Annual Peak-Flow Frequency Analysis
For more information on the contents of this documentation, see Kessler and others (2013).

Streamgage number and name:

06482745 Beaver Creek at Valley Springs, S. Dak.

Peak-flow information:

Number of systematic peak flows in record	10
Systematic period begins	1986
Systematic period ends	2011
Length of systematic record	26
Years without information	16
Peak flows not used in analysis	15
Number of historical peak flows in record	0

Frequency analysis options:

Method	Bulletin 17B
Skew option	Weighted
Generalized skew	-0.254
Standard error of generalized skew	0.426
Low-outlier method	Bulletin 17B Grubbs-Beck test

Bulletin 17B systematic record analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.7077	0.3428	-0.032

Outlier criteria and number of peak flows exceeding:

Low	102.3	0
High	2544.5	15

Bulletin 17B Final analysis results:

Moments of the common logarithms of the peak flows:

Mean	Standard deviation	Skewness
2.7077	0.3428	-0.192

Annual frequency curve at selected exceedance probabilities:

Exceedance probability	Peak estimate	Lower-95 level	Upper-95 level
0.9950	58.0	13.3	117
0.9900	72.8	19.1	139
0.9500	134.0	49.5	225
0.9000	183.0	79.9	291
0.8000	265.0	138.0	403
0.6667	371.0	219.0	560
0.5000	523.0	337.0	821
0.4292	602.0	394.0	973
0.2000	998.0	654.0	1,930
0.1000	1,380.0	870.0	3,100
0.0400	1,930.0	1,150.0	5,170
0.0200	2,380.0	1,360.0	7,170
0.0100	2,860.0	1,570.0	9,590
0.0050	3,380.0	1,790.0	12,500
0.0020	4,120.0	2,080.0	17,100

Peak-flow data used in the analysis:

Explanation of symbols and codes

−−	none
NA	Missing peak value

Water year	Peak flow	Peak-flow code
1986	1,060	−−
1987	670	−−
1988	175	−−
1989	455	−−
1990	205	−−
1991	220	−−
1992	NA	−−
1993	NA	−−
1994	NA	−−
1995	NA	−−
Gap in systematic record		
1997	NA	−−
1998	NA	−−
1999	NA	−−
2000	NA	−−
2001	NA	−−
2002	NA	−−
2003	NA	−−
2004	NA	−−
2005	NA	−−
2006	NA	−−
2007	NA	−−
2008	728	−−
2009	340	−−
2010	1,590	−−
2011	1,190	−−