

**FLYING E WASH
FCD GAGE #51707**

STATION DESCRIPTION

LOCATION - The gage is located on the downstream, right side of the bridge culvert of US 60 over Flying E Wash, approximately 4 miles west of downtown Wickenburg. Latitude N 33° 57' 44.5"; Longitude W 112° 46' 58.4". Located in the S09 T7N R5W in the Vulture Peak 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed July 12, 1994.

DRAINAGE AREA - 8.63 mi²

GAGE - The gage is a pressure transducer type instrument. The PT is at 0.00 feet gage height, levels of September 14, 2017. It is located on the right bank of the north side of US60.

There is one staff gage at this location. It is painted on the right bank wall of the US60 crossing. It displays in gage height.

There are two crest gages located on the right bank just upstream of the transducer. The lower gage has a pin elevation of 0.49 feet gage height, levels of September 14, 2017. The upper gage has a pin elevation of 5.28 feet gage height, levels of September 14, 2017.

ZERO GAGE HEIGHT - Zero gage height is defined by the zero point on the staff gage at the gage location. Elevation is 2,283.20 feet NAVD 1988, levels of March 9, 2017.

HISTORY - Gage installed on July 12, 1994. PT moved to 0.45 feet gage height, effective on December 1, 2000 due to constant burial of instrument. Station moved following construction to the south side of US 60. PT remained in the same location and at the same elevation. FCD brass cap was installed on the northwest side of the US 60 crossing of the wash on July 17, 2003. In the summer 2017, the crest gages were split into two gages, and the staff gage was replaced with a painted staff gage.

REFERENCE MARKS -

BM-FLYE2 is an FCD brass cap located approximately 25 feet north of US 60 and about 40 feet west of the wash. Monument established on July 17, 2003. Elevation = 7.270 feet gage height and 2,290.470 feet NAVD88, levels of March 9, 2017.

RM-1 is a rebar on the left bank directly opposite the instrumentation on the right bank. It is at elevation 7.075 feet gage height and 2,290.275 feet NAVD88, levels of September 14, 2017.

RM-2 is a rebar located on the top of the left bank approximately 35 feet north of the sidewalk. It is at elevation 5.653 feet gage height and 2,288.853 feet NAVD88, levels of September 14, 2017.

RP-1 is a chiseled 'X' in the center of the pedestrian sidewalk, centered with the pier of the bridge upstream. It is at elevation 0.155 feet gage height, levels of September 14, 2017.

There are three marked cross sections downstream of the gage. These three replace all previous downstream cross sections set in 2000 and 1995.

Cross section one is located approximately 50 feet downstream from the US60 bridge. XS1LB is 1/2-inch rebar with elevation 6.10 feet gage height or 89.20 feet for slope area. XS1RB is a stake high on the right bank with elevation 93.51 feet.

Cross section two is located approximately 300 feet downstream from cross section one. XS2LB is a stake with elevation 86.76 feet. XS2RB is a 1/2-inch rebar with elevation 86.54 feet.

Cross section three is located approximately 250 feet downstream from cross section two. XS3LB is a stake with elevation 83.91 feet. XS3RB is a stake with elevation 83.64 feet.

A fourth cross section downstream may be used if needed.

CHANNEL AND CONTROL - The channel is in natural condition downstream from the gage. The gage is located at the outlet of the US60 bridge, which also has a natural bottom. The control is channel control for most gage heights.

RATING - Current rating is #6, effective October 1, 2019. The rating is based on an HEC-RAS model developed from February 2020 survey data of 7 cross sections.

POINT OF ZERO FLOW - Surveyed to -0.1 feet gage height near the PT on the right side of the bridge, levels of July 21, 2015.

DISCHARGE MEASUREMENTS - Low flow discharge measurements could be made directly by wading just downstream from the gage. Higher flow measurements would best be made using indirect methods following the event.

There are three permanent cross sections downstream of the gage and bridge that could be evaluated for an indirect discharge measurement. All four are described above in the references section.

FLOODS – A flood of 5,250 cfs and 7.07 feet gage height occurred on July 18, 2015. A flood of about 3,600 cfs at 5.70 feet gage height occurred on October 22, 2000. A flood of 3,740 cfs and 5.74 feet gage height occurred on July 30, 2005.

REGULATION - None known

DIVERSIONS - There are four known stock tanks upstream from the gage.

ACCURACY - Fair

JUSTIFICATION - Monitor flows in Flying E Wash for the Wickenburg flood warning project.

UPDATE April 30, 2020
 DE Gardner