

Appendix B. Estimating recent peak stream discharges and return intervals for Floodplain Hydrologic Connectivity rating.

The choice of rating table for Floodplain Hydrologic Connectivity metric (A1) is dependent on estimating the peak discharge of the river or stream within the last five years at the Sampling Area (SA) and the return interval for that peak flow. The higher the peak flow, the greater the expectation that more of the floodplain and associated side channels should show indications of inundation. Hence, the rating tables are scaled to the size of peak discharges and their return intervals. This appendix provides a rough guide to estimating the peak discharge and return intervals for sites in or near the lower Gila and San Francisco watersheds using available USGS stream gage data. The closer your site is to a gage the more accurate will be the estimation of peak discharge within the last five years. For sites in nearby watersheds outside the Gila basin and lacking gage data (e.g., Mimbres River), still use the nearest available gage to the site (for other gages around the state see: <http://nwis.waterdata.usgs.gov/nm/nwis/peak>)

Steps:

- 1) Using Table 1, choose the gage nearest your SA location and use the hyperlink provided to go to the USGS National Water Information System to see the yearly peak flows for that gage.
- 2) Choose the highest discharge from the last five years.
- 3) Using Table 2, determine the return interval for that discharge at that gage.
- 4) Use that return interval to select the corresponding rating table for Floodplain Hydrologic Connectivity metric (Field Guide Worksheet Table A1).

Table 1. Available gages for evaluating peak discharges in the lower Gila, San Francisco, and Mimbres watersheds.

Gage No.	Gage Name and webpage link
9431500	GILA RIVER NEAR REDROCK, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09431500&agency_cd=USGS&format=html
9432000	GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09432000&agency_cd=USGS&format=html
9430500	GILA RIVER NEAR GILA, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09430500&agency_cd=USGS&format=html
9442680	SAN FRANCISCO RIVER NEAR RESERVE, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09442680&agency_cd=USGS&format=html
9444000	SAN FRANCISCO RIVER NEAR GLENWOOD, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09444000&agency_cd=USGS&format=html
9430600	MOGOLLON CREEK NEAR CLIFF, NM http://nwis.waterdata.usgs.gov/nm/nwis/peak?site_no=09430600&agency_cd=USGS&format=html

Table 2. Peak discharge (CFS) recurrence intervals that correspond to the rating tables for the Floodplain Hydrologic Connectivity metric (Field Guide Table A1).

Gage No.	Gage	Recurrence Interval (years)				
		Range	1-2	2-10	10-25	25-50
9431500	GILA RIVER NEAR REDROCK, NM	Min		6,180	19,700	29,100
		Max	<6,180	19,700	29,100	37,200
9432000	GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM	Min		5,210	17,900	27,200
		Max	<5,210	17,900	27,200	35,500
9430500	GILA RIVER NEAR GILA, NM	Min		2,140	11,800	22,500
		Max	<2,140	11,800	22,500	34,300
9442680	SAN FRANCISCO RIVER NEAR RESERVE, NM	Min		752	3,420	6,280
		Max	<752	3,420	6,280	9,450
9444000	SAN FRANCISCO RIVER NEAR GLENWOOD, NM	Min		2,600	10,700	18,100
		Max	<2,600	10,700	18,100	25,500
9430600	MOGOLLON CREEK NEAR CLIFF, NM	Min		877	5,070	9,500
		Max	<877	5,070	9,500	14,200