GILA RIVER AT MARICOPA ROAD
FCD GAGE ID# 41707 (778)

STATION DESCRIPTION

LOCATION – The gage station is located along Maricopa Road (SR 347) approximately 10 miles south of Chandler and five miles north of Maricopa. The gage is operated by the USGS. The gage house is on the left bank between the highway bridges. The PT is located near the USGS orifice line on the first pier from the left bank of the northbound roadway bridge. Latitude N 33° 10' 18.0", Longitude W 112° 00' 20.4". Located in the NW1/4 NE1/4 SW1/4 S13 T3S R3E in the Pima Butte 7.5-minute quadrangle.

ESTABLISHMENT – The District established gaging on April 9, 1995.

DRAINAGE AREA – 20,312 mi^2 via USGS Streamstats.

GAGE – The FCD gage is a pressure transducer type instrument. The PT diaphragm is at 1.30 feet gage height, levels of January 10, 2019.

There are four staff gages at this location. The first is a staff plate located on the right side of the first pier near the PT and USGS orifice. The second is a staff plate located on the left side of the same pier. Both display in gage height. The third staff gage is a painted staff located on the left side of the first pier on the northbound bridge. The painted gage does not display in gage height. One must add 1.3 feet to the displayed reading to get an equivalent gage height. All staff gage levels are as of the survey of January 10, 2019.

There is a fourth painted staff gage located on the ninth pier on the southbound bridge. It is not tied to gage height.

The USGS operates two staff gages at this location. The lower gage has a pin elevation of 1.90 feet gage height, and the upper gage has a pin elevation of 6.65 feet gage height, both levels of January 10, 2019.

ZERO GAGE HEIGHT – Zero gage height is that of 0.000 on the staff plates at the level sensor. It is equivalent to 1,115.936 feet NAVD88.

HISTORY – No previous gaging at this site. The USGS established gaging during Water Year 1995 to replace the gage Gila River near Laveen, several miles downstream. The District began gaging this site April 9, 1995.

REFERENCE MARKS –

BM-1 (previously RM-1) is the USGS brass cap on the pad of the station house on the left bank. It is at elevation 15.834 feet gage height and 1,131.770 feet NAVD88, levels of January 10, 2019.

RM-1 is a rebar located on the fence line on the left bank. It is at elevation 17.479 feet gage height and 1,133.415 feet NAVD88, levels of January 10, 2019.

RM-2 is a rebar just down slope from the station house. It is at elevation 11.449 feet gage height and 1,127.385 feet NAVD88, levels of January 10, 2019.

RP-1 is a bolt on the pier with the instrumentation and is located between the crest gage and staff plate. It is at elevation 2.614 feet gage height, levels of January 10, 2019.

RP-2 is a rebar located about 6 inches in front of the orifice lines. It is at elevation 0.834 feet gage height, levels of January 10, 2019.

The USGS staff gage plates also serve as a reference point since they display directly in gage height.

CHANNEL AND CONTROL – The channel is a wide, shallow natural watercourse. The bed is sand and gravel.

The control for low flow is unknown or undefined. For high flows, the channel is control, and more specifically, the bridge opening narrows a wide and flat channel to about 1,300 feet in width. The bridge will flow across at about elevation 1,121 feet NAVD88, or about 5 feet gage height.

RATING – The current rating is Rating #3. It was developed from several surveyed cross sections in early 2019. Data were used in an HEC-RAS model that was modified with added cross section based on surveyed ones. Even using a low roughness value, the channel at the bridges appears to only convey about 100,000 cfs. Rating is valid as of Water Year 2019.

DISCHARGE MEASUREMENTS – Low flows could be measured by wading. High flows may be attempted from the southbound bridge downstream side. However, caution should be exercised due to heavy fast moving traffic.

POINT OF ZERO FLOW – Is at about 1.75 feet gage height and is just downstream of the southbound bridge. Levels of January 10, 2019.

FLOODS – The largest flow recorded to date is 8,051 cfs at 3.99 feet stage, on July 31, 2006.

REGULATION – Coolidge Dam regulates normal flows in the Gila River.

DIVERSIONS – Coolidge Dam diverts water to canals for irrigation purposes.

ACCURACY – Poor

JUSTIFICATION – Monitor flows in the Gila River 22 miles above the confluence with the Salt River. Significant river flows affect the GRIC community of Komatke.

UPDATE – August 1, 2019
D E Gardner