Table 8. Regression equations based on bankfull width (W_{bf})

[Abbreviations: n, number of stations used in the regression analysis; Q_T, annual peak discharge, in cubic feet per second, for recurrence interval T, in years; W_{bf}, width of bankfull channel, in feet; *SEP*, standard error of prediction; *EYR*, equivalent years of record. Symbol: --, not applicable]

Regression Equation	Error Variance, log units			Average *SEP*, in log units	Average *SEP*, in percent	EYR
	Average sampling	Model	Measurement			
West Region (n = 90)						
$Q_2 = 0.281\ W_{bf}^{1.98}$	0.001	0.040	0.038	0.281	72.3	1.3
$Q_5 = 0.678\ W_{bf}^{1.86}$	.001	.036	.033	.266	67.5	1.9
$Q_{10} = 1.08\ W_{bf}^{1.79}$	.001	.037	.031	.263	66.6	2.4
$Q_{25} = 1.75\ W_{bf}^{1.72}$	.002	.040	.029	.266	67.5	3.1
$Q_{50} = 2.34\ W_{bf}^{1.69}$	.002	.045	.028	.272	69.5	3.4
$Q_{100} = 2.99\ W_{bf}^{1.66}$	.002	.050	.027	.281	72.3	3.5
$Q_{200} = 3.72\ W_{bf}^{1.64}$	.002	.058	.026	.293	76.1	3.6
$Q_{500} = 4.82\ W_{bf}^{1.61}$	.003	.068	.025	.310	81.7	3.6
Northwest Region (n = 29)						
$Q_2 = 0.527\ W_{bf}^{1.82}$	.005	.084	.032	.348	95.1	--
$Q_5 = 1.93\ W_{bf}^{1.63}$	.004	.075	.026	.324	86.6	--
$Q_{10} = 4.00\ W_{bf}^{1.52}$	.005	.080	.022	.326	87.3	--
$Q_{25} = 9.46\ W_{bf}^{1.40}$	.005	.084	.019	.329	88.0	--
$Q_{50} = 16.6\ W_{bf}^{1.34}$	.005	.089	.018	.334	90.1	--
$Q_{100} = 28.4\ W_{bf}^{1.29}$	.006	.097	.016	.345	94.1	--
$Q_{200} = 45.0\ W_{bf}^{1.26}$	.006	.108	.015	.360	99.6	--
$Q_{500} = 81.6\ W_{bf}^{1.21}$	.007	.127	.014	.386	109.9	--
Northwest Foothills Region (n = 22)						
$Q_2 = 1.68\ W_{bf}^{1.38}$	.019	.138	.019	.419	124.3	2.2
$Q_5 = 8.91\ W_{bf}^{1.21}$	.017	.109	.014	.374	105.2	4.0
$Q_{10} = 20.4\ W_{bf}^{1.14}$	.019	.106	.013	.370	103.6	5.5
$Q_{25} = 47.5\ W_{bf}^{1.08}$	.021	.112	.011	.380	107.4	7.3
$Q_{50} = 79.4\ W_{bf}^{1.04}$	.024	.122	.011	.395	113.6	8.2
$Q_{100} = 124\ W_{bf}^{1.02}$	.027	.134	.010	.414	121.9	8.9
$Q_{200} = 183\ W_{bf}^{1.01}$	.030	.149	.010	.435	131.6	9.4
$Q_{500} = 288\ W_{bf}^{1.00}$	.035	.170	.010	.464	146.1	9.8
Northeast Plains Region (n = 39)						
$Q_2 = 1.07\ W_{bf}^{1.62}$	.009	.158	.026	.439	133.8	2.0
$Q_5 = 4.31\ W_{bf}^{1.52}$	.009	.139	.022	.413	121.4	2.6
$Q_{10} = 8.91\ W_{bf}^{1.46}$	.009	.139	.021	.411	120.5	3.4
$Q_{25} = 18.9\ W_{bf}^{1.38}$	.010	.147	.019	.419	124.1	4.4
$Q_{50} = 30.3\ W_{bf}^{1.34}$	.011	.157	.017	.430	129.3	4.9
$Q_{100} = 45.6\ W_{bf}^{1.30}$	.012	.168	.016	.443	135.6	5.4
$Q_{200} = 65.8\ W_{bf}^{1.26}$	.013	.181	.015	.458	143.0	5.7
$Q_{500} = 101\ W_{bf}^{1.21}$	.015	.202	.014	.481	155.5	6.0

