area.--3.67 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.48 ft^3/s; Oct. 17, 1968, 0.35 ft^3/s.

05431650 Turtle Creek near Shopiere, Wis.

Location.--NE¼NW¼ sec. 9, T. 1 N., R. 13 E., Rock County, at bridge on Lathers Road, 1.3 mi west of Shopiere.

Drainage area.--223 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 15, 1967, 41.0 ft^3/s; Aug. 14, 1968, 49.3 ft^3/s; Oct. 17, 1968, 43.4 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05431677 Turtle Creek at Beloit, Wis.

Location.--SW¼NW¼ sec. 20, T. 1 N., R. 13 E., Rock County, 4.2 mi upstream from mouth of Spring Brook, 0.8 mi north of Morgan School in Beloit.

Drainage area.--231 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Jan. 28, 1970, 53.9 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431681 Turtle Creek at Beloit, Wis.

Location.--SW¼SW¼ sec. 20, T. 1 N., R. 13 E., Rock County, at bridge 3.0 mi upstream from mouth of Spring Brook, 0.4 mi north of Morgan School in Beloit.

Drainage area.--232 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Jan. 28, 1970, 56.5 ft^3/s.

05431685 Turtle Creek at Beloit, Wis.

Location.--NW¼NE¼ sec. 30, T. 1 N., R. 13 E., Rock County, 2.3 mi upstream from mouth of Spring Brook, 0.5 mi west of Morgan School in Beloit.

Drainage area.--232 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Jan. 28, 1970, 55.1 ft^3/s.

05431695 Turtle Creek at Beloit, Wis.

Location.--SW¼NW¼ sec. 30, T. 1 N., R. 13 E., Rock County, 0.9 mi upstream from White Avenue Road, at Beloit.

Drainage area.--233 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 22, 1975, 91.5 ft^3/s.

05431700 Turtle Creek at Beloit, Wis.

Location.--SW¼SW¼ sec. 30, T. 1 N., R. 13 E., Rock County, at bridge on State Highway 15, at Beloit.

Drainage area.--233 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1967, 34.1 ft^3/s; Aug. 14, 1968, 49.2 ft^3/s; Oct. 17, 1968, 45.0 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05431710 Spring Brook near Clinton, Wis.

Location.--SW¼SW¼ sec. 18, T. 1 N., R. 14 E., Rock County, at culvert on Clinton Corners Road, 1.7 mi southwest of Clinton.

Drainage area.--3.09 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 0.705 ft^3/s; July 25, 1973, 1.22 ft^3/s; Nov. 6, 1973, 1.46 ft^3/s; Sept. 22, 1975, 0.625 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.30 ft^3/s, $Q_{7,10}$ = 0.20 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05431740 Spring Brook near Beloit, Wis.

Location.--NE¼NW¼ sec. 32, T. 1 N., R. 13 E., Rock County, at private road bridge, 2.6 mi northeast of post office, in Beloit.

Drainage area.--9.65 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 22, 1975, 2.25 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05431750 Spring Brook at Beloit, Wis.

Location.--SW¼NW¼ sec. 31, T. 1 N., R. 13 E., Rock County, at bridge on country road, 0.3 mi upstream from mouth, at Beloit.

Drainage area.--11.6 mi^2. Tributary to.--Turtle Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Aug. 14, 1968, 0.21 ft^3/s; Oct. 17, 1968, 0.23 ft^3/s.

05431760 Turtle Creek at South Beloit, Ill.

Location.--SE¼NE¼ sec. 6, T. 46 N., R. 12 E., Winnebago County, at mouth, at South Beloit.

Drainage area.--249 mi^2. Tributary to.--Rock River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 27, 1975, 82.8 ft^3/s.

05438291 Piscasaw Creek near Sharon, Wis.

Location.--SE¼SE¼ sec. 25, T. 1 N., R. 15 E., Walworth County, at bridge on County Trunk B, 3.3 mi east of Sharon.

Drainage area.--11.2 mi^2. Tributary to.--Kishwaukee River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 2, 1972, 3.64 ft^3/s; June 26, 1972, 3.59 ft^3/s; July 25, 1973, 8.12 ft^3/s; Nov. 6, 1973, 5.06 ft^3/s; Sept. 22, 1975, 4.48 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 1.9 ft^3/s, $Q_{7,10}$ = 1.3 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05438292 Piscasaw Creek near Sharon, Wis.

Location.--SE¼SE¼ sec. 36, T. 1 N., R. 15 E., Walworth County, at bridge on country road, 3.4 mi east of Sharon.

Drainage area.--14.0 mi^2. Tributary to.--Kiskwaukee River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 2, 1965, 4.82 ft^3/s; Sept. 12, 1966, 3.11 ft^3/s; June 26, 1972, 5.23 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05527610 Des Plaines River near Union Grove, Wis.

Location.--SE¼SE¼ sec. 32, T. 3 N., R. 21 E., Racine County, at County Trunk KR, 1.3 mi southeast of Union Grove.

Drainage area.--2.03 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 18, 1974, 0 ft^3/s; Sept. 18, 1975, 0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05527662 Brighton Creek near Paddock Lake, Wis.

Location.--NW¼NW¼ sec. 6, T. 1 N., R. 21 E., Kenosha County, at bridge on County Trunk K, 1.8 mi east of Paddock Lake.

Drainage area.--16.6 mi^2. Tributary to.--Des Plaines River.

Type of site.--Miscellaneous site.

Discharge measurements.--July 18, 1973, 1.84 ft^3/s; Aug. 9, 1973, 0.162 ft^3/s; Sept. 18, 1974, 0 ft^3/s; Sept. 17, 1975, 0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0 ft^3/s, $Q_{7,10}$ = 0 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 4 discharge measurements.

Accuracy.--Not applicable.

05527672 Salem Branch near Salem, Wis.

Location.--SE¼NE¼ sec. 11, T. 1 N., R. 20 E., Kenosha County, just downstream from confluence of tributaries from Paddock Lake and Hooker Lake, 1.2 mi northeast of Salem.

Drainage area.--3.80 mi^2. Tributary to.--Brighton Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 19, 1974, 0 ft^3/s; Sept. 17, 1975, 0 ft^3/s.

05527675 Brighton Creek near Paddock Lake, Wis.

Location.--SW¼NW¼ sec. 5, T. 1 N., R. 21 E., Kenosha County, at bridge on State Highway 45, 1.5 mi east of Paddock Lake.

Drainage area.--25.5 mi^2. Tributary to.--Des Plaines River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 13, 1963, 0 ft^3/s; Aug. 14, 1967, 1.37 ft^3/s.

05527694 Des Plaines River near Bristol, Wis.

Location.--SW¼SE¼ sec. 4, T. 1 N., R. 21 E., Kenosha County, at bridge on State Highway 50, 1.6 mi rortheast of Bristol.

