## SKUNK CREEK NEAR NEW RIVER FCD GAGE ID# 66207

## **STATION DESCRIPTION**

**LOCATION** - This gage is located on Skunk Creek about 250 ft downstream of Fig Springs Road. Latitude N 33° 55′ 34.5″; Longitude W 112° 04′ 58.1″. Located in the SW1/4 NW1/4 NW1/4 S29 T7N R3E, in the Daisy Mountain 7.5- minute quadrangle.

**ESTABLISHMENT** – Gaging began on June 21, 1995.

DRAINAGE AREA – 3.92 square miles, from USGS Streamstats.

<u>GAGE</u> - This gage is a pressure transducer type instrument. The PT elevation is 1.45 feet gage height, levels of February 7, 2019.

There is no staff gage at this location.

There is one crest stage gage located on the right bank near the standpipe. The pin elevation of the crest stage gage is 1.85 feet gage height, levels of February 7, 2019.

**ZERO GAGE HEIGHT** – Zero gage height was the elevation of the transducer gage as installed in 1995. It is now an arbitrary point. It is equivalent to 2,188.011 feet NAVD88, levels of February 7, 2019.

**HISTORY** - Gaging established on June 21, 1995. Crest stage gage installed Dec. 18, 1996. The CSG pin was at 1.0 feet gage height. The CSG was destroyed during the July 15, 1999 event. The pressure transducer and its foundation were moved several feet downstream during the July 15, 1999 event. The gage height of the PT decreased by approximately 0.40 feet. The crest gage was replaced following the July 1999 event, and surveyed on February 9, 2000. RM1 was tied into GPS grid in October 2000. Station ID number was changed from 5583 to 5588 with the addition of a precipitation gage (5585) at this location on June 28, 2001. Rating #2 developed in August 2001, and applied back to beginning of Water Year 2001. Rating #2 defined for flows from 1,500 – 2,500 cfs. New reference monument installed on July 17, 2003. PT elevation adjusted as of June 2, 2009. New reference monuments installed just prior to survey in February 2019. References at this site seem to get destroyed often.

## **REFERENCE MARKS** –

BM-50662 is an FCDMC brass cap located on the southeast corner of the wash and road crossing downstream of the gage. It is at elevation 2.639 feet gage height and 2,190.650 feet NAVD88, levels of February 7, 2019.

RM-1 is a rebar near BM-50662. It is at elevation 3.293 feet gage height, and 2,191.304 feet NAVD88, levels of February 7, 2019.

RM-2 is a rebar on the northeast bank of the wash and road crossing intersection. It is at elevation 5.858 feet gage height and 2,193.869 feet NAVD88, levels of February 7, 2019.

RM-3 is an FCDMC brass cap located just to the right of the station tube. It is at elevation 2.260 feet gage height and 2,190.271 feet NAVD88, levels of February 7, 2019.

RP-1 is a rebar located on the right side of the transducer conduit between the crest gage and the end of the transducer. It is at elevation 1.664 feet gage height, levels of February 7, 2019.

RP-2 is a rebar on top of the left bank in the gage cross section. It is at elevation 6.257 feet gage height, levels of February 7, 2019.

A number of brass caps were set in July 1995. Some have been recovered, but some have not been recovered. The following cross sections are established for indirect measurements. Some of the left bank points use existing brass caps. All of the following levels are based on the August 2, 2001 survey, unless otherwise noted.

XS-Gage is the cross section located at the gage. XSGLB is a rebar on top of the left bank. It hasn't been tied to gage height. Elevation 2,194.708 feet NAVD 1988. XSGRB is an FCD brass cap. Elevation 2,190.304 feet NAVD 1988, and 2.26 feet gage height.

RM4 or XS4LB is an FCD BC, found September 27, 2004. Located just south of the road on the same hill near RM-SKNKNRNR and RP-SKNKNRNR. Elevation 2.39 feet gage height or 2,190.40 feet NAVD 1988, levels of September 27, 2004.

Cross Section 5 is located about 250 feet downstream from the gage. XS5LB is an FCD brass cap. Elevation 2,188.047 feet NAVD 1988. XS5RB is a stake, elevation 2,190.812 feet NAVD 1988.

Cross Section 6 is located about 60 feet downstream from the XS5. XS6LB is an FCD brass cap, elevation 2,187.010 feet NAVD 1988. XS6RB is a stake, elevation 2,190.218 feet NAVD 1988.

Cross Section 7 is located about 80 feet downstream from XS6. XS7LB is an FCD brass cap, elevation 2,187.720 feet NAVD 1988. XS7RB is a stake, elevation 2,187.619 feet NAVD 1988.

Cross Section 8 is located about 110 feet downstream from XS7. XS8LB is a stake at elevation 2,187.836 feet NAVD 1988. XS8RB is a stake at elevation 2,189.023 feet NAVD 1988.

**<u>CHANNEL AND CONTROL</u>** -- The channel is a natural stream with a sandy bottom. The right bank is gradual with a large amount of vegetation like desert broom and mesquite. The left bank is nearly vertical near the gage cross section. This site has no meaningful control for low flows. Larger flows are channel control.

## <u>RATING</u> –

The current rating is Rating #4. This rating was determined using an analysis of four cross sections collected along the reach. The data was collected on August 14, 2024 and the rating was developed on the same day.

**DISCHARGE MEASUREMENTS** - For low discharges, wading measurements could be made near the gage. High flow measurements should be done via indirect methods. A good slope area reach is located just downstream of the road between RMs 5 and 8.

**POINT OF ZERO FLOW** – The PZF is estimated at about 0.3 feet gage height at the gage cross section, levels of February 7, 2019.

**FLOODS** – The peak discharge of record is 3,021 cfs, at 5.01 feet gage height, on September 23, 2019. Additional peaks are 2,000 cfs and 4.3 feet gage height on January 21, 2010. A flood of 949 cfs at 3.85 feet gage height occurred on July 15, 1999. A flood of 258 cfs at 2.3 feet gage height occurred on July 15, 1999. A flood of 258 cfs at 2.3 feet gage height occurred on June 20, 2000.

**REGULATION** - None known

**DIVERSIONS** - None known

**ACCURACY** - Good for most stages to about 4.0 feet gage height. Fair for levels up to about 5.5 feet gage height.

<u>JUSTIFICATION</u> - Provide flow information in upper watershed of Skunk Creek. Provides MCDOT warning for closure of roads in the Desert Hills area south of New River Road and north of Carefree Highway.

<u>UPDATE</u> - January 10, 2024 D E Gardner