

U. S. GEOLOGICAL SURVEY
ANNUAL PEAK FLOW FREQUENCY ANALYSIS
Following Bulletin 17-B Guidelines
Program peakfq
(Version 4.0, December, 2000)

Station - 05361400 HAY CREEK NEAR PRENTICE, WI
2002 MAR 13 09:02:50

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	40
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	40
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.216
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	0.0
User supplied high outlier threshold	=	--
User supplied low outlier criterion	=	--
Plotting position parameter	=	0.00

***** NOTICE -- Preliminary machine computations. *****
***** User responsible for assessment and interpretation. *****

WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.	0.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	99.4
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	2191.6

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE	LOGARITHMIC		
	EXCEEDANCE DISCHARGE	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	2.6690	0.2505 -0.432
BULL.17B ESTIMATE	0.0	1.0000	2.6690	0.2505 -0.357

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY'	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
			ESTIMATE	LOWER	UPPER
0.9950	87.1	83.7	76.6	57.4	117.4
0.9900	105.1	101.9	95.3	71.9	137.9
0.9500	171.1	169.3	163.9	128.9	211.2
0.9000	218.8	218.1	213.1	172.3	263.0
0.8000	290.9	291.9	287.2	239.4	341.7
0.5000	483.0	486.4	483.0	415.0	563.4
0.2000	763.8	764.4	771.3	649.4	930.6
0.1000	952.6	946.6	970.3	795.7	1200.0
0.0400	1189.0	1170.0	1227.0	970.9	1558.0
0.0200	1362.0	1330.0	1421.0	1095.0	1831.0
0.0100	1532.0	1483.0	1617.0	1214.0	2106.0
0.0050	1699.0	1632.0	1816.0	1329.0	2384.0
0.0020	1917.0	1822.0	2085.0	1475.0	2756.0
0.6667	374.8	(1.50-year flood)			
0.4292	535.4	(2.33-year flood)			

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I N P U T D A T A L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1961	425.0		1981	730.0	
1962	390.0		1982	790.0	
1963	155.0		1983	485.0	
1964	110.0		1984	275.0	
1965	720.0		1985	375.0	
1966	635.0		1986	1090.0	
1967	975.0		1987	320.0	
1968	950.0		1988	450.0	
1969	770.0		1989	455.0	
1970	195.0		1990	245.0	
1971	630.0		1991	350.0	
1972	700.0		1992	480.0	
1973	850.0		1993	730.0	
1974	245.0		1994	1650.0	
1975	720.0		1995	339.0	
1976	545.0		1996	572.0	
1977	155.0		1997	660.0	
1978	260.0		1998	422.0	
1979	540.0		1999	295.0	
1980	530.0		2000	474.0	

Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1994	1650.0	0.0244	0.0244
1986	1090.0	0.0488	0.0488
1967	975.0	0.0732	0.0732
1968	950.0	0.0976	0.0976
1973	850.0	0.1220	0.1220
1982	790.0	0.1463	0.1463
1969	770.0	0.1707	0.1707
1981	730.0	0.1951	0.1951
1993	730.0	0.2195	0.2195
1965	720.0	0.2439	0.2439
1975	720.0	0.2683	0.2683
1972	700.0	0.2927	0.2927
1997	660.0	0.3171	0.3171
1966	635.0	0.3415	0.3415
1971	630.0	0.3659	0.3659
1996	572.0	0.3902	0.3902
1976	545.0	0.4146	0.4146
1979	540.0	0.4390	0.4390
1980	530.0	0.4634	0.4634
1983	485.0	0.4878	0.4878
1992	480.0	0.5122	0.5122
2000	474.0	0.5366	0.5366
1989	455.0	0.5610	0.5610
1988	450.0	0.5854	0.5854
1961	425.0	0.6098	0.6098
1998	422.0	0.6341	0.6341
1962	390.0	0.6585	0.6585
1985	375.0	0.6829	0.6829
1991	350.0	0.7073	0.7073
1995	339.0	0.7317	0.7317
1987	320.0	0.7561	0.7561
1999	295.0	0.7805	0.7805
1984	275.0	0.8049	0.8049
1978	260.0	0.8293	0.8293
1974	245.0	0.8537	0.8537
1990	245.0	0.8780	0.8780
1970	195.0	0.9024	0.9024
1963	155.0	0.9268	0.9268
1977	155.0	0.9512	0.9512
1964	110.0	0.9756	0.9756