Drainage area.--51.2 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--July 18, 1973, 3.78 ft^3/s; Aug. 8, 1973, 0.97 ft^3/s; Sept. 18, 1974, 0.42 ft^3/s; Sept. 19, 1975, 1.05 ft^3/s; Sept. 2, 1976, 0.34 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.16 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Des Plaines River near Des Plaines, Ill., using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05527700 Des Plaines River near Kenosha, Wis.

Location.--SW¼ sec. 15, T. 1 N., R. 21 E., Kenosha County, at bridge on County Trunk MB, 8.8 mi west of Kenosha.

Drainage area.--56.2 mi^2. Tributary to.--Illinois River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0 ft^3/s, ponded, July 12, 1963.

Low-flow frequency.--$Q_{7,2}$ = 0.17 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Des Plaines River near Des Plaines, Ill., using 14 discharge measurements made in the period 1962-75.

Accuracy.--Not applicable.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05527720 Des Plaines River near Pleasant Prairie, Wis.

Location.--SW¼SW¼ sec. 7, T. 1 N., R. 22 E., Kenosha County, at bridge on U.S. Highway 41 and Interstate Highway 94, 1.0 mi west of Pleasant Prairie.

Drainage area.--60.6 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--July 17, 1973, 4.58 ft^3/s; Aug. 8, 1973, 0.85 ft^3/s; Sept. 19, 1974, 0.99 ft^3/s; Sept. 19, 1975, 2.12 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.22 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Des Plaines River near Des Plaines, Ill., using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05527730 Kilbourn Road Ditch near Truesdell, Wis.

Location.--SE¼SW¼ sec. 6, T. 1 N., R. 22 E., Kenosha County, at culvert on State Highway 50, 2.0 mi west of Truesdell.

Drainage area.-- 22.2 mi^2. Tributary to.--Des Plaines River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 14, 1967, 0.10 ft^3/s.

05527740 Des Plaines River at Pleasant Prairie, Wis.

Location.--SE¼NW¼ sec. 18, T. 1 N., R. 22 E., Kenosha County, at bridge on County Trunk C, 0.6 mi southwest of Pleasant Prairie.

Drainage area.--61.0 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--July 17, 1973, 5.25 ft^3/s; Aug. 8, 1973, 0.81 ft^3/s; Sept. 19, 1974, 1.07 ft^3/s; Sept. 19, 1975, 1.99 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.23 ft^3/s, $Q_{7,10}$ = <0.01 ft^3/s.

Basis of estimate.--Correlated with Des Plaines River near Des Plaines, Ill., using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05527744 Tributary to Des Plaines River tributary at Pleasant Prairie, Wis.

Location.--NE¼NW¼ sec. 17, T. 1 N., R. 22 E., Kenosha County, at Bain Station Road, at Pleasant Prairie.

Drainage area.--0.18 mi^2. Tributary to.--Des Plaines River tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 19, 1974, 0 ft^3/s; Sept. 19, 1975, 0 ft^3/s.

05527895 Dutch Gap Canal near Benet Lake, Wis.

Location.--SE¼SW¼ sec. 34, T. 1 N., R. 21 E., Kenosha County, at bridge on County Trunk WG, 3.7 mi east of Benet Lake.

Drainage area.-- Tributary to.--North Mill Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 14, 1967, 0.56 ft^3/s.

05527790 Des Plaines River near Pleasant Prairie, Wis.

Location.--SW¼SE¼ sec. 32, T. 1 N., R. 22 E., Kenosha County, at Wisconsin-Illinois State line, 4.1 mi south of Pleasant Prairie.

Drainage area.--134 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 13, 1963, 0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

055437904 Fox River tributary at Sussex, Wis.

Location.--NE¼NE¼ sec. 26, T. 8 N., R. 19 E., Waukesha County, at bridge on County Trunk VV, at Sussex.

Drainage area.--7.77 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 8, 1972, 0.720 ft^3/s; July 17, 1973, 0.62 ft^3/s; Aug. 8, 1973, 0.237 ft^3/s; Sept. 16, 1974, 0.51 ft^3/s; Sept. 15, 1975, 1.80 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05543791 Fox River tributary near Sussex, Wis.

Location.--NW¼SW¼ sec. 6, T. 7 N., R. 20 E., Waukesha County, at country road bridge, 2.9 mi southeast of Sussex.

Drainage area.--14.0 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 12, 1966, 1.16 ft^3/s.

055437955 Poplar Creek tributary at New Berlin, Wis.

Location.--NW¼NE¼ sec. 23, T. 6 N., R. 20 E., Waukesha County, just downstream from storm-sewer outlet at end of Hargrove Street in New Berlin, 0.8 mi upstream from County Trunk ES.

Drainage area.--0.93 mi^2. Tributary to.--Poplar Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 15, 1975, 0.025 ft^3/s.

05543796 Poplar Creek near Waukesha, Wis.

Location.--SW¼NW¼ sec. 29, T. 7 N., R. 20 E., Waukesha County, at County Trunk Y bridge, 3.0 mi northeast of Waukesha.

Drainage area.--23.6 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 12, 1966, 0.64 ft^3/s; Aug. 16, 1967, 0.40 ft^3/s.

05543800 Fox River near Waukesha, Wis.

Location.--NE¼ sec. 24, T. 7 N., R. 19 E., Waukesha County, at bridge on County Trunk SS, 3.5 mi northeast of Waukesha.

Drainage area.--77.4 mi^2. Tributary to.--Illinois River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.66 ft^3/s, Oct. 18, 1963.

Low-flow frequency.--$Q_{7,2}$ = 4.0 ft^3/s, $Q_{7,10}$ = 2.0 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 13 discharge measurements made in the period 1962-75.

Accuracy.--$SE_{7,2}$ = 50 percent, $SE_{7,10}$ = 51 percent.

05543808 Zion Creek near Pewaukee, Wis.

Location.--SE¼NW¼ sec. 24, T. 7 N., R. 18 E., Waukesha County, at culvert on Oakton Road, 3.1 mi southwest of Pewaukee.

Drainage area.--3.39 mi^2. Tributary to.--Pewaukee Lake.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 16, 1974, 1.26 ft^3/s; Sept. 15, 1975, 0.822 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05543810 Pewaukee River at Pewaukee, Wis.

Location.--SW¼NW¼ sec. 9, T. 7 N., R. 19 E., Waukesha County, at bridge on County Trunk JJ, at Pewaukee.

Drainage area.--27.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 16, 1967, 1.66 ft^3/s.

05543811 Pewaukee River at Pewaukee, Wis.

Location.--SW¼SE¼ sec. 9, T. 7 N., R. 19 E., Waukesha County, at sewage-treatment plant, at Pewaukee.

