

**SAUCEDA WASH
FCD GAGE ID# 71007**

STATION DESCRIPTION

LOCATION – The gage site is along State Route 85 approximately 5.5 miles south of Gila Bend. The gage equipment is located on the right bank upstream side of the bridge over Sauceda Wash. Latitude N 32° 52' 16.0", Longitude W 112° 45' 33.9". Located in the SE1/4 SW1/4 S27 T6S R5W in the Black Gap 7.5-minute quadrangle.

ESTABLISHMENT – The District established gaging on February 28, 1990. The USGS had gaged at this location for many years previous.

DRAINAGE AREA – 126 mi²

GAGE – The recording gage is a pressure transducer type instrument. The PT is located inside the stilling well on the right bank upstream side of the bridge. The PT is at elevation 1.10 feet gage height, levels of July 2017.

There are two staff gages at this location. One is located on the outside of the stilling well and one is located on the inside of the stilling well. Both read in gage height.

There is one crest gage at this location. It is maintained by the USGS. The pin elevation is at 2.571 feet gage height, levels of January 4, 2018.

ZERO GAGE HEIGHT - Zero gage height is equivalent to 841.472 feet NAVD88, levels of January 8, 2018. Previously zero gage height had been 842.01 feet NAVD88. The change is based on the surveys in 2017 and 2018, but nothing had changed as far as the staff gages or the concrete bottom at the upstream side of the SR85 culverts.

HISTORY – The USGS collected annual maximums at this site from November 27, 1963 through WY1979 after which the station was discontinued. During Water Year 1990, the station was reestablished cooperatively between the District and the USGS. The District added ALERT equipment on February 28, 1990. The USGS began continuous collection on March 15, 1990. PT elevation was adjusted in the database to match USGS gage datum. The position of the PT did not change, but the elevation was redefined from 0.00 feet to 0.90 feet gage height. The change was effective on May 1, 1992. The USGS discontinued continuous collection on June 7, 1994. Since then, the USGS has continued to collect peak data. Installed permanent reference mark at wash on June 7, 2001. Found PT at 1.14 feet gage height on August 15, 2001. Set in database back to August 1, 2001. Rating updated for WY2010, based on rating review of July 27, 2010. After implementation of the rating and observation of a large flow event, it was decided that the original USGS rating was more representative of actual flow.

REFERENCE MARKS –

RM-50710 is an FCDMC brass cap located high on the right bank upstream of the SR85 bridge. It is at elevation 8.309 feet gage height and 849.781 feet NAVD88, levels of January 4, 2018.

RM-1 is an ADOT brass cap on the center upstream headwall of the SR85 bridge. It is at elevation 8.324 feet gage height or 849.796 feet NAVD88, levels of January 4, 2018.

RM-2 is a chiseled 'X' located on the left top of the upstream headwall. It is at 8.269 feet gage height and 849.741 feet NAVD88, levels of January 4, 2018.

RM-3 is a chiseled 'X' located near the center of the upstream concrete apron entrance. It is at elevation 0.846 feet gage height and 842.318 feet NAVD88, levels of January 4, 2018.

RM-4 is a chiseled 'X' located near the center of the top of the downstream headwall. It is at elevation 8.131 feet gage height and 849.603 feet NAVD88, levels of January 4, 2018.

RM-5 is a rebar on top of the right bank about 20 feet upstream from SR85. It is at elevation 8.563 feet gage height and 850.035 feet NAVD88, levels of January 4, 2018.

RP-1 is a bolt on the right upstream wingwall, painted white. It is at elevation 4.650 feet gage height and 846.122 feet NAVD88, levels of January 4, 2018.

CHANNEL AND CONTROL – The channel is predominantly a sand channel up and downstream of the gage location. The channel between the railroad and highway bridges are graded periodically. The SR85 bridge contains 7 concrete box culverts 5 foot by 10 foot skewed at a 28 degree angle to the flow and extending about 50 feet. The average elevation of the culvert inlet invert is 1.05 feet gage height, (USGS levels of November 3, 1993) and the outlet invert is 0.88 feet gage height. Note: A small grade control structure wall exists in the channel about 20 feet upstream of the crest gage. Also, debris accumulation on the bridge piers can be substantial. Also, the railroad trestle about 300 feet upstream may have an effect on discharge near the gage. Observations on September 8, 1997 showed relatively sharp local differences in high water marks upstream and downstream of the grade control structure.

RATING – The current rating is FCD rating #1, which is USGS Rating #4. It is applied to the entire gage history.

DISCHARGE MEASUREMENTS – Wading measurements can be made in the channel upstream of the small grade control structure. High flow measurements can be taken from the bridge. Indirect estimates should carefully examine the high water mark profiles upstream and downstream of the bridge before selecting a reach. A short reach upstream of the railroad bridge was used for an indirect measurement for the January 21, 2010 event.

POINT OF ZERO FLOW – 0.8 feet gage height, levels of January 4, 2018.

FLOODS – A flood of 3,150 cfs at 6.3 feet gage height occurred September 26, 1976. A flood of 2,160 cfs at 4.26 feet gage height occurred on August 12, 1964. For the FCD gage, the largest flow on record is 2,698 cfs at 5.70 feet gage height on August 13, 2014.

REGULATION – None known

DIVERSIONS – Possible natural losses over interfluves to adjacent drainages.

ACCURACY – Fair

JUSTIFICATION – Long term watershed runoff record for a watershed in southwest Maricopa County.

UPDATE – January 23, 2024
D E Gardner