PIMA CANYON WASH
FCD Gage ID# 68707

STATION DESCRIPTION

LOCATION – The station is located in Phoenix near the town of Guadalupe. Latitude 33.3649°; Longitude -111.9751°. Located in S05 T1S R4E, in the Guadalupe 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed April 15, 2014.

DRAINAGE AREA – 1.51 mi^2 via UGSG Streamstats.

GAGE - The gage is a pressure transducer type instrument. The PT diaphragm is at gage height 1.69 feet, levels of March 21, 2018.

There is one crest-stage gage at this site, near the transducer gage. It has pin elevation of 1.63 feet gage height, levels of July 13, 2021.

There is a recently relocated painted staff gage located on the wall near the transducer gage. The staff gage displays in gage height, within a few hundredths of a foot, levels of July 13, 2021.

ZERO GAGE HEIGHT – Zero gage height is defined as 0.00 feet and is located below the current streambed at the upstream entrance to the culvert. It is equivalent to 1,302.896 feet NAVD88, levels of March 21, 2018.

HISTORY – Gaging established on April 15, 2014. A staff gage has been painted on the right guide wall. No automatic gaging of this site has been done. A newer staff gage was painted on the wall at the transducer location in May 2018.

REFERENCE MARKS

BM-50687 is an FCDMC brass cap located at the top of the wash near the small fence on the west side of 48th Street. It is at elevation 13.744 feet gage height and 1,316.640 feet gage height, levels of July 13, 2021.

RM-1 is a rebar located directly uphill from the transducer gage as positioned at the time of this survey. It is at elevation 6.813 feet gage height and 1,309.709 feet NAVD88, levels of July 13, 2021.

RP-1 is a chiseled 'X' on the southwest corner of the SRP transformer pad located on the top of the left bank on the west side of 48th Street. Elevation is 14.383 feet gage height and 1,317.279 feet NAVD88, levels of July 13, 2021.

RP-2 is a chiseled 'X' on the northwest corner of the SRP transformer pad located on the top of the left bank on the west side of 48th Street. Elevation is 14.355 feet gage height and 1,317.251 feet NAVD88, levels of July 13, 2021.

RP-3 is the corner of the wall on the right bank near the entrance of the culvert on the west side of 48th Street and was painted white. It is at elevation 5.864 feet gage height, levels of July 13, 2021.

CHANNEL AND CONTROL – The channel is a culvert crossing under 48th Street. The channel is mostly natural upstream, but has been redirected to cross through the culvert. The channel downstream is a graded grass lined channel through a golf course until it terminates into Guadalupe FRS.

The control for the gage is not defined at low flows. The culvert becomes the control at perhaps 1 – 2 feet inside, or about 3.0 – 3.5 feet gage height.

The culvert is either a 16-foot corrugated steel culvert that is embedded about 8 feet deep, or it is an arch culvert that has a 16-foot diameter at the streambed, and rises to about 8 feet above the streambed. At the downstream outlet, the width remains 16 feet, but is only about 6 feet above the streambed. The culvert length is 85 feet, and the slope is 0.013 feet/foot.

RATING – The current rating is Rating #2, dated October 1, 2019. The rating was developed from an HY-8 analysis from recent survey data.

The previous rating is Rating #1, dated April 15, 2014. The rating was developed from an HY-8 culvert analysis. The culvert was modeled as a 16-foot pipe, with an 8-foot embedment.

DISCHARGE MEASUREMENTS – Direct measurements would be difficult at the gage site, but could be done elsewhere. Both direct and indirect measurements may be possible in a reach downstream from the culvert.

POINT OF ZERO FLOW - The PZF is at approximately 1.8 feet gage height.

FLOODS – A peak discharge of 345 cfs at 6.52 feet gage height occurred on Septmeber 8, 2014.

REGULATION – None known.

DIVERSIONS - None known

ACCURACY - Fair

JUSTIFICATION – Monitor inflow into Guadalupe FRS.

UPDATED - July 14, 2021
D E Gardner