

**ESTRELLA FAN
FCD GAGE ID# 84207 (6893)**

STATION DESCRIPTION

LOCATION – The gage location is on the western slope / fan of the Sierra Estrella Mountains in Rainbow Valley. The gage can be accessed by turning from Rainbow Valley Road east onto Riggs Road. Riggs Road is traveled 7 miles until electric transmission lines are met. Turn left and follow the lines for approximately 3.5 miles. A road/path heads into the wash to the gage site. Latitude N 33° 16' 08", Longitude W 112° 19' 15". Located in the NW1/4 SW1/4 NW1/4 S12 T2S R1W in the Avondale SE 7.5-minute quadrangle.

ESTABLISHMENT – The stage gage was established on April 30, 1993.

DRAINAGE AREA – Approximately 1.0 mi²

GAGE – The recording gage is a pressure transducer type instrument. It is located on the left bank. It is at elevation 0.00 feet gage height, levels of March 21, 2019.

There is no staff gage at this location.

There are twenty-eight crest gages located in the study area. See the crest gage table at the end of this document for more information. Four of them, #21-24 are located near the transducer gage.

CSG #21 is located on the left bank, downstream of the transducer gage. It has a pin elevation of 0.01 feet gage height, levels of March 21, 2019.

CSG #22 is located on the right bank, downstream of the transducer gage. It has a pin elevation of 0.29 feet gage height, levels of March 21, 2019.

CSG #23 is located on the left bank, upstream of the transducer gage. It has a pin elevation of 2.39 feet gage height, levels of March 21, 2019.

CSG #24 is located on the right bank, upstream of the transducer gage. It has a pin elevation of 2.60 feet gage height, levels of March 21, 2019.

ZERO GAGE HEIGHT – is defined as the location of the pressure transducer at the weather station. It is equivalent to 1,446.872 feet NAVD88.

HISTORY – No previous history at this location. A weather station and stage gage were installed on April 30, 1993. Twenty-eight crest gages were installed in the watershed. Reference markers ESTRFN and EFANCSG were established on December 27, 2000.

REFERENCE MARKS –

RM-ESTRFN is an FCD brass cap stamped “ESTRFN 2001” located about 220 feet southwest of the weather station. It is at elevation 9.030 feet gage height and 1,455.902 feet NAVD88, levels of March 21, 2019.

RM-1 is a sign channel on top of the left bank just beyond the station tube. It is at elevation 7.814 feet gage height and 1,454.686 feet NAVD88, levels of March 21, 2019.

RM-2 is a sign channel near the top of the right bank in the transducer gage cross section. It is at elevation 6.605 feet gage height and 1,453.477 feet NAVD88, levels of March 21, 2019.

RM-3 is a rebar located on the right bank about 30 feet downstream from the gage cross section. It is at elevation 5.830 feet gage height and 1,452.702 feet NAVD88, levels of March 21, 2019.

RP-1 is the top of the most shoreward pipe at the irrigation box housing the transducer gage. It is at elevation 1.125 feet gage height, levels of March 21, 2019.

RP-2 is a chiseled ‘X’ on the top of a large rock just north west of the station tube. It may be unreliable because it covers a control box. If it is moved then the elevation data are not valid. It is at elevation 8.271 feet gage height, levels of March 21, 2019.

CHANNEL AND CONTROL – The channel upstream of the gage is straight for approximately 500 feet and is well defined. Below the gage, the channel begins to ‘fan out’ and the channel disappears into many shallow finger channels.

There is no natural or man-made control at the gage for low flows. For higher stages the channel becomes the control. However, just downstream of the station, the channel becomes distributary into a very wide floodplain.

RATING – The current rating is Rating #2. The rating was developed by a HEC-RAS model from cross sections collected in March 2019.

DISCHARGE MEASUREMENTS – Direct measurements would be difficult. Indirect methods could be used in a section at and above the gage.

POINT OF ZERO FLOW – The low point PZF in the channel at the weather station gauge is at 0.22 feet gage height, levels of March 21, 2019.

FLOODS – The peak recorded since installation was 508 cfs at 1.60 feet gage height on September 8, 2014. There have only been 12 recorded runoff events since installation.

REGULATION – None

DIVERSIONS – None known

ACCURACY – Fair

JUSTIFICATION – Study alluvial fans for data gathering

UPDATE – August 20, 2019
DE Gardner

CREST GAGE Table

Crest Gauge #	Elevation (feet)	Northing (feet)	Easting (feet)
0	1404.965	823194.938	576581.754
1	1404.998	823385.647	576371.569
2	1405.536	825429.336	576324.974
3	1405.285	823492.010	576254.124
4	1405.317	823510.665	576232.041
5	1405.919	823553.074	576181.303
6	1407.017	823619.970	576109.001
7	1406.951	823699.805	576021.676
8	1407.772	823750.769	575963.022
9	1408.435	823860.463	575846.704
10	1409.226	823895.602	575820.619
11	1410.668	824037.603	575689.747
12	1411.121	824137.046	575579.644
13	1411.699	824208.177	575510.812
14	1411.853	824278.223	575420.863
15	1412.775	824366.084	575325.763
16	1414.797	824528.620	575158.511
17	1415.026	824650.113	575029.359
18	1414.919	824715.097	574952.921
19	1414.551	824778.165	574883.753
20	1449.569	825889.028	576571.646
21	1447.453	825762.089	576441.641
22	1447.754	825736.889	576383.914
23	1449.819	825869.292	576334.259
24	1450.014	825889.618	576390.677
25	1517.496	827764.097	576197.730
26	1517.220	827805.762	576568.549
27	1516.495	827878.956	576515.250