East-Central Plains Region (n = 77)						
$Q_2 = 2.19\ W_{bf}^{1.37}$	.006	.126	.018	.387	110.4	3.1
$Q_5 = 8.91\ W_{bf}^{1.32}$	.005	.090	.017	.335	90.2	5.1
$Q_{10} = 18.3\ W_{bf}^{1.29}$	.005	.085	.016	.326	87.2	7.0
$Q_{25} = 37.9\ W_{bf}^{1.25}$	.006	.091	.015	.335	90.5	8.7
$Q_{50} = 59.4\ W_{bf}^{1.23}$	.007	.102	.015	.351	96.3	9.4
$Q_{100} = 88.3\ W_{bf}^{1.20}$	.008	.116	.014	.371	104.0	9.8
$Q_{200} = 126\ W_{bf}^{1.18}$	.008	.133	.014	.394	113.3	9.8
$Q_{500} = 191\ W_{bf}^{1.15}$	.010	.160	.013	.427	127.8	9.6
Southeast-Plains Region (n = 61)						
$Q_2 = 1.97\ W_{bf}^{1.38}$	.007	.176	.018	.449	138.6	1.5
$Q_5 = 6.42\ W_{bf}^{1.32}$	.006	.116	.017	.372	104.2	2.9
$Q_{10} = 11.8\ W_{bf}^{1.29}$	.005	.093	.016	.337	91.2	4.8
$Q_{25} = 22.9\ W_{bf}^{1.25}$	.005	.078	.015	.313	82.7	7.7
$Q_{50} = 35.3\ W_{bf}^{1.22}$	.005	.077	.014	.310	81.6	9.6
$Q_{100} = 52.2\ W_{bf}^{1.18}$	.006	.081	.014	.316	83.6	10.8
$Q_{200} = 74.7\ W_{bf}^{1.15}$	.006	.089	.013	.329	88.2	11.3
$Q_{500} = 115\ W_{bf}^{1.10}$	.007	.107	.012	.356	97.9	11.1
Upper Yellowstone-Central Mountain Region (n = 82)						
$Q_2 = 0.610\ W_{bf}^{1.78}$	.003	.059	.031	.303	79.4	2.5
$Q_5 = 2.97\ W_{bf}^{1.52}$	.003	.054	.022	.281	72.3	4.0
$Q_{10} = 6.78\ W_{bf}^{1.39}$	.003	.059	.019	.284	73.1	5.0
$Q_{25} = 15.8\ W_{bf}^{1.25}$	.004	.071	.015	.300	78.4	5.9
$Q_{50} = 27.5\ W_{bf}^{1.17}$	.004	.084	.013	.319	84.7	6.2
$Q_{100} = 44.4\ W_{bf}^{1.09}$	.005	.099	.012	.340	92.0	6.4
$Q_{200} = 68.7\ W_{bf}^{1.03}$	.006	.116	.010	.362	100.5	6.4
$Q_{500} = 115\ W_{bf}^{0.949}$	.007	.140	.009	.394	113.4	6.4
Southwest Region (n = 42)						
$Q_2 = 0.343\ W_{bf}^{1.89}$	.003	.036	.035	.270	68.8	2.5
$Q_5 = 1.58\ W_{bf}^{1.60}$	.003	.035	.025	.251	63.1	3.5
$Q_{10} = 3.36\ W_{bf}^{1.46}$	.004	.046	.021	.265	67.4	3.7
$Q_{25} = 7.39\ W_{bf}^{1.32}$	.005	.065	.017	.295	76.7	3.7
$Q_{50} = 12.2\ W_{bf}^{1.23}$	.006	.082	.015	.320	85.1	3.6
$Q_{100} = 19.3\ W_{bf}^{1.15}$	.007	.099	.013	.345	94.1	3.6
$Q_{200} = 29.3\ W_{bf}^{1.08}$	.008	.118	.011	.370	103.6	3.5
$Q_{500} = 48.1\ W_{bf}^{0.988}$	.010	.144	.009	.404	117.5	3.5