Drainage area.--33.1 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 8, 1972, 15.0 ft^3/s; July 17, 1973, 6.97 ft^3/s; Aug. 8, 1973, 3.09 ft^3/s; Sept. 16, 1974, 3.00 ft^3/s; Sept. 15, 1975, 7.65 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.87 ft^3/s, $Q_{7,10}$ = 0.18 ft^3/s.

Basis of estimate.--Correlated with Fox River at Waukesha based on 5 discharge measurements.

Accuracy.--59 percent (basin average).

05543814 Pewaukee River near Waukesha, Wis.

Location.--SW¼NE¼ sec. 26, T. 7 N., R. 19 E., Waukesha County, at State Highway 164 bridge, 2.3 mi northeast of Waukesha.

Drainage area.--38.0 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 12, 1966, 0.47 ft^3/s; Aug. 16, 1967, 1.66 ft^3/s.

05543817 Fox River near Waukesha, Wis.

Location.--NW¼SE¼ sec. 26, T. 7 N., R. 19 E., Waukesha County, at bridge on County Trunk JJ, 2.1 mi northeast of Waukesha.

Drainage area.--120 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Oct. 2, 1951, 15.2 ft^3/s.

05543818 Fox River tributary at Waukesha, Wis.

Location.--NE¼NE¼ sec. 2, T. 6 N., R. 19 E., Waukesha County, at culvert on State Highway 59, 1.2 mi east of post office in Waukesha.

Drainage area.--0.75 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 17, 1974, 0.51 ft^3/s; Sept. 15, 1975, 0.552 ft^3/s.

05543819 Fox River tributary at Waukesha, Wis.

Location.--SW¼SE¼ sec. 35, T. 7 N., R. 19 E., Waukesha County, at culvert on town road, 1.0 mi northeast of post office, in Waukesha.

Drainage area.--1.75 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 17, 1974, 0.85 ft^3/s; Sept. 15, 1975, 0.758 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05543830 Fox River at Waukesha, Wis.

Location.--SW¼ sec. 3, T. 6 N., R. 19 E., Waukesha County, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam, 3.2 mi downstream from Pewaukee River.

Drainage area.--127 mi^2. Tributary to.--Illinois River.

Type of site.--Gaging station.

Period of record.--January 1963 to September 1975.

Average discharge.--12 years, 89.4 ft^3/s.

Extremes.--Maximum discharge, 2,260 ft^3/s Apr. 22, 1973; minimum, 3.0 ft^3/s Jan. 1, 1964.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years		
	2	5	10
7	12	6.2	4.4
14	14	7.3	5.1
30	16	7.6	5.3
60	19	9.6	6.5
90	21	11	7.4

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time

Percent	2	5	10	20	30	40	50
ft^3/s	445	298	202	123	85	61	45
Percent	60	70	80	90	95	98	99.5
ft^3/s	33	25	17	11	7.7	6.0	3.3

Accuracy.--$SE_{7,2}$ = 19 percent, $SE_{7,10}$ = 26 percent.

Remarks.--Occasional regulation from mill dam 1.0 mi upstream.

05543850 Pebble Creek near Waukesha, Wis.

Location.--SE¼ sec. 7, T. 6 N., R. 19 E., Waukesha County, at bridge on County Trunk TT, 3.2 mi west of Waukesha.

Drainage area.--16.2 mi^2. Tributary to.--Fox River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.66 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 1.7 ft^3/s, $Q_{7,10}$ = 0.71 ft^3/s.

Basis of estimate.--Correlated with Cedar Creek near Cedarburg using 11 discharge measurements made in the period 1962-67.

Accuracy.--$SE_{7,2}$ = 27 percent, $SE_{7,10}$ = 36 percent.

05543860 Fox River near Waukesha, Wis.

Location.--NE¼SW¼ sec. 20, T. 6 N., R. 19 E., Waukesha County, at bridge on County Trunk HI, 4.3 mi southwest of Waukesha.

Drainage area.--151 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 12, 1966, 19.3 ft^3/s.

05543878 Tributary to Fox River tributary near Genesee, Wis.

Location.--SE¼SW¼ sec. 34, T. 6 N., R. 18 E., Waukesha County, at bridge on County Trunk X, 1.7 mi south of Genesee.

Drainage area.--5.07 mi^2. Tributary to.--Fox River tributary.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 9, 1969, 0.63 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05543880 Tributary to Fox River tributary at Genesee, Wis.

Location.--NE¼NE¼ sec. 34, T. 6 N., R. 18 E., Waukesha County, at bridge on State Highway 83, 0.9 mi southeast of Genesee.

Drainage area.--6.67 mi^2. Tributary to.--Fox River tributary.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 9, 1969, 2.73 ft^3/s.

05543887 Fox River near Genesee, Wis.

Location.--NW¼SE¼ sec. 31, T. 6 N., R. 19 E., Waukesha County, at County Trunk I bridge, 3.6 mi southeast of Genesee.

Drainage area.--188 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 13, 1966, 36.3 ft^3/s.

05544000 Fox River near Mukwonago, Wis.

Location.--NE¼SE¼ sec. 24, T. 5 N., R. 18 E., Waukesha County, at State Highway 15, 0.5 mi upstream from Mukwonago River, 1.5 mi northeast of Mukwonago.

Drainage area.--231 mi^2. Tributary to.--Illinois River.

Type of site.--Gaging station.

Period of record.--April 1927 to July 1930.

Extremes.--Maximum discharge, 1,560 ft^3/s Mar. 15, 1920; minimum daily, 11 ft^3/s July 24, 1930.

Low-flow frequency.--No relationship determined, additional discharge data are required.

05544050 Mukwonago River near Troy Center, Wis.

Location.--SE¼SE¼ sec. 3, T. 4 N., R. 17 E., Walworth County, 1.4 mi north of Troy Center.

Drainage area.--23.8 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 4.21 ft^3/s.

05544070 Mukwonago River near Jericho, Wis.

Location.--SE¼NW¼ sec. 36, T. 5 N., R. 17 E., Waukesha County, outlet of Eagle Spring Lake at culvert on County Trunk E, 1.8 mi south of Jericho.

Drainage area.--33.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 13, 1966, 6.85 ft^3/s.

05544080 Jericho Creek near Jericho, Wis.

Location.--SW¼SE¼ sec. 25, T. 5 N., R. 17 E., Waukesha County, at bridge on State Highway 99, 1.4 mi south of Jericho.

Drainage area.--12.1 mi^2. Tributary to.--Mukwonago River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 16, 1967, 1.77 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05544090 Mukwonago River near Mukwonago, Wis.

Location.--NW¼NE¼ sec. 32, T. 5 N., R. 18 E., Waukesha County, at town road bridge, 3.2 mi west of Mukwonago.

Drainage area.--50.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 13, 1966, 12.0 ft^3/s.

05544150 Mukwonago River tributary near East Troy, Wis.

Location.--SW¼NW¼ sec. 4, T. 4 N., R. 18 E., Walworth County, at Lake Beulah outlet, 3.8 mi north of East Troy.

