

**PRICE DRAIN AT SR202L  
FCD GAGE ID# 31507**

**STATION DESCRIPTION**

**LOCATION** – The gage site is within the Loop 101 / Loop 202 interchange. Access is via the westbound Loop 202. The gaging equipment is located on an open channel. Latitude N33° 26' 3.4"; Longitude W111° 53' 25.4". Located in the NW1/4 S18 T1N R5W, in the Tempe 7.5-minute USGS quadrangle.

**ESTABLISHMENT** – The gage was installed on February 12, 2001.

**DRAINAGE AREA** – Undetermined

**GAGE** – The gage is a pressure transducer type instrument. The orifice is at elevation 0.20 feet gage height, levels of February 12, 2019.

There is no staff gage at this location.

There is no crest gage at this location.

**ZERO GAGE HEIGHT** – Gage height 0.00 is defined as the invert of the channel at the gage cross section. It is equivalent to 1,158.136 feet NAVD88, levels of February 12, 2019.

**HISTORY** – No previous history at this location. Gaging established on February 12, 2001. Gas-purge bubbler system replaced with pressure transducer on June 26, 2006. PT housing replaced in April 2011 due to rot and deterioration of the previous one. No flow for about 5 months from December 2010 through May 2011.

**REFERENCE MARKS** –

BM-4573 is an FCDMC brass cap located southwest of the station tube on the right bank. It is at elevation 18.234 feet gage height and 1,176.370 feet NAVD88, levels of February 12, 2019.

RM-1 is a chiseled 'X' on the top left side of the upstream outlet headwall. Elevation 19.100 feet gage height and 1,177.236 feet NAVD88, levels of February 12, 2019.

RM-2 is a chiseled 'X' on the top of the left wingwall. It is at elevation 17.549 feet gage height and 1,175.685 feet NAVD88, levels of February 12, 2019.

RM-3 is a chiseled 'X' on the top of the right wingwall. It is at elevation 17.695 feet gage height and 1,175.831 feet NAVD88, levels of February 12, 2019.

RP-1 is the end point of the most streamward part of the right wingwall. It is at elevation 0.798 feet gage height, levels of February 12, 2019.

RP-2 is the highest marked bolt securing the transducer conduit about midway between the top and bottom of the channel. It is at elevation 6.921 feet gage height, levels of February 12, 2019.

RP-3 is a lower marked bolt securing the transducer conduit. It is at elevation 1.097 feet gage height, levels of February 12, 2019.

**CHANNEL AND CONTROL** – The channel is lined with a rough type concrete. The sidewalls are soil cement. Channel shape is trapezoidal with a 10-foot bottom width and an 82-foot top width. The channel is the control for all stages.

**RATING** – The current rating is Rating #3. It was developed from a four cross section RTK survey in a 500-foot reach on March 1, 2021. For this survey the channel geometry and slope are similar to previous ratings, however the roughness in the channel was much greater due to significant vegetation growth since the previous ratings were applied.

Rating #2 was developed using the Manning relation with a slope of 0.00035 ft/ft, and an N value of 0.0158 computed from a discharge measurement from February 23, 2005. Discharges were computed at various levels to 16.0 feet gage height. Rating #2 is valid beginning in Water Year 2005. Rating #1 was developed using the Manning relation with a slope of 0.00035 ft/ft, and an N value of 0.018. Discharges were computed at various levels to 16.0 feet gauge height.

**DISCHARGE MEASUREMENTS** – For low discharges, below about 2.0 feet gage height, wading could be done. Higher flow measurements may not be possible due to steep side slopes and limited access to the channel.

**POINT OF ZERO FLOW** – The PZF is at about 0.00 feet gage height.

**FLOODS** – A discharge of 993 cfs at 8.50 feet gage height occurred on March 4, 2004. A discharge of 311 cfs at 5.01 feet gage height occurred on February 11, 2005. There have been a number of runoff events with discharge less than 250 cfs.

**REGULATION** – Unknown

**DIVERSIONS** – Unknown

**ACCURACY** – Good

**JUSTIFICATION** – Monitor water quantity from the Price Drain per FCD Project Management request.

**UPDATE** – March 31, 2021

DE Gardner