

**IBW AT INDIAN SCHOOL ROAD  
FCD GAGE ID# 56507 (4618)**

**STATION DESCRIPTION**

**LOCATION** – The gage is located at the Indian School Road low flow crossing of Indian Bend Wash, just west of Hayden Road. The gage is located on the west bank of the wash with the instrumentation located just to the right of the v-notch in the weir. Latitude 33° 29' 42.3" N, Longitude 111° 54' 40.3" W. Located in the SE1/4 SE1/4 S23 T2N R4E of the Tempe 7.5-minute quadrangle.

**ESTABLISHMENT** – The gage was installed November 25, 1997.

**DRAINAGE AREA** – 90 mi<sup>2</sup> is the area below the CAP canal which cuts out the upper watershed.

**GAGE** – The gage is a pressure transducer type instrument located on the right bank of the low flow channel, approximately 150 feet upstream from the weir at Indian School Road. It is at elevation 0.72 feet gage height, levels of March 5, 2019.

There is no staff gage at this location.

There is one crest-stage gage at this location. It is located right of the notch in the weir. The pin elevation is 1.22 feet gage height, levels of March 5, 2019.

**ZERO GAGE HEIGHT** – Zero gage height is located in channel at the gage cross section. Prior to transducer relocation, zero gage height had been defined as the low point (bottom) of the v-notch in the weir. Since the datum shifted -0.70 feet, the bottom of the v-notch weir is now -0.70 feet gage height. Zero elevation is equivalent to 1,235.282 feet NAVD88, levels of March 5, 2019.

**HISTORY** – Gaging established on November 25, 1997. The PT was moved back toward the right bank on June 22, 2000 to get away from the effects of the notch in the weir during low flow events. A crest-stage gage was installed on June 22, 2000. Gage removed for construction on November 30, 2009. Gage reinstalled about 150 upstream of original location on February 16, 2010. The gage datum was shifted -0.70 feet at that time.

**REFERENCE MARKS** –

RM-IBWISR is an FCDMC brass cap located about 100 feet south of Indian School Road near the townhomes. The RM was established in November 2000. It is at elevation 3.533 feet gage height and 1,238.815 feet NAVD88, levels of March 5, 2019.

BM-4618 is an FCDMC brass cap located near the station tube on the north side of Indian School Road. It is at elevation 4.858 feet gage height and 1,240.140 feet NAVD88, levels of March 5, 2019.

RM-1 is a chiseled 'X' in the upstream end of the left (east) wingwall and painted white. It is at elevation 5.102 feet gage height and 1,240.384 feet NAVD88, levels of March 5, 2019.

RM-2 is a chiseled 'X' on the upstream end of the right wingwall. It is at elevation 5.266 feet gage height and 1,240.548 feet NAVD88, levels of March 5, 2019.

RM-3 is a rebar located on top of the left bank in the gage cross section. It is at elevation 5.909 feet gage height and 1,241.191 feet NAVD88, levels of March 5, 2019.

RM-4 is a rebar located on top of the right bank on the streamward side of the wall in the gage cross section. It is at elevation 6.418 feet gage height and 1,241.700 feet NAVD88, levels of March 5, 2019.

RP-1 is the top bolt on the side of the left bank wingwall securing a piece of angle iron. It is at elevation 4.049 feet gage height, levels of March 5, 2019.

RP-2 is the top of the pipe that holds the safety cable on the upstream right bank. It is at elevation 7.001 feet gage height, levels of March 5, 2019.

RP-3 is the bolt at the transducer gage located on the upstream side and most shoreward. It is at elevation 0.895 feet gage height, levels of March 5, 2019.

**CHANNEL AND CONTROL** – The channel upstream of the weir is a grassy trapezoidal channel. Channel control prevails.

**RATING** – The current rating is Rating #3. The rating was developed from surveyed cross sections upstream and downstream at the drop structure. Data were used in an HEC-RAS model.

**DISCHARGE MEASUREMENTS** – Discharge measurements could be made in the reach approximately 200 feet upstream from the weir. Direct measurements could be made for low flows. Higher flows could be made by wading. Caution is recommended when walking near the weir during flow events.

**POINT OF ZERO FLOW** – The PZF is near the center of the channel and is approximately 0 feet gage height, levels of November 29, 2018.

**FLOODS** – A peak recorded flow of 3,929 cfs and 5.50 feet gage height occurred on September 8, 2014. Higher flows have possibly occurred prior to gage installation.

**REGULATION** – Numerous aesthetic lakes in the project capture and hold water, particularly low flows. However, once full, water will flow unimpeded.

**DIVERSIONS** – The CAP Reach 11 dike diverts water to the CAP canal and it does not make it to the lower watershed.

**ACCURACY** – Good

**JUSTIFICATION** – Monitor flows in the low flow channel of Indian Bend Wash as part of the Scottsdale Flood Warning System.

**UPDATE** -        January 22, 2024  
                             E.S. Thomas