

**NEW RIVER FIRE STREAMGAGE  
FCD GAGE ID# 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** – 64.3 mi<sup>2</sup>

**GAGE** – There are two automatic level sensors at this site. The first is a pressure transducer type gage located on the left bank, downhill from the station tube. It is still active but it buried under approximately 5 feet of rock and sand debris. This PT diaphragm is at 0.42 feet gage height, levels of March 30, 2006. The PT is on the left bank of the wash. A second wireless pressure transducer is located on the right bank, about 30 feet upstream from the gage cross section. It was installed on November 5, 2014. It is needed because of the significant shift in the channel that scoured the right bank. The PT diaphragm has elevation 2.00 feet gage height, levels of December 3, 2014.

There is one crest-stage gage at this location. It is assumed buried under the 5-foot debris pile that has also buried the PT and is no longer usable.

There are no staff gages at this site.

**ZERO GAGE HEIGHT** – Zero gage height is defined as the elevation of the pressure transducer at the time of installation. Elevation 2,468.93 feet NAVD 1988, levels of September 27, 2005.

**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 PT was installed on the right bank of the river on November 5, 2014.

**REFERENCE MARKS**

An FCD aluminum cap is located near the west foot of the hill where the station tube is installed. Elevation 7.15 feet gage height or 2,476.08 feet NAVD 1988, levels of March 30, 2006. It has not been found in years and is assumed buried under a large sand dune.

Rebar markers are located on both the right and left banks of the gage cross section. The left bank marker is at elevation 13.45 feet gage height, or 2,482.38 feet NAVD 1988. The right bank marker is at elevation 7.87 feet gage height, or 2,476.80 feet NAVD 1988. All are levels of September 27, 2005.

**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 #1, dated July 18, 2005. The rating is based upon a 5 cross section survey in a reach of approximately 5,400 feet. Data were used in setting up an HEC-RAS model. Results indicate that flows are mostly dependent upon the cross section at the gage.

**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 -2.2 feet gage height.

**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** - December 11, 2014  
D E Gardner