

NEW RIVER FIRE STREAMGAGE FCD GAGE ID# 62707 (5638)

STATION DESCRIPTION

LOCATION - The gage is located just north from Table Mesa Road approximately 4.5 miles east of I-17. Latitude 33° 58' 33.6" North; Longitude 112° 03' 38.4" West. Located in S04 T7N R3E, in the Daisy Mountain 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed on July 18, 2005.

DRAINAGE AREA – 64.2 mi²

GAGE – There is one pressure transducer type level sensor. It is at elevation 1.20 feet gage height, levels of November 20, 2019.

There is no crest-stage gage at this site.

There are no staff gages at this site.

ZERO GAGE HEIGHT – Zero gage height is defined equal to 2,469.094 feet NAVD88, levels of November 20, 2019 and previous levels.

HISTORY – Gaging established on July 18, 2005. No previous gaging history at this location. An aluminum cap reference was installed on September 27, 2005. PT setup was reconfigured (change in elevation) and a crest-stage gage added in November 2005. A significant flood occurred on August 19, 2014 that altered the river channel. A wireless transducer (ID=5637) was installed on the right bank of the river on November 5, 2014. The original left bank transducer (ID #5638) was removed in August 2015 and the right bank transducer ID was changed and assigned ID #5638 on August 27, 2015. The elevation of the right bank transducer was lowered on August 3, 2017 to elevation 1.40 feet gage height. During the survey of August 9, 2017 it was discovered that the survey of September 3, 2014 was incorrect in the elevation for RM-2 and that error was carried over to the survey of December 3, 2014, which was used to determine the elevation of the right bank transducer after its installation. The transducer was thought to be at gage height 2.00 feet, but was actually at 2.37 feet gage height. A survey in November 2019 found the transducer gage at 1.20 feet gage height.

REFERENCE MARKS

BM-5638 is an FCDMC brass cap located high on the left bank near the station tube. It is at elevation 18.886 feet gage height and 2,487.980 feet NAVD88, levels of November 20, 2019.

RM-1 is a rebar painted white at the left bank. It is also known as XS1LB. It is at elevation 13.450 feet gage height and 2,482.544 feet NAVD88, levels of November 20, 2019.

RM-2 is a rebar painted white, near the right bank. It is also known as XS1RB. It is at elevation 8.033 feet gage height and 2,477.127 feet NAVD88, levels of August 9, 2017.

RM-3 is a rebar high on the left bank plateau about 150 feet south and west of the station tube. It is at elevation 28.236 feet gage height and 2,497.330 feet NAVD88, levels of November 20, 2019.

RP-1 is a bolt on the left bank securing the transducer line. It is the upstream bolt above the transducer housing and it is painted white. It is at elevation 3.265 feet gage height, levels of November 20, 2019.

CHANNEL AND CONTROL - The channel has a natural bottom and sides with an assortment of boulders, cobbles and sand. The channel is straight downstream from the gage cross section, but is changing direction upstream of the gage cross section. Just downstream of the gage cross section, the channel opens up and gets very wide toward the left bank, before all comes back together about 2,000 feet downstream.

Low flow control is either non-existent or a small riffle in the channel. Higher flows are controlled by constriction of the channel at the gage. The gage is located in a natural narrowing of the channel between two rock outcrops.

RATING - The current rating is Rating #6, dated October 1, 2019. This rating is based on a February 2020 survey of 4 cross section used in the development of an HEC-RAS model.

DISCHARGE MEASUREMENTS - Direct measurements could be made by wading in the area near the gage. Higher flows can be measured by indirect methods. The gage itself is located in a suitable indirect reach. High flows can only be measured by indirect methods. However, direct measurements would require crossing the river downstream first, which may be impassible during flow events.

POINT OF ZERO FLOW - The channel PZF is not determined exactly. The low elevation of the channel is at about 0.0 feet gage height, but that may not be the point of zero flow.

FLOODS – The largest flow of record occurred on August 19, 2014 with an estimated discharge of 32,600 cfs at 11.0 feet gage height. The flow downstream at Rock Springs gage was about 53,000 cfs. Several other large flows have occurred. A flow of 16,230 cfs and 8.50 feet gage height occurred July 31, 2005. A flow of 9,168 cfs and 6.45 feet gage height occurred on August 11, 2005. A flow of 7,586 cfs and 7.77 feet gage height

occurred on January 21, 2010. A flow of 6,166 cfs and 5.00 feet gage height occurred on August 9, 2005.

REGULATION - There may be several small stock ponds located in the watershed above the gage.

DIVERSIONS - None known

ACCURACY - Fair to Poor

JUSTIFICATION - Monitor flows in New River for potential high runoff caused by the Cave Creek Complex fire in June-July 2005. Monitor flow for New River low flow crossings north of New River Road.

UPDATED - March 12, 2020
D E Gardner