

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

Station - 04066000 MENOMINEE RIVER NEAR PEMBINE, WI
 2002 MAR 13 09:02:28

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

Number of peaks in record	=	33
Peaks not used in analysis	=	1
Systematic peaks in analysis	=	32
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.149
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. *****

**WCF109W-PEAKS WITH MINUS-FLAGGED DISCHARGES WERE BYPASSED.	1
**WCF113W-NUMBER OF SYSTEMATIC PEAKS HAS BEEN REDUCED TO NSYS =	32
WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.	0.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	4780.8
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	36943.7
WCF002J-CALCS COMPLETED. RETURN CODE =	2

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	DISCHARGE	EXCEEDANCE PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	4.1235	0.1714	-0.114
BULL.17B ESTIMATE	0.0	1.0000	4.1235	0.1714	-0.126

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY' ESTIMATE	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
				LOWER	UPPER
0.9950	4590.0	4611.0	4181.0	3371.0	5672.0
0.9900	5117.0	5135.0	4761.0	3856.0	6223.0
0.9500	6849.0	6858.0	6627.0	5515.0	8006.0
0.9000	7975.0	7978.0	7814.0	6626.0	9160.0
0.8000	9560.0	9557.0	9463.0	8206.0	10810.0
0.5000	13400.0	13390.0	13400.0	11920.0	15070.0
0.2000	18570.0	18560.0	18740.0	16420.0	21640.0
0.1000	21910.0	21930.0	22310.0	19100.0	26320.0
0.0400	26060.0	26100.0	26910.0	22260.0	32440.0
0.0200	29090.0	29170.0	30420.0	24500.0	37100.0
0.0100	32080.0	32190.0	34010.0	26650.0	41840.0
0.0050	35040.0	35200.0	37740.0	28750.0	46670.0
0.0020	38950.0	39190.0	42910.0	31460.0	53200.0
0.6667	11290.6	(1.50-year flood)			
0.4292	14378.8	(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
1950	20500.0		1967	16900.0	
1951	21100.0		1968	12400.0	
1952	17100.0		1969	11900.0	
1953	25500.0		1970	17200.0	
1954	19800.0		1971	15800.0	
1955	15100.0		1972	18000.0	
1956	7840.0		1973	16000.0	
1957	9100.0		1974	8640.0	
1958	13200.0		1975	17200.0	
1959	9720.0		1976	15700.0	
1960	26900.0		1977	7720.0	
1961	12200.0		1978	7620.0	
1962	8160.0		1979	-17300.0	K
1963	6370.0		1980	9670.0	
1964	8340.0		1981	18500.0	
1965	21500.0		1982	12500.0	
1966	9480.0				

