

EMF BELOW POWERLINE FLOODWAY FCD GAGE ID# 33707 (6758)

STATION DESCRIPTION

LOCATION – The station is located in southeast Mesa near Phoenix/Mesa Gateway Airport. Latitude 33.3167°; Longitude -111.6834°. Located in S30 T1S R7E, in the Higley 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed April 15, 2014.

DRAINAGE AREA – 257 mi² via UGSG Streamstats.

GAGE - The gage is a pressure transducer type instrument. The transducer diaphragm is at 0.15 feet gage height, levels of January 29, 2019.

There is no crest-stage gage at this site.

There is no staff gage at this site.

ZERO GAGE HEIGHT – Zero gage height is defined as 1,316.230 feet NAVD88, levels of January 29, 2019. This elevation is the estimated invert of the channel at the gage cross section.

HISTORY – Gaging established on April 15, 2014. No previous gaging history at this location. Several stations are located on the EMF upstream and downstream, and have been in operation since 1989.

REFERENCE MARKS

BM-6758 is an FCDMC brass cap located about 16 feet south of the station tube. It is at elevation 12.540 feet gage height and 1,328.770 feet NAVD88, levels of January 29, 2019.

RM-1 is a USDA brass cap, marked R4-12, and is located about 500 feet downstream of the station tube on the right bank. It is at elevation 10.624 feet gage height and 1,326.854 feet NAVD88, levels of January 29, 2019.

RM-2 is a chiseled 'X' on a concrete pad for the city of Mesa sanitary sewer manhole access, approximately 180 feet downstream on the right bank. It is at elevation 14.639 feet gage height, and 1,330.869 feet NAVD88, levels of January 29, 2019.

RP-1 is a chiseled 'X' on the top of the right bank near EMF station 505+00. Elevation is 11.093 feet gage height, and 1,327.323 feet NAVD88, levels of January 29, 2019.

RP-2 is a chiseled 'X' on top of the left bank at the gage cross section. It is at elevation 11.110 feet gage height and 1,327.340 feet NAVD88, levels of January 29, 2019.

RP-3 is a chiseled 'X' located at the ground at the transducer sensor. It is at elevation 0.114 feet gage height and 1,316.344 feet NAVD88, levels of January 29, 2019.

CHANNEL AND CONTROL – The channel is an engineered concrete channel of uniform shape. The channel is straight upstream and downstream for several hundred feet.

The control for the gage is not defined at low flows. The channel is the control at most stages.

RATING - The current rating is Rating #2, dated May 1, 2014. The rating was developed from a three cross section survey input into an HEC-RAS model for analysis.

DISCHARGE MEASUREMENTS – Direct measurements would be difficult at the gage site, but could be done elsewhere. Indirect measurements may be able to be taken upstream where the stream passes through two hills.

POINT OF ZERO FLOW - The PZF is at approximately 0.0 feet gage height.

FLOODS – The peak flow of record was 3,372 cfs at 6.27 feet gage height on August 10, 2018.

REGULATION – None known.

DIVERSIONS - None known.

ACCURACY - Fair

JUSTIFICATION – Monitor flows in the EMF below Powerline Floodway.

UPDATED - January 31, 2019
D E Gardner