RAWHIDE WASH
FCD GAGE ID# 61007 (4863)

STATION DESCRIPTION

LOCATION – The gage is located on the downstream side of the Dynamite Road Bridge over Rawhide Wash in Scottsdale, Arizona. Latitude N 33° 44' 26.1", Longitude W 111° 53' 53.8". Located in the NW1/4 NE1/4 S36 T5N R4E (Curry's Corner 7.5 minute quadrangle.)

ESTABLISHMENT – July 27, 1999

DRAINAGE AREA – 8.9 square miles, from USGS Streamstats.

GAGE – The gage is a pressure transducer type installed on the east wall of the rightmost (westernmost) culvert barrel of the Dynamite Road Bridge. The PT diaphragm elevation is 0.52 feet gage height, levels of February 1, 2018.

There is one staff gage at this site. It is located inside the rightmost culvert next to the PT gage. It reads in gage height.

There are two crest-stage gages at this site.

The first crest gage is located on the downstream side of the culverts on the outside of the culvert on the downstream side of the fourth pier. The pin elevation is 1.03 feet gage height, levels of February 1, 2018.

The second crest gage was installed in July 2019 on the upstream side of the road on the fourth pier. It has pin elevation of 1.67 feet gage height, levels of July 11, 2019.

ZERO GAGE HEIGHT - Zero is defined as the zero on the staff gage. It is equal to 2,220.142 feet NAVD88, levels of February 1, 2018.

HISTORY – No previous history at this site.

REFERENCE MARKS –

BM-4863 is an FCDMC brass cap located on the top, downstream side of the Dynamite Boulevard bridge. It is at elevation 9.903 feet gage height and 2,230.045 feet NAVD88, levels of February 1, 2018.

RM-75 is a chiseled square on the northeast corner of bridge. It is at elevation 8.542 feet gage height and 2,228.684 feet NAVD88, levels of February 1, 2018.

RM-1 is a bolt located on the left wingwall on the downstream side of the culvert. It is at elevation 3.026 feet gage height and 2,223.563 feet NAVD88, levels of February 1, 2018.

RM-2 is a new rebar located on the downstream right bank of the wash. It is at elevation 7.309 feet NAVD88, levels of February 1, 2018.

RM-3 is a chiseled 'X' on the downstream headwall above the right culvert. It is at elevation 7.454 feet gage height and 2,227.596 feet NAVD88, levels of February 1, 2018.

RM-4 is a chiseled 'X' on the upstream and northwest corner of the bridge. It is at elevation 8.553 feet gage height and 2,228.695 feet NAVD88, levels of February 1, 2018.

RP-1 is the lower right support bolt of the crest stage gage. It is at elevation 1.518 feet gage height, levels of February 1, 2018.

There are three slope area cross sections starting at approximately 180 feet downstream of the culvert. All are marked on both banks with sign channel painted white. Assumed and gage height elevations are provided for both. In using the slope area program SAC, the assumed elevations should be used in the input file. All cross sections are perpendicular to the channel. These cross section markers have not been recovered since the February 2000 survey.

RP_A_LB – is the left bank marker of the uppermost cross section, approximately 180 feet downstream of the culverts. Assumed elevation of 25.61 feet or gage height elevation of –0.35 feet, levels of February 9, 2000.

RP_A_RB – is the right bank marker of the uppermost cross section. Assumed elevation of 26.40 feet, or gage height elevation of 0.44 feet, levels of February 9, 2000.

RP_B_LB – is the left bank marker of the middle cross section, 85 feet downstream of the upper cross section. Assumed elevation of 25.28 feet, or gage height elevation of –0.68 feet, levels of February 9, 2000.

RP_B_RB – is the right bank marker of the middle cross section. Assumed elevation of 24.71 feet or –1.25 feet gage height, levels of February 9, 2000.

RP_C_LB – is the left bank marker of the lower cross section, approximately 79 feet downstream from the middle cross section. Assumed elevation of 24.82 feet, or -1.14 feet gage height, levels of February 9, 2000.

RP_C_RB – is the right bank marker of the lower cross section. Assumed elevation of 24.05 feet, or –1.91 feet gage height, levels of February 9, 2000.

CHANNEL AND CONTROL – The channel is a sand and granite mix in the streambed downstream of the gage. The control downstream of the gage is the channel for flows below about 6.0 feet gage height. Above about 6.0 feet gage height water will back up behind the bridge and begin to flow around the bridge to the east.

RATING – Rating #1 was updated in July 2019. Survey data were collected for the full channel and floodway widths up and down stream of the bridge. Culvert data were also used. Data were used in an HEC-RAS model for analysis. The gage in its current configuration can only measure up to about 5 feet stage which is about 2,500 cfs or about a 25-year event.

DISCHARGE MEASUREMENTS – Low flow discharge measurements could be made by wading. Indirect methods can be employed for higher discharge events.

POINT OF ZERO FLOW – The PZF was found to be at about 0.0 feet gage height, levels of July 18, 2019.

FLOODS – An event occurred on September 9, 2006 with a discharge of 446 cfs and 2.07 feet gage height.

REGULATION – None known

DIVERSIONS – None known

ACCURACY – Fair until some discharge measurements are made for verification.

JUSTIFICATION – Monitor flows for future basin project.

UPDATE – July 24, 2019
D E Gardner