Drainage area.--10.8 mi^2. Tributary to.--Mukwonago River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 13, 1966, 0.37 ft^3/s; May 26, 1972, 2.66 ft^3/s.

05544200 Mukwonago River at Mukwonago, Wis.

Location.--NE¼NE¼ sec. 35, T. 5 N., R. 18 E., Waukesha County, on State Highway 83, 0.6 mi south of Mukwonago.

Drainage area.--76.2 mi^2. Tributary to.--Fox River.

Type of site.--Gaging station.

Period of record.--July 1973 to September 1975.

Extremes.--Maximum discharge, 292 ft^3/s Mar. 3, 1974; minimum daily, 3.3 ft^3/s Sept. 29, 1975.

Low-flow frequency.--No relationship determined, additional discharge data are required.

Remarks.--Discharge affected by manipulation of gates at dams 800 ft upstream in response to changes in stage of recreation lakes.

05544300 Mukwonago River tributary near Mukwonago, Wis.

Location.--NE¼SW¼ sec. 36, T. 5 N., R. 18 E., Waukesha County, at culvert on State Highway 83, 1.5 mi southeast of Mukwonago.

Drainage area.--1.32 mi^2. Tributary to.--Mukwonago River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 11, 1961, 0.06 ft^3/s.

05544320 Fox River at Big Bend, Wis.

Location.--SE¼ sec. 23, T. 5 N., R. 19 E., Waukesha County, at bridge on State Highway 24, in Big Bend.

Drainage area.--321 mi^2. Tributary to.--Illinois River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--33.4 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 42 ft^3/s, $Q_{7,10}$ = 25 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 13 discharge measurements made in the period 1962-75.

Accuracy.--$SE_{7,2}$ = 25 percent, $SE_{7,10}$ = 26 percent.

05544330 Fox River near Tichigan, Wis.

Location.--NW¼NE¼ sec. 10, T. 4 N., R. 19 E., Racine County, at bridge on country road, 1.9 mi west of Tichigan.

Drainage area.--334 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 30, 1972, 293 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05544350 Fox River at Waterford, Wis.

Location.--NE¼SE¼ sec. 35, T. 4 N., R. 19 E., Racine County, at bridge on State Highway 20 and 36, in Waterford.

Drainage area.--356 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Minimum discharge measured.--48.7 ft^3/s, Sept. 13, 1966.

Low-flow frequency.--$Q_{7,2}$ = 32 ft^3/s, $Q_{7,10}$ = 16 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 6 discharge measurements made in the period 1966-75.

Accuracy.--$SE_{7,10}$ = 18 percent.

05544380 Muskego Creek at Muskego, Wis.

Location.--SE¼SW¼ sec. 9, T. 5 N., R. 20 E., Waukesha County, at bridge on town road, at Muskego.

Drainage area.--11.9 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 8, 1972, 3.02 ft^3/s; July 19, 1973, 1.63 ft^3/s; Aug. 7, 1973, 1.55 ft^3/s; Sept. 17, 1974, 11.3 ft^3/s; Sept. 15, 1975, 0.573 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05544390 Muskego Canal near Wind Lake, Wis.

Location.--SW¼NE¼ sec. 4, T. 4 N., R. 20 E., Racine County, at bridge on State Highway 36, 1.2 mi northeast of Wind Lake.

Drainage area.--35.8 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 14, 1966, 0 ft^3/s.

05544410 Wind Lake Drainage Canal near Hartford, Wis.

Location.--NE¼NW¼ sec. 16, T. 4 N., R. 20 E., Racine County, just downstream from dam at country road, 4.9 mi northeast of Hartford.

Drainage area.--40.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 14, 1966, 0 ft^3/s.

05544440 Tributary to Goose Lake Branch Canal tributary near Rochester, Wis.

Location.--NE¼NW¼ sec. 9, T. 3 N., R. 20 E., Racine County, at culvert on State Highway 20, 4.1 mi east of Rochester.

Drainage area.--2.49 mi^2. Tributary to.--Goose Lake Branch Canal tributary.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 17, 1974, 0.040 ft^3/s; Sept. 17, 1975, 0.004 ft^3/s.

05544450 Wind Lake Drainage Canal at Rochester, Wis.

Location.--NW¼SW¼ sec. 1, T. 3 N., R. 19 E., Racine County, at bridge on State Highway 20, 1.0 mi northeast of Rochester.

Drainage area.--88.4 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 14, 1966, 0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05544500 Fox River at Rochester, Wis.

Location.--NW¼SW¼ sec. 11, T. 3 N., R. 19 E., 0.4 mi south of State Highway 189 bridge in Rochester.

Drainage area.--451 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 17, 1975, 142 ft^3/s.

05544512 Eagle Creek near Rochester, Wis.

Location.--NW¼NW¼ sec. 21, T. 3 N., R. 20 E., Racine County, at culvert on County Trunk N, 4.3 mi southeast of Rochester.

Drainage area.--8.61 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 17, 1974, 0.004 ft^3/s; Sept. 17, 1975, 0.001 ft^3/s.

05544530 Eagle Creek near Rochester, Wis.

Location.--SE¼NW¼ sec. 14, T. 3 N., R. 19 E., Racine County, near country road, at mouth, 1.5 mi south of Rochester.

Drainage area.--16.3 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 1.07 ft^3/s.

05544800 Honey Creek near Little Prairie, Wis.

Location.--SE¼NW¼ sec. 36, T. 4 N., R. 16 E., Walworth County, at State Highway 67, 4.9 mi south of Little Prairie.

Drainage area.--16.1 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 26, 1972, 2.32 ft^3/s; Sept. 16, 1975, 5.87 ft^3/s.

05544813 Tributary to Honey Creek tributary near Elkhorn, Wis.

Location.--SE¼NW¼ sec. 30, T. 4 N., R. 17 E., Walworth County, at bridge on country road, 7.9 mi north of Elkhorn.

Drainage area.--2.40 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 18, 1975, 1.52 ft^3/s.

05544826 Honey Creek near East Troy, Wis.

Location.--SE¼NW¼ sec. 27, T. 4 N., R. 17 E., Walworth County, at end of farm drive on old railroad grade, 3.7 mi west of East Troy.

Drainage area.--30.0 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 17, 1975, 13.7 ft^3/s.

05544830 Honey Creek at Troy, Wis.

Location.--NE¼NE¼ sec. 26, T. 4 N., R. 17 E., Walworth County, at town road, 0.2 mi north of Troy.

Drainage area.--36.7 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 27, 1972, 11.0 ft^3/s; Sept. 18, 1975, 18.2 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05544835 Honey Creek at Troy, Wis.

Location.--SE¼NW¼ sec. 25, T. 4 N., R. 17 E., Walworth County, at bridge on State Highway 15, 0.3 mi northeast of Troy.

