

**SCATTER WASH
FCD GAGE ID# 5543**

STATION DESCRIPTION

LOCATION – The gage is located on the west (right) bank of Scatter Wash just south of the eastbound Beardsley Road between 43rd and 35th Avenues. Latitude N 33° 40' 08.6"; Longitude W 112° 08' 28.8". Located in the NW1/4 NE1/4 S27 T4N R2E of the Hedgpath Hills 7.5-minute USGS quadrangle.

ESTABLISHMENT – The gage was installed September 18, 1996.

DRAINAGE AREA – 18.1 mi²

GAGE – The gage is a pressure transducer type sensor. The diaphragm was found at 0.00 feet gage height, elevation 1,329.78 feet MSL.

There is one staff gage at this location. The staff gage 0.0 was found at 1,329.78 feet MSL, levels of July 8, 1998.

There is one crest stage gage at this location. The crest gage is located on the right bank near the PT. The crest gage is at an angle. Therefore, the length along the crest gage stick needs to be noted and compared to a plot of the gage. The pin elevation is 0.66 feet gage height.

ZERO GAGE HEIGHT - Zero is defined as zero on the staff gage at the end of the culverts on Beardsley Road. Elevation is 1,329.78 feet M.S.L.

HISTORY – Gage installed on September 18, 1996. Crest gage moved from inside of a culvert to the right bank near the PT gage on June 19, 2000. PT run was changed and PT lowered to 0.00 feet gage height on November 18, 2008.

REFERENCE MARKS –

RM1 is a green paint spot on the concrete wingwall near the gage standpipe. Its elevation is 1,340.23 feet MSL (from ADOT As-Builts), gage height 10.45 feet, levels of July 8, 1998.

RM2 is an ADOT brass cap located on the headwall of the culverts, about mid-way across the south side of Beardsley Road. Elevation 10.42 feet gage height, or 1,340.20 feet M.S.L., levels of March 24, 2005.

RP1 is the 0.0 foot elevation of the black and white staff gage on the downstream face of one of the middle culverts under the Loop 101 eastbound frontage road. Its elevation is 1,329.78 feet MSL or gage height 0.00 feet, levels of July 8, 1998.

CHANNEL AND CONTROL – The channel is earthen bottom and concrete trapezoidal side slopes. The rating is channel control at the PT for all stages.

RATING – The current rating is Rating #4. It was developed from the original HEC-RAS model. In the original analysis, the roughness coefficient was 0.03. However, the rated discharges have been seemingly high. The channel bottom usually has some vegetation of height varying from 6-12 inches. Therefore, a roughness coefficient of 0.045 was used in the rating #4 analysis. For now, this rating is applied beginning with Water Year 2005. Further information from in-stream flow measurements will be used to make the rating more accurate.

Surveys of high water marks past the PT from runoff event of July 7, 1998 indicate an observed water surface very close to that of the channel bed slope (0.002 versus 0.0021 respectively.)

DISCHARGE MEASUREMENTS – Can be done for low flow events. Higher flow, i.e. above wading depth, would be dangerous because of squishy mud.

POINT OF ZERO FLOW – Found to be -0.4 feet gage height from levels of March 24, 2005.

FLOODS – The peak flow recorded to date was 1,784 cfs at 3.42 feet gage height on July 25, 2007. A peak discharge of 824 cfs and 2.22 feet gage height was recorded on September 3, 2005. Several other floods of between 300 cfs and 480 cfs have occurred since installation.

REGULATION – No known regulation

DIVERSIONS – No known diversions

ACCURACY – Fair, given generally fixed channel geometry. Variations in roughness due to vegetation changes should be monitored.

JUSTIFICATION – Monitor additions to Skunk Creek from Scatter Wash downstream of Adobe Dam.

UPDATE - July 2, 2014
D E Gardner