

**ARIZONA CANAL DIVERSION CHANNEL AT 14TH STREET  
FCD GAGE # 10507**

**STATION DESCRIPTION**

**LOCATION** – The gage is located on the north bank of the ACDC near 14th Street and Orangewood Avenue in Phoenix. Located at Latitude N 33° 32' 37.3", Longitude W 112° 03' 05". Located in the NE1/4 SE1/4 S04 T2N R3E, in the Sunnyslope 7.5-minute quadrangle.

**ESTABLISHMENT** – February 9, 1994

**DRAINAGE AREA** – 10.2 mi<sup>2</sup>

**GAGE** – The gage is a pressure transducer type instrument. The PT is at 0.40 feet gage height, 1216.21 NAVD88 levels of October 1, 2020.

There is a staff gage located on the opposite (south) side of the channel. It displays in gage height, levels of January 16, 2019.

There is one crest gage at this location. It has a pin elevation of 0.73 feet gage height, levels of January 16, 2019.

**ZERO GAGE HEIGHT** - Zero gage height is defined as the invert of the channel. Elevation is 1,215.807 feet NAVD88, levels of January 16, 2019.

**HISTORY** - No previous history at this location. Gaging established on February 9, 1994. A crest gage was added in 2017.

**REFERENCE MARKS** –

BM-4813 is an FCDMC brass cap located near the station tube on top of the right bank. It is at elevation 26.979 feet gage height and 1,242.782 feet NAVD88, levels of January 16, 2019. It has coordinates of Northing 925361.276, Easting 658945.676.

RM-1 is a city of Phoenix brass cap in the intersection of State Avenue and 14th Street. The marker is at 25.272 feet gage height or 1,241.079 feet NAVD88, levels of January 16, 2019.

RM-2 is a chiseled 'X' on the concrete pad at the station tube. It is at elevation 27.440 feet gage height and 1,243.247 feet NAVD88, levels of January 16, 2019.

RM-3 is a chiseled 'X' on the bottom of the channel at the transducer location. It is at elevation 0.312 feet gage height and 1,216.119 feet NAVD88, levels of January 16, 2019.

RM-4 is a chiseled 'X' on the bottom of the channel at the staff plate on the left bank. It is at elevation 0.308 feet gage height and 1,216.115 levels of January 16, 2019.

RP-1 is a bolt on the wall about one foot downstream of the transducer intake on the right bank wall. It is at elevation 1.031 feet gage height, levels of January 16, 2019.

**CHANNEL AND CONTROL** – The channel is the control. The ACDC is a concrete channel of width 40 feet with vertical walls 23.5 feet in height at the gage location. The center invert of the channel is at 0.00 feet gage height with the toes of the channel being at approximately 0.3 feet gage height. About 12 cfs pass through before detection by the transducer gage.

**RATING** – Current rating is rating #2 and was developed in from a December 2020 survey. Data collected were used in an HEC-RAS model for analysis.

**DISCHARGE MEASUREMENTS** – Discharge measurements could be made at low depths by wading. Higher discharges could possibly be measured from the 12th Street bridge. Caution should be exercised when entering the channel as it will be slippery when wet.

**POINT OF ZERO FLOW** - The point of zero flow is the invert of the channel at 0.00 feet gage height.

**FLOODS** – Many small discharges pass through the channel. Peak discharge of record is 1,414 cfs at 6.75 feet gage height on September 8, 2014.

**REGULATION** – None

**DIVERSIONS** – None

**ACCURACY** – Good

**JUSTIFICATION** – Monitor flows in the ACDC for downstream flood warning at Paseo Park in Glendale.

**UPDATED** – December 17, 2020  
D E Gardner