Drainage area.--37.5 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 14, 1966, 5.63 ft^3/s; Aug. 16, 1967, 7.55 ft^3/s.

05544838 Honey Creek near East Troy, Wis.

Location.--SE¼NE¼ sec. 25, T. 4 N., R. 17 E., Walworth County, at culvert on town road, 1.1 mi west of East Troy.

Drainage area.--41.0 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 3, 1965, 21.7 ft^3/s; Sept. 17, 1974, 24.5 ft^3/s; Sept. 17, 1975, 19.7 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 6.7 ft^3/s, $Q_{7,10}$ = 4.6 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05544840 Honey Creek at East Troy, Wis.

Location.--SW¼NW¼ sec. 29, T. 4 N., R. 18 E., Walworth County, at bridge on County Trunk G, at East Troy.

Drainage area.--44.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 16, 1975, 16.4 ft^3/s.

05544850 Honey Creek near East Troy, Wis.

Location.--SE¼SE¼ sec. 21, T. 4 N., R. 18 E., Walworth County, at town road bridge, 2.0 mi east of East Troy.

Drainage area.--48.4 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 14, 1966, 7.19 ft^3/s.

05544860 Honey Creek tributary near Mukwonago, Wis.

Location.--NE¼NE¼ sec. 15, T. 4 N., R. 18 E., Walworth County, at State Highway 24, 3.6 mi south of Mukwonago.

Drainage area.--0.92 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 27, 1972, 0 ft^3/s.

05544880 Honey Creek tributary near East Troy, Wis.

Location.--SW¼SW¼ sec. 14, T. 4 N., R. 18 E., Walworth County, at bridge on country road, 0.2 mi above mouth, 3.3 mi east of East Troy.

Drainage area.--1.56 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 17, 1975, 0.10 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05544900 Spring Creek near Mukwonago, Wis.

Location.--NE¼SW¼ sec. 23, T. 4 N., R. 18 E., Walworth County, at State Highway 20, 5.0 mi south of Mukwonago.

Drainage area.--7.87 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 27, 1972, 0.57 ft^3/s; Sept. 17, 1975, 1.06 ft^3/s.

05544910 Honey Creek tributary near Mukwonago, Wis.

Location.--SE¼SW¼ sec. 11, T. 4 N., R. 18 E., Walworth County, at State Highway 24, 3.4 mi south of Mukwonago.

Drainage area.--1.46 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 27, 1972, 0.02 ft^3/s; Sept. 17, 1975, 0 ft^3/s.

05544948 Honey Creek near East Troy, Wis.

Location.--NW¼NW¼ sec. 24, T. 4 N., R. 18 E., Walworth County, at culvert on country road, 4.3 mi east of East Troy.

Drainage area.-- Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 3, 1965, 32.0 ft^3/s.

05544950 Honey Creek near Mukwonago, Wis.

Location.--SE¼SE¼ sec. 24, T. 4 N., R. 18 E., Walworth County, at country road, 5.6 mi south of Mukwonago.

Drainage area.--69.4 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 27, 1972, 15.7 ft^3/s; Sept. 17, 1975, 24.0 ft^3/s.

05544970 Honey Creek at Honey Creek, Wis.

Location.--SE¼NE¼ sec. 1, T. 3 N., R. 18 E., Walworth County, at bridge on County Trunk D, at Honey Creek.

Drainage area.--74.2 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 13, 1966, 10.2 ft^3/s; Aug. 15, 1967, 12.7 ft^3/s; June 27, 1972, 18.9 ft^3/s; Sept. 18, 1975, 23.4 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 9.2 ft^3/s, $Q_{7,10}$ = 5.8 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 4 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05544990 Honey Creek near Burlington, Wis.

Location.--NE¼SE¼ sec. 13, T. 3 N., R. 18 E., Walworth County, at bridge on County Trunk DD, 3.1 mi northwest of Burlington.

Drainage area.--84.7 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 12, 1963, 14.0 ft^3/s; June 27, 1972, 25.4 ft^3/s; Sept. 18, 1975, 29.6 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 9.9 ft^3/s, $Q_{7,10}$ = 6.2 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05545080 Sugar Creek near Elkhorn, Wis.

Location.--SE¼SE¼ sec. 14, T. 3 N., R. 16 E., Walworth County, at bridge on country road, 3.0 mi north of Elkhorn.

Drainage area.--27.2 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 13, 1966, 1.95 ft^3/s; June 26, 1972, 4.05 ft^3/s; Sept. 16, 1975, 4.83 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 1.7 ft^3/s, $Q_{7,10}$ = 1.1 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05545103 Sugar Creek tributary near Elkhorn, Wis.

Location.--SE¼NE¼ sec. 24, T. 3 N., R. 16 E., Walworth County, at U.S. Highway 12, 2.6 mi north of Elkhorn.

Drainage area.--9.67 mi^2. Tributary to.--Sugar Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 26, 1972, 0.987 ft^3/s; Sept. 16, 1975, 0.03 ft^3/s.

05545105 Sugar Creek near Tibbets, Wis.

Location.--NE¼SE¼ sec. 12, T. 3 N., R. 16 E., Walworth County, on U.S. Highway 12, 1.9 mi east of town hall in Tibbets.

Drainage area.--41.5 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--June 26, 1972, 5.91 ft^3/s; Sept. 16, 1975, 5.86 ft^3/s.

05545107 Sugar Creek near Elkhorn, Wis.

Location.--SW¼SW¼ sec. 8, T. 3 N., R. 17 E., Walworth County, at bridge on State Highway 15, 3.3 mi northeast of Elkhorn.

Drainage area.--48.6 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 3, 1965, 7.8 ft^3/s; Sept. 13, 1966, 2.58 ft^3/s.

05545109 Sugar Creek near Spring Prairie, Wis.

Location.--SW¼NE¼ sec. 15, T. 3 N., R. 17 E., Walworth County, at country road bridge, 3.9 mi northwest of Spring Prairie.

Drainage area.--54.8 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 3, 1965, 18.1 ft^3/s; Sept. 13, 1966, 4.89 ft^3/s; Aug. 15, 1967, 6.24 ft^3/s; June 27, 1972, 11.7 ft^3/s; Sept. 16, 1975, 11.0 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 4.8 ft^3/s, $Q_{7,10}$ = 3.1 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05545110 Sugar Creek near Troy, Wis.

Location.--NW¼SW¼ sec. 8, T. 3 N., R. 18 E., Walworth County, at bridge on County Trunk G, 3.9 mi east of Troy.

Drainage area.--60.9 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 3, 1965, 21.6 ft^3/s; Sept. 13, 1966, 6.58 ft^3/s; Sept. 16, 1975, 14.3 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 5.8 ft^3/s, $Q_{7,10}$ = 3.8 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 3 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05545118 Sugar Creek tributary near Honey Lake, Wis.

