

SIPHON DRAW WASH AT SIGNAL BUTTE ROAD

FCD GAGE ID# 37607

STATION DESCRIPTION

LOCATION – The station is located on the east, left side of the culvert crossing at Signal Butte Road. Latitude 33.35169°; Longitude -111.60090°. Located in S12 T1S R7E, in the Desert Well 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed December 22, 2016.

DRAINAGE AREA – 2.37 mi² from USGS Streamstats. Drainage area is all downstream of the CAP canal.

GAGE - The gage is a pressure transducer type instrument. The PT diaphragm is at gage height 0.65 feet, levels of February 14, 2017.

There is one crest-stage gage at this location. It is on the upstream side of the wash crossing. The pin is at elevation 0.90 feet gage height, levels of December 20, 2018.

There is no staff gage at this location.

ZERO GAGE HEIGHT – Zero gage height is defined as 1,460.500 NAVD88, levels of February 14, 2017.

HISTORY – Gaging established on December 22, 2016. No previous gaging history at this location.

REFERENCE MARKS

RM-1 is an FCDMC brass cap, located near the station tube on the southeast corner of the culverts at Signal Butte Road. It is at elevation 7.049 feet gage height and 1,467.549 feet NAVD88, levels of February 14, 2017.

RP-1 is the top left corner of the headwall on the upstream (east side) of the crossing. It is near the station tube. It is at elevation 7.901 feet gage height and 1,468.401 feet NAVD88, levels of December 20, 2018.

RP-2 is the top left corner of the headwall on the downstream (west side) of the crossing. It is at elevation 7.672 feet gage height and 1,468.172 feet NAVD88, levels of December 20, 2018.

RP-3 is the top right corner of the headwall on the upstream (east side) of the crossing. It is at elevation 6.806 feet gage height and 1,467.306 feet NAVD88, levels of March 22, 2017.

RP-4 is a chiseled 'X' located southeast of the station house on an SRP power pole base. It is at elevation 7.143 feet gage height and 1,467.643 feet NAVD88, levels of December 20, 2018.

CHANNEL AND CONTROL – The channel crossing is composed of three small natural channels that cross under Signal Butte Road. The opening on the upstream side has a total width of about 106 feet, whereas the downstream side has a total width of about 30 feet. The channel downstream is a single natural channel that takes combined flows from the three natural channels that pass through the culverts under Signal Butte Road and combine at the downstream side of Signal Butte Road.

There are three culverts that cross under the road. There are two identical culverts on the left (south) side of the culvert headwall. Both are 3-foot in height and 7-foot in width, and are both about 119 feet in length. The third culvert is a 6-foot high by 3-foot wide culvert that is about 111 feet in length.

The culverts control flow at this location. It is estimated that the culverts can pass about 300 cfs. The amount would be higher if the channel downstream were more open.

RATING - The current rating is Rating #1, dated December 22, 2016. The rating was developed from an HY-8 model for the three culvert crossings at Signal Butte Road.

DISCHARGE MEASUREMENTS – Direct measurements would be difficult due to the heavy vegetation downstream of Signal Butte Road, and that there are three channels upstream of the road. Indirect measurements may be able to be taken in a suitable section that has not yet been identified.

POINT OF ZERO FLOW - The PZF is at approximately 0.1 feet gage height, levels of February 14, 2017.

FLOODS – The largest runoff recorded was 312 cfs at 4.46 feet gage height, and occurred on July 24, 2017.

REGULATION – Powerline FRS intercepts, diverts, and regulates flow upstream of the CAP canal and diverts it to Powerline Floodway.

DIVERSIONS – Powerline FRS intercepts flows from the upstream watershed and diverts those flows to Powerline Floodway, which empties into the East Maricopa Floodway.

ACCURACY - Fair

JUSTIFICATION – Monitor flows in Skunk Creek at this location to determine when this road crossing should be monitored and closed.

UPDATED - January 17, 2024
DE Gardner