

WHITE TANK OUTFALL CHANNEL AT INDIAN SCHOOL ROAD
FCD GAGE ID# 87407

STATION DESCRIPTION

LOCATION - The gage is located at the northwest corner of Jackrabbit Trail and Indian School Road. It is at latitude N 33° 29' 38.0" and longitude W 112° 28' 45.4". Located in S20 T2N R2W, in the Perryville 7.5-minute quadrangle.

ESTABLISHMENT - The gage was installed on December 7, 2016.

DRAINAGE AREA – 26.8 mi², via USGS Streamstats. Area includes drainage to White Tank FRS #3.

GAGE - The gage is a pressure transducer type instrument. The PT diaphragm is at gage height 0.55 feet gage height, levels of June 9, 2021. The PT is on the north (upstream) right side wingwall, about 28 feet upstream of Indian School Road.

There is one crest-stage gage located near the transducer gage. The pin is at elevation 0.78 feet gage height, levels of June 9, 2021.

There is one staff gage at this location. It is located on the southwest corner of the culvert, and is viewable from the left bank (east side). The staff gage is not tied to gage height of the transducer gage.

ZERO GAGE HEIGHT – Zero gage height is equivalent to 1,153.400 feet NAVD88, levels of June 9, 2020. It is defined at the current gage cross section.

HISTORY – The channel was upgraded recently. A staff gage and secondary flood observation point has existed at this site for more than 20 years. Gaging established on December 7, 2016. No previous gaging history at this location. The transducer gage was moved from its original location to a spot 28 feet upstream on August 5, 2020. Following the survey of June 9, 2021, the gage height datum of all the references were updated to coincide with the current gage location. Previously the gage height datum was based on the downstream staff gage which no longer has any relationship to the present gage location.

REFERENCE MARKS

BM-50874 is an FCDMC brass cap located near the station tube on the northwest corner of the channel. It is at elevation 7.190 feet gage height and 1,160.590 feet NAVD88, levels of June 9, 2021.

RP-A is a chiseled 'X' on top of the right upstream headwall of the Indian School Road crossing. It is at elevation 8.778 feet gage height and 1,162.178 feet NAVD88, levels of June 9, 2021.

RP-1 is a chiseled 'X' at the channel bottom on the upstream side of the culvert at the top of the drop, about 20 feet north of the culvert entrance, on the left side. It is at elevation -0.083 feet gage height, levels of June 9, 2021.

RP-2 is a chiseled 'X' at the base of the staff gage on the south side of the culvert. It is at elevation -2.387 feet gage height, levels of June 9, 2021.

RP-3 is a chiseled 'X' at the original transducer location. It is at elevation -1.652 feet gage height, levels of June 9, 2021.

RP-4 is a chiseled 'X' at the present transducer gage location. It is at elevation 0.485 feet gage height, levels of June 9, 2021.

CHANNEL AND CONTROL - The channel is an engineered channel both up and downstream of the Indian School Road culvert. At Indian School Road, there is a single culvert passing under the road.

The culverts are the control for flows in the wash. The channel doesn't contract much at the culvert crossing. The culvert is 7 feet high, and 16 feet in width, and has a length of 155 feet.

The elevation of Indian School Road is at nearly 10 feet gage height and it is unlikely to overtop. The culvert is designed to handle the 100-year discharge.

RATING - The current rating is Rating #2, dated August 5, 2020. The rating was developed from survey data of July 2020 and was used in an HEC-RAS analysis.

DISCHARGE MEASUREMENTS - Direct measurements would be difficult to obtain from a safety standpoint, due to the variable bottom of the channel.

POINT OF ZERO FLOW – In the gage cross section, the point of zero flow is near the left side of the cross section, levels of July 7, 2020.

FLOODS – The largest flow recorded was on July 23, 2020 with a peak stage of 2.06 feet and discharge of 425 cfs.

REGULATION – White Tanks FRS #3 will eventually fully discharge into the channel, but it regulates a significant amount of water.

DIVERSIONS - None known

ACCURACY - Good

JUSTIFICATION - Monitor flows in this channel because it flows directly into White Tanks FRS #4, about 2.5 miles downstream.

UPDATED - June 14, 2021
 DE Gardner