Location.--NW¼SW¼ sec. 15, T. 3 N., R. 18 E., Walworth County, at country road, 3.0 mi west of Horey Lake.

Drainage area.--4.93 mi^2. Tributary to.--Sugar Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 13, 1966, 1.55 ft^3/s; June 26, 1972, 2.77 ft^3/s; Sept. 17, 1975, 1.96 ft^3/s.

Low-flow frequency.--Unable to define relationship, additional discharge measurements are required.

05545120 Sugar Creek near Vienna, Wis.

Location.--SW¼SW¼ sec. 14, T. 3 N., R. 18 E., Walworth County, at bridge on country road, 1.4 mi west of Vienna.

Drainage area.--76.4 mi^2. Tributary to.--Honey Creek.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--6.22 ft^3/s, July 30, 1965.

Low-flow frequency.--$Q_{7,2}$ = 9.6 ft^3/s, $Q_{7,10}$ = 6.4 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 27 discharge measurements made in the period 1961-76.

Accuracy.--$SE_{7,10}$ = 17 percent.

05545137 White River at Lake Geneva, Wis.

Location.--SE¼SE¼ sec. 25, T. 2 N., R. 17 E., Walworth County, at sewage-treatment plant, at Lake Geneva.

Drainage area.--29.6 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--1.69 ft^3/s, Sept. 12, 1966.

Low-flow frequency.--$Q_{7,2}$ = 1.7 ft^3/s, $Q_{7,10}$ = 0.89 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot based on 9 discharge measurements made in the period 1966-75.

Accuracy.--$SE_{7,10}$ = 91 percent.

05545145 White River near Lake Geneva, Wis.

Location.--NE¼NW¼ sec. 29, T. 2 N., R. 18 E., Walworth County, at bridge on private road, 2.3 mi northeast of post office in Lake Geneva.

Drainage area.--40.4 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 18, 1974, 8.78 ft^3/s; Sept. 17, 1975, 11.0 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05545155 Como Creek near Lake Geneva, Wis.

Location.--SE¼SW¼ sec. 23, T. 2 N., R. 17 E., Walworth County, at U.S. Highway 12, 1.8 mi northwest of City Hall in Lake Geneva.

Drainage area.--9.06 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 26, 1972, 2.00 ft^3/s; Nov. 28, 1972, 14.7 ft^3/s.

05545170 White River near Lyons, Wis.

Location.--NW¼SW¼ sec. 16, T. 2 N., R. 18 E., Walworth County, at county road, 2.0 mi southwest of Lyons.

Drainage area.--59.4 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Discharge measurements.--Nov. 2, 1965, 56.8 ft^3/s; June 26, 1972, 40.1 ft^3/s.

05545190 Ore Creek at Lyons, Wis.

Location.--NW¼SW¼ sec. 10, T. 2 N., R. 18 E., Walworth County, at mouth, 0.3 mi southwest of Lyons.

Drainage area.--18.3 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 3.95 ft^3/s.

05545192 White River at Lyons, Wis.

Location.--SW¼NE¼ sec. 10, T. 2 N., R. 18 E., Walworth County, just downstream from tail race of millpond dam, at Lyons.

Drainage area.--83.2 mi^2. Tributary to.--Honey Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--16.1 ft^3/s, Sept. 18, 1974.

Low-flow frequency.--$Q_{7,2}$ = 7.0 ft^3/s, $Q_{7,10}$ = 3.6 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 6 discharge measurements made in the period 1972-75.

Accuracy.--$SE_{7,10}$ = 47 percent.

05545203 White River tributary at Lyons, Wis.

Location.--SE¼NW¼ sec. 3, T. 2 N., R. 18 E., Walworth County, at country road, 0.8 mi north of Lyons.

Drainage area.--4.07 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 0.94 ft^3/s.

05545208 White River tributary near Lyons, Wis.

Location.--NE¼SW¼ sec. 2, T. 2 N., R. 18 E., Walworth County, at bridge on State Highway 36, 1.3 mi northeast of Lyons.

Drainage area.--2.86 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 0.50 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05545240 White River tributary near Pell Lake, Wis.

Location.--NE¼SW¼ sec. 35, T. 2 N., R. 18 E., Walworth County, at bridge on State Highway 50, 3.3 mi northeast of Pell Lake.

Drainage area.--10.5 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 4.82 ft^3/s.

05545290 White River tributary near Lyons, Wis.

Location.--SE¼NW¼ sec. 12, T. 2 N., R. 18 E., Walworth County, at road, 2.0 mi east of Lyons.

Drainage area.--17.0 mi^2. Tributary to.--White River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 10.3 ft^3/s.

05545300 White River near Burlington, Wis.

Location.--NW¼ sec. 1, T. 2 N., R. 18 E., Walworth County, on right bank near bridge on State Highway 36, 2.25 mi southwest of Burlington.

Drainage area.--97.5 mi^2. Tributary to.--Honey Creek.

Type of site.--Gaging station.

Period of record.--Annual maximum, water years 1958-64, 1967-73; Aug. 1964 to Sept. 1977 no winter records; Apr. 1973 to Sept. 1975.

Extremes.--Maximum discharge, 1,960 ft^3/s July 18, 1969; minimum recorded, 2.3 ft^3/s July 4, 1965.

Low-flow frequency.--$Q_{7,2}$ = 9.8 ft^3/s, $Q_{7,10}$ = 5.6 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 31 measurements and daily mean discharges for 1961-75 period.

Accuracy.--$SE_{7,10}$ = 31 percent.

05545329 Honey Creek at Burlington, Wis.

Location.--NW¼NE¼ sec. 32, T. 3 N., R. 19 E., Racine County, below dam, in Burlington.

Drainage area.--270 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Aug. 15, 1967, 49.7 ft^3/s.

05545334 Fox River at Burlington, Wis.

Location.--NE¼NE¼ sec. 32, T. 3 N., R. 19 E., Racine County, at Jefferson Street bridge, in Burlington.

Drainage area.--767 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 13, 1966, 85.6 ft^3/s; Aug. 15, 1967, 115 ft^3/s.

05545336 Fox River at Burlington, Wis.

Location.--NW¼NW¼ sec. 4, T. 2 N., R. 19 E., Racine County, at sewage-treatment plant, at Burlington.

Drainage area.--770 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurements.--Sept. 18, 1974, 226 ft^3/s; Sept. 16, 1975, 233 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05545590 Hoosier Creek near Burlington, Wis.

Location.--NE¼NE¼ sec. 1, T. 2 N., R. 19 E., Racine County, at bridge on County Trunk J, 4.4 mi east of Burlington.

Drainage area.--12.6 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--Dec. 5, 1955, 0.044 ft^3/s.

05545600 Hoosier Creek near Burlington, Wis.

Location.--SE¼ sec. 3, T. 2 N., R. 19 E., Racine County, at bridge on State Highway 43, 2.6 mi southeast of Burlington.

