

**EAST MARICOPA FLOODWAY AT QUEEN CREEK ROAD
FCD GAGE ID# 34807**

STATION DESCRIPTION

LOCATION – The gage is located approximately 1/4 mile west of Higley Road at the Queen Creek Road crossing of the EMF. The instrumentation is located on the downstream side of the bridge near the center of the channel. Latitude N 33° 15' 47.3", Longitude W 111° 43' 32.8". Located in the NW1/4 NE1/4 S15 T2S R6E, in the Higley 7.5-minute quadrangle.

ESTABLISHMENT – The gage was installed January 18, 1989.

DRAINAGE AREA – 273.5 mi²

GAGE – The gage is a pressure transducer type instrument. It is located at the low flow channel. Gage elevation is -0.64 feet gage height, levels of January 30, 2019.

There is one staff gage painted on a pier viewable from the southwest corner of the Queen Creek Road crossing. It displays in gage height, levels of January 30, 2019.

There is one crest gage at this location. It is located near the transducer gage. It has pin elevation of 0.72 feet gage height, levels of January 30, 2019.

ZERO GAGE HEIGHT - Zero is defined as the datum of the staff gage near the gaging equipment. It has equivalent elevation of 1,301.275 feet NAVD88, levels of January 30, 2019.

HISTORY – A float gage was established on January 18, 1989. The float gage was replaced with a pressure transducer on July 24, 1992. The crest gages were installed at an unknown date. The transducer was moved to the low flow channel in the spring of 2008. The station was removed for construction on October 21, 2010, and was re-installed following the construction on January 18, 2012. A crest gage was added in 2017.

REFERENCE MARKS –

BM-6583 is an FCDMC brass cap located about 20 feet south of Queen Creek Road on the southwest corner. It is at elevation 14.426 feet gage height and 1,315.701 feet NAVD88, levels of September 27, 2018 and January 30, 2019.

RM-1 is a chiseled 'X' on the sidewalk at the southwest corner of the bridge. It is at elevation 15.132 feet gage height and 1,316.407 feet NAVD88, levels of January 30, 2019.

RM-2 is a chiseled 'X' on the north wingwall of the city of Mesa outfall in the floodway, southeast of the gage station. It is at elevation 2.819 feet gage height and 1,304.094 feet NAVD88, levels of January 30, 2019.

RM-3 is a chiseled 'X' on the right side of the outfall structure. It is at elevation 0.686 feet gage height and 1,301.961 feet NAVD88, levels of January 30, 2019.

RM-4 is a chiseled 'X' on the southwest corner of the bridge. It is at elevation 15.026 feet gage height and 1,316.301 feet NAVD88, levels of January 30, 2019.

RP-1 is the top downstream bolt on the crest gage bracket. It is at elevation 4.664 feet gage height, levels of January 30, 2019.

CHANNEL AND CONTROL – The channel is a trapezoidal shape with natural 'grass' lining. The channel passes under the Queen Creek Road bridge at this location. Upstream of the gaging location, the channel bends to the northeast. The channel is relatively straight downstream of the gage with a slight tending to the southwest.

The channel is the control for all but very shallow depths.

RATING – The current rating is Rating #6 and has been used since Water Year 2014. Several surveys and HEC-RAS models were done (September 2014 and September 2018.) The 2014 analysis was reanalyzed in 2019 and modified slightly based on the additional surveyed cross sections and using the gage cross section perpendicular to flow rather than parallel to the Queen Creek Road bridge. All data since October 1, 2013 have been adjusted accordingly.

DISCHARGE MEASUREMENTS – Discharge measurements can be made by wading the channel at low flows. Higher flows require direct measurement possibly from the Queen Creek Road bridge, or via indirect methods.

POINT OF ZERO FLOW – The PZF is approximately -1.2 feet gage height, levels of January 30, 2019 in the low flow channel at the gage cross section.

FLOODS – The peak of record is 3,167 cfs at 4.41 feet gage height on September 7, 2012.

REGULATION – Several man-made lakes in the Superstition Springs golf course and Leisure World golf course upstream may serve to retain water at low flows. Higher flows are likely unaffected. Dams in the watersheds east of the structure also regulate natural peak flows.

DIVERSIONS – Several man-made lakes in the Superstition Springs golf course and Leisure World golf course upstream may serve to retain water at low flows. Higher flows are likely unaffected.

ACCURACY – Fair to good

JUSTIFICATION – Monitor flows in the East Maricopa Floodway

UPDATE – February 6, 2024
DE Gardner