

Table 2. Results of the Mann-Whitney U-test to determine if El Niño/Southern Oscillation extremes significantly affected flow at five gaging stations.

[U_1 and U_2 are lower and upper sample values of the test statistic U . $U_{0.05}$ and $U_{0.95}$ are the lower and upper critical values of U used to accept or reject the null hypothesis H_0 : median of population 1 (F_1) = median of population 2 (F_2). The alternative hypothesis H_1 : median of $F_1 <$ median of F_2 is supported by U_1 values less than $U_{0.05}$ and U_2 values greater than $U_{0.95}$. See Tamhane and Dunlop (2000) for discussion of technique]

Gaging station	U_1	U_2	Decision
Mississippi River at St. Louis	89	135	Accept H_0
Ohio River at Metropolis	85	139	Accept H_0
Mississippi River at Vicksburg	95	145	Accept H_0
Rio Grande at Embudo	39	201	Reject H_0
Rio Grande at Presidio ¹	12	118	Reject H_0

¹At level of significance $\alpha = 0.05$, $U_{0.5} = 38$ and $U_{0.95} = 92$. Presidio comparison for 1930-97; all others for 1915-97.