Drainage area.--20.5 mi^2. Tributary to.--Fox River.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--0.29 ft^3/s, June 26, 1963.

Low-flow frequency.--$Q_{7,2}$ = 0.53 ft^3/s, $Q_{7,10}$ = 0.22 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 14 discharge measurements made in the period 1956-75.

Accuracy.--$SE_{7,10}$ = 56 percent.

05545750 Fox River near Wheatland, Wis.

Location.--NW¼NW¼ sec. 26, T. 2 N., R. 19 E., Kenosha County, at bridge on County Trunk JB, 1.5 mi northwest of Wheatland.

Drainage area.--811 mi^2. Tributary to.--Illinois River.

Type of site.--Miscellaneous site.

Discharge measurement.--Sept. 12, 1966, 103 ft^3/s.

05545955 Bassett Creek near Twin Lakes, Wis.

Location.--SE¼SE¼ sec. 15, T. 1 N., R. 19 E., Kenosha County, at bridge on County Trunk F, 1.3 mi northeast of Twin Lakes.

Drainage area.--5.24 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurements.--June 7, 1972, 0.684 ft^3/s; July 18, 1973, 1.14 ft^3/s; Aug. 9, 1973, 1.22 ft^3/s; Sept. 18, 1974, 1.20 ft^3/s; Sept. 17, 1975, 1.44 ft^3/s.

Low-flow frequency.--$Q_{7,2}$ = 0.20 ft^3/s, $Q_{7,10}$ 0.10 ft^3/s.

Basis of estimate.--Correlated with Fox River at Wilmot using 5 discharge measurements.

Accuracy.--$SE_{7,10}$ = 59 percent (basin average).

05546500 Fox River at Wilmot, Wis.

Location.--SW¼ sec. 30, T. 1 N., R. 20 E., Kenosha County, on right bank 100 ft downstream from bridge on County Trunk C, 300 ft upstream from Wilmot Dam, 1 mi north of Wisconsin-Illinois State line, 6 mi upstream from Fox chain of lakes.

Drainage area.--868 mi^2. Tributary to.--Illinois River.

Type of site.--Gaging station.

Period of record.--October 1939 to September 1975.

Average discharge.--36 years, 505 ft^3/s.

Extremes.--Maximum discharge, 7,520 ft^3/s Mar. 31, 1960; minimum daily discharge, 35 ft^3/s Sept. 9, 1958.

Period of consecutive days	Magnitude and frequency of annual low flow. Discharge, in cubic feet per second, for indicated recurrence interval, in years					
	2	5	10	20	50	100
7	100	71	60	53	46	42
14	109	78	66	57	49	45
30	123	86	72	63	54	49
60	144	96	79	67	57	51
90	163	109	90	77	66	59

Duration table of daily flow. Discharge, in cubic feet per second, which was exceeded for indicated percent of time							
Percent	2	5	10	20	30	40	50
ft^3/s	2,200	1,610	1,160	740	530	393	302
Percent	60	70	80	90	95	98	99.9
ft^3/s	230	182	143	109	89	74	45

Accuracy.--$SE_{7,2}$ = 7 percent, $SE_{7,10}$ = 10 percent.

05548004 Nippersink Creek at Zenda, Wis.

Location.--SE¼SE¼ sec. 33, T. 1 N., R. 17 E., Walworth County, at Bissell Road, 1.0 mi south of Zenda.

Drainage area.--6.54 mi^2. Tributary to.--Fox River.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 3.27 ft^3/s.

05548150 North Branch Nippersink Creek near Genoa City, Wis.

Location.--SW¼NW¼ sec. 33, T. 1 N., R. 18 E., Walworth County, at bridge on County Trunk B, 3 mi west of Genoa City.

Drainage area.--13.8 mi^2. Tributary to.--Nippersink Creek.

Type of site.--Low-flow partial-record station.

Minimum discharge measured.--1.85 ft^3/s, Sept. 15, 1964.

Low-flow frequency.--$Q_{7,2}$ = 3.2 ft^3/s, $Q_{7,10}$ = 1.9 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek near Clinton using 31 discharge measurements made in the period 1961-72.

Accuracy.--$SE_{7,10}$ = 28 percent.

05548153 West Branch Nippersink Creek near Lake Geneva, Wis.

Location.--SE¼NE¼ sec. 23, T. 1 N., R. 17 E., Walworth County, at bridge on State Highway 120, 4.3 mi south of Lake Geneva.

Drainage area.--3.89 mi^2. Tributary to.--North Branch Nippersink Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--June 26, 1972, 1.93 ft^3/s.

Table 1.--Low-flow characteristics for sites in the Rock-Fox River basin--Continued

05548170 North Branch Nippersink Creek at Genoa City, Wis.

Location.--SW¼SE¼ sec. 35, T. 1 N., R. 18 E., Walworth County, at bridge on County Trunk B, at Genoa City.

Drainage area.--43.0 mi^2. Tributary to.--Nippersink Creek.

Type of site.--Miscellaneous site.

Minimum discharge measured.--17.6 ft^3/s, Sept. 17, 1975.

Low-flow frequency.--$Q_{7,2}$ = 6.0 ft^3/s, $Q_{7,10}$ = 3.7 ft^3/s.

Basis of estimate.--Correlated with Turtle Creek at Clinton using 6 discharge measurements made in the period 1972-75.

Accuracy.--$SE_{7,10}$ = 42 percent.

05548175 North Branch Nippersink Creek at Genoa City, Wis.

Location.--SW¼SE¼ sec. 35, T. 1 N., R. 18 E., Walworth County, at sewage-treatment plant, at Genoa City.

Drainage area.-- Tributary to.--Nippersink Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 2, 1965, 37.3 ft^3/s.

05548190 North Branch Nippersink Creek at Genoa City, Wis.

Location.--SW¼SE¼ sec. 35, T. 1 N., R. 18 E., Walworth County, at bridge on County Trunk B, at Genca City.

Drainage area.-- Tributary to.--Nippersink Creek.

Type of site.--Miscellaneous site.

Discharge measurement.--Nov. 2, 1965, 37.3 ft^3/s.

