CASANDRO WASH AT US 60
FCD GAGE ID# 52007

STATION DESCRIPTION

LOCATION - The gaging station is located on the south side of US 60 in Wickenburg, Arizona near the intersection of Lazy Fox Drive. The instrumentation is located on the upstream (south) side of the box culverts at US 60. Latitude N 33° 57' 43.4", Longitude W112° 45' 54.9". Located in the NE1/4 SW1/4 S10 T7N R5W in the Vulture Peak 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed on July 12, 1994.

DRAINAGE AREA - 0.59 mi^2, via USGS Streamstats. This is the east of two similarly sized tributary basins contributing to the Casandro Dam. The west tributary crossing however has a smaller, less efficient crossing of US 60.

GAGE - The gage is presently a pressure transducer located on the upstream side of the box culvert. The PT diaphragm is placed 0.5 feet below the culvert invert. The gage elevation is 0.75 feet gage height.

There is no staff gage at this site.

There is one crest-stage gage at this location. It is located near the transducer on the upstream, right wing wall. The pin is at elevation 1.52 feet gage height, levels of March 9, 2017.

ZERO GAGE HEIGHT - Zero gage height is defined as the concrete culvert floor at the downstream end of the culvert. It is at elevation 2,241.736 feet NAVD88, levels of March 9, 2017.

HISTORY - No previous gaging at this site. Crest gages installed in 1997. Crest gages reinstalled December 7, 1999. Station and transducer moved on March 15, 2006. Station was relocated to the south side of US 60. It is believed that the transducer will provide more accurate information about flows through the culvert. Datum references were kept the same as before the move.

REFERENCE MARKS –

BM-7093 is an FCDMC brass cap located west of the station tube. It is at elevation 10.029 feet gage height and 2,251.765 feet NAVD88, levels of March 9, 2017. Remeasured and reaffirmed on August 28, 2025.

BM-2 is an ADOT brass cap located in the center of the upstream headwall. It is stamped 1932 with an elevation of 2,287.74 feet MSL. It is at elevation 9.002 feet gage height, and 2,250.738 feet NAVD88, levels of March 9, 2017. Remeasured and reaffirmed on August 28, 2025.

RM-2 is a brass cap located in the center of the downstream headwall. It is at elevation 10.880 feet gage height and 2,252.616 feet NAVD88, levels of March 9, 2017. Remeasured and reaffirmed on August 28, 2025.

RM-1 from the original installation has been destroyed.

RP1 is a chiseled 'x' on the bottom of the box culvert near the outlet, in the right barrel near the pier. Established March 8, 2000. Elevation = -0.27 feet gage height, levels of August 28, 2025.

There are three slope area cross sections beginning approximately 50 feet downstream of the US60 bridge. Top of rebar elevations are given in gage height and in an arbitrary elevation for the slope area computations.

Cross section one is located approximately 50 feet downstream from the bridge. XS1LB is 1/2-inch rebar with elevation 0.86 feet gage height, or 25.49 feet for slope area computations. XS1RB is 1/2-inch rebar with elevation 0.72 feet gage height or 25.35 feet for slope area.

Cross section two is located approximately 50 feet downstream from cross section one. XS2LB is a 1/2-inch rebar with elevation 0.13 feet gage height or 24.76 feet for slope area. XS2RB is a 1/2-inch rebar with elevation 0.64 feet gage height or 25.27 feet for slope area.

Cross section three is located approximately 75 feet downstream from cross section two. XS3LB is a 1/2-inch rebar with elevation –0.48 feet gage height or 24.15 feet for slope area. XS3RB is a 1/2-inch rebar with elevation –0.55 feet gage height or 24.08 feet for slope area.

CHANNEL AND CONTROL - The control is two 86 foot long, 6 foot by 6-foot concrete box culverts. The culvert inlet is the control. The inlet invert has a minimum elevation of 1.24 feet gage height.

RATING - The current rating is rating #5. It was developed from an HEC-RAS model from a March 2020 survey of cross sections up and downstream of the culverts.

The previous rating was developed from a culvert analysis using HY-8 and assuming the level sensor is at the upstream side of the culvert. The previous ratings apply when the level sensor was located near the outlet of the culvert.

ACCURACY - Fair

DISCHARGE MEASUREMENTS - Wading measurements could be made for lower discharges in the reach downstream of the culverts either at or near the local street dip crossing about 200 ft downstream of the gage.

POINT OF ZERO FLOW – The PZF is at 1.24 feet gage height, levels of March 9, 2017. The upstream left bottom of the box culvert is considered the PZF.

FLOODS – The largest discharge of record occurred on July 18, 2015 with a stage of 8.00 feet gage height and a discharge of 667 cfs. Hurricane Nora remnants event on September 26, 1997 estimated at 178 cfs at 1.66 ft gage height based on high water marks in culvert. A verified flood of 147 cfs at 1.42 feet gage height occurred on August 29, 2000. A flood of 400 cfs, at an undetermined gage height, occurred on October 27, 2000.

REGULATION – None known

DIVERSIONS – None known

UPDATE - August 28, 2025
ES Thomas