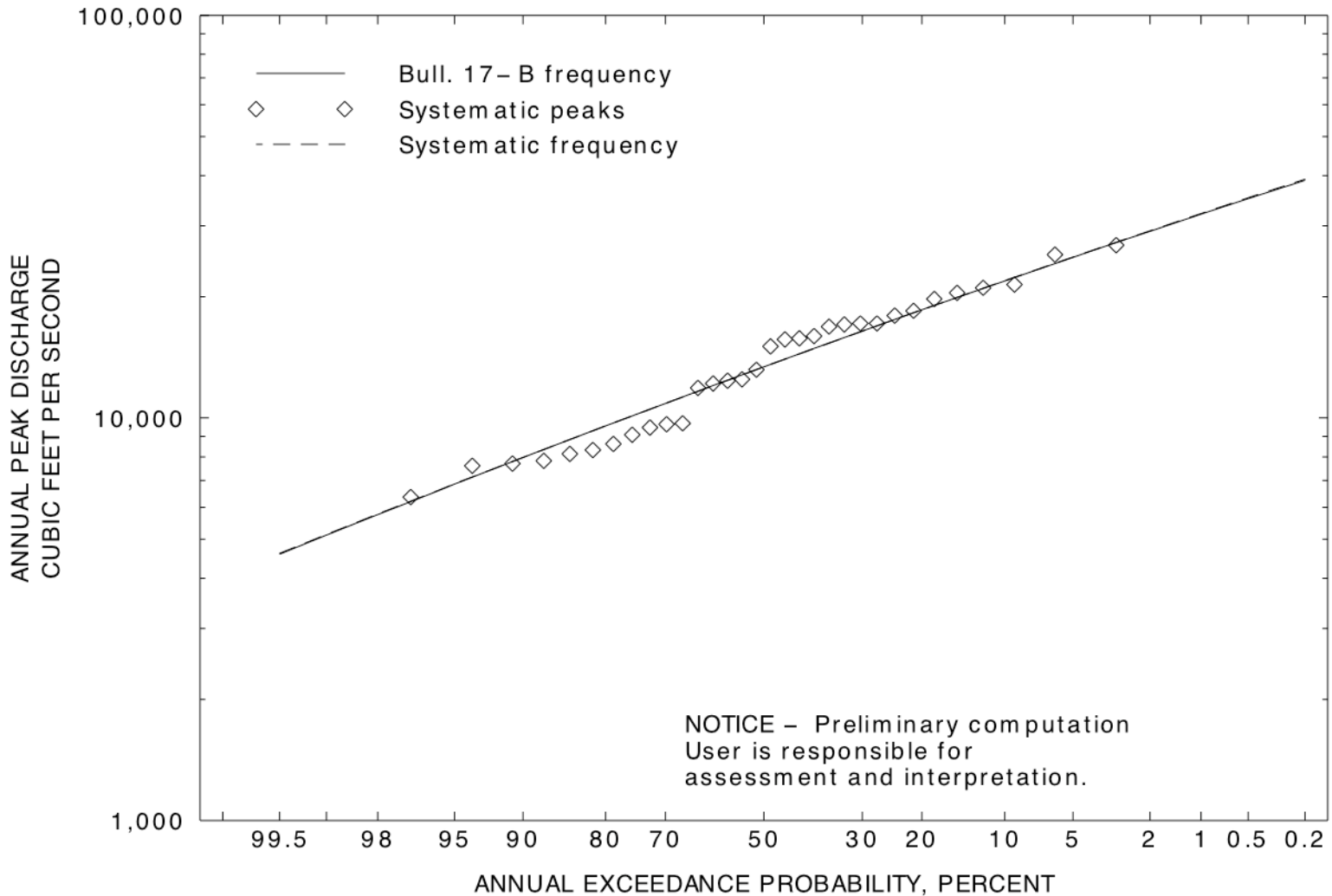
Explanation of peak discharge qualification codes

PEAKFQ CODE	WATSTORE 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
1960	26900.0	0.0303	0.0303
1953	25500.0	0.0606	0.0606
1965	21500.0	0.0909	0.0909
1951	21100.0	0.1212	0.1212
1950	20500.0	0.1515	0.1515
1954	19800.0	0.1818	0.1818
1981	18500.0	0.2121	0.2121
1972	18000.0	0.2424	0.2424
1970	17200.0	0.2727	0.2727
1975	17200.0	0.3030	0.3030
1952	17100.0	0.3333	0.3333
1967	16900.0	0.3636	0.3636
1973	16000.0	0.3939	0.3939
1971	15800.0	0.4242	0.4242
1976	15700.0	0.4545	0.4545
1955	15100.0	0.4848	0.4848
1958	13200.0	0.5152	0.5152
1982	12500.0	0.5455	0.5455
1968	12400.0	0.5758	0.5758
1961	12200.0	0.6061	0.6061
1969	11900.0	0.6364	0.6364
1959	9720.0	0.6667	0.6667
1980	9670.0	0.6970	0.6970
1966	9480.0	0.7273	0.7273
1957	9100.0	0.7576	0.7576
1974	8640.0	0.7879	0.7879
1964	8340.0	0.8182	0.8182
1962	8160.0	0.8485	0.8485
1956	7840.0	0.8788	0.8788
1977	7720.0	0.9091	0.9091
1978	7620.0	0.9394	0.9394
1963	6370.0	0.9697	0.9697
1979	-17300.0	--	--



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