Table 2.--Basin characteristics for low-flow partial-record and selected gaging stations in the Rock-Fox River basin

Station number	Station name	Drainage area (mi^2) A	Main-channel slope (ft/mi) S	Main-channel length (mi) L	Basin storage (percent) BS	Forest cover (percent) F
05423000	West Branch Rock River near Waupun	41.4	9.58	16.0	10.0	1.57
05423300	South Branch Rock River near Waupun	12.6	13.8	5.7	14.5	1.18
05423500	South Branch Rock River at Waupun	62.8	8.33	13.8	8.25	1.50
05423800	East Branch Rock River tributary near Slinger	3.04	74.2	2.55	.99	7.56
05424100	Rubicon River near Hartford	59.8	11.5	16.4	7.1	9.50
05424200	Ashippun River near Oconomowoc	32.9	6.12	20.5	9.1	10.9
05425400	Silver Creek near Watertown	21.3	9.90	12.0	3.7	6.2
05425550	Johnson Creek at Johnson Creek	39.9	3.32	16.9	9.0	7.3
05425600	North Branch Crawfish River near Fall River	69.1	6.40	19.8	6.6	8.3
05425700	Robbins Creek near Columbus	8.01	21.0	8.0	2.0	3.86
05425930	Pratt Creek near Lowell	21.8	10.0	11.6	2.0	3.4
05426060	Bark River at Hartland	30.1	4.94	16.5	8.8	17.0
05426200	Bark River near Sullivan	106	4.76	35.6	14.9	16.9
05426300	Duck Creek near Sullivan	31.4	4.89	10.1	30.6	10.9
05426400	Scuppernong River near Palmyra	23.6	11.3	8.6	8.3	12.9
05427200	Allens Creek near Fort Atkinson	10.2	15.5	6.6	4.1	3.24
05427230	Otter Creek near Milton	41.5	8.02	15.1	8.4	7.6
05427350	Koshkonong Creek near Deerfield	64.3	4.87	20.8	1.3	5.2
05427550	Saunders Creek at Albion	21.8	14.0	8.7	3.0	4.6
05427700	Yahara River near De Forest	48.6	11.1	15.2	2.2	1.4
05427800	Token Creek near Madison	24.3	8.53	11.2	1.24	3.43
05427900	Sixmile Creek at Waunakee	41.1	9.60	11.5	5.4	4.0
05429600	Door Creek near McFarland	26.7	8.46	11.5	.7	3.9
05430100	Badfish Creek near Stoughton	43.1	8.01	8.65	1.78	4.4
05430300	Marsh Creek at Janesville	27.3	8.29	13.7	1.1	7.9
05430600	Bass Creek near Janesville	58.1	12.0	11.3	0.0	3.5
05431400	Little Turtle Creek at Allens Grove	41.8	8.23	12.8	.26	2.63
05527700	Des Plaines River near Kenosha	56.2	2.50	13.9	5.92	5.15
05543800	Fox River near Waukesha	77.4	4.90	18.0	4.24	8.76
05543830	Fox River at Waukesha	127	3.28	22.6	6.05	7.46
05543850	Pebble Creek near Waukesha	16.2	38.7	6.41	4.70	7.84
05544320	Fox River at Big Bend	321	1.72	45.7	7.48	7.87
05545120	Sugar Creek near Vienna	72.1	4.65	24.1	3.04	6.56
05545300	White River near Burlington	97.5	15.1	14.8	15.4	13.3
05545600	Hoosier Creek near Burlington	20.5	5.98	8.69	7.36	7.07
05548150	North Branch Nippersink Creek near Genoa City	13.8	9.34	5.72	4.19	2.67

Table 2.--Basin characteristics for low-flow partial-record and selected gaging stations in the Rock-Fox River basin

Mean annual precipitation (in) P	Soil infiltration rate (in/hr) i	Mean annual snowfall (in) Sn	Base-flow index $\{(ft^3/s)/mi^2\}$ Bf	Hydraulic conductivity $\{(gal/d)/ft^2\}$ K	Drift thickness (ft) H	Transmissivity {(gal/d)/ft} T	Drainage density (mi/mi^2) D
29.5	1.0	39	0.014	31.0	50	1,550	1.18
30.6	1.5	39	.001	48.0	50	2,400	2.07
29.6	1.2	38	.005	30.0	50	1,500	1.25
31.0	.5	41	.517	77.5	150	11,800	3.12
31.0	2.1	42	.092	35.2	200	7,040	2.47
31.3	1.8	42	.119	138	200	27,600	2.21
31.3	.7	42	.031	8.3	50	415	2.74
32.0	.6	40	.013	14.4	50	720	1.74
30.0	1.5	39	.004	10.2	50	510	2.05
30.8	1.7	38	.033	10.0	50	500	3.09
30.3	1.5	40	.012	9.8	50	490	2.82
30.1	1.1	42	.155	772	150	116,000	1.84
31.2	1.7	42	.092	812	200	162,000	1.59
32.1	1.0	40	.041	15.2	150	1,180	1.60
32.1	2.5	41	.161	353	175	61,800	3.14
32.0	3.5	38	.048	8.8	50	440	2.25
32.1	1.9	32	.013	242	175	42,400	1.22
30.7	.9	39	.123	10.9	150	1,640	2.78
31.1	1.1	32	.166	7.4	50	370	3.40
30.3	1.7	39	.074	19.0	50	950	1.61
30.4	1.7	38	.467	22.6	75	1,700	2.68
30.0	1.7	39	.024	24.3	150	3,640	2.38
30.6	1.1	39	.091	8.8	150	1,320	3.19
30.6	1.4	38	.117	741	126	93,370	3.42
31.6	1.7	32	.303	1,220	125	152,000	3.66
32.2	1.7	32	.223	19.9	150	2,980	6.07
32.5	1.7	39	.055	9.2	75	690	2.46
32.5	.59	40	.012	61.4	185	11,300	3.75
29.7	.42	42	.046	32.1	61	1,960	2.51
30.0	.53	42	.070	48.5	65	3,130	2.47
30.9	.42	42	.134	28.7	110	3,180	4.66
30.8	1.1	42	.137	520	130	67,600	2.08
32.1	2.1	41	.142	427	230	98,200	2.37
32.3	.96	41	.160	60.5	170	10,300	3.45
32.2	.54	41	.071	16.9	100	1,690	3.92
32.7	1.7	37	.386	22.4	175	3,920	4.49

Table 3.--Comparison of methods available to estimate low-flow characteristics in the Rock-Fox River basin

Type of site	Type of data	Number of sites with data	Time required to collect data	Analytical method to determine $Q_{7,10}$	Standard error of 10-year low flow ($SE_{7,10}$)
Gaging station	10 years or more recorded streamflow	9	12-61 years	Frequency analysis	23
Gaging station	10 years recorded streamflow	None[1]	10 years	Frequency analysis	32
Low-flow partial-record stations	11-39 base-flow discharge measurements	29	6-10 years	Correlation analysis	45
Miscellaneous measurement sites	3-9 base-flow discharge measurements	78	1- 2 years	Correlation analysis	59
Miscellaneous measurement sites with drainage areas less than 150 mi^2	1 base-flow discharge measurement	244	2 hours	Regression analysis	62
Ungaged sites with drainage areas less than 150 mi^2	Basin characteristics	Unlimited	2 hours	Regression analysis	155

[1]Example was presented to illustrate the accuracy that could be obtained from 10 years of recorded streamflow in the basin. Data from existing gaging stations were adjusted to represent 10 years of recorded streamflow for the analysis.