WINTERS WASH
FCD GAGE ID# 25507

STATION DESCRIPTION

LOCATION – The gage site is located approximately 1/2 mile west of 395th Avenue and approximately 0.1 miles north of the Camelback Road alignment. Latitude N 33° 30' 34.7", Longitude W 112° 54' 44.9". Located in the SE1/4 SE1/4 SW1/4 S18 T2N R6W in the Hot Rock Mountain 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established on July 11, 2000.

DRAINAGE AREA – 28.9 square miles, of which 19.5 square miles of drainage area is above the CAP canal.

GAGE – The recording gage is a pressure transducer type instrument. The PT is at 0.32 feet gage height, levels of January 24, 2019.

There is no staff gage at this location.

There is one crest gage at this location. The pin elevation is 0.90 feet gage height, levels of January 24, 2019.

ZERO GAGE HEIGHT – Zero gage height is arbitrarily defined as 1,120.000 feet NAVD88. It is defined with respect to RM-WINTER.

HISTORY – The crest cage pin was elevated by 0.5 feet on August 23, 2000 following an event on August 22, 2000. The crest gage pin was in a scour hole prior to the move. The PT was moved to a higher level in the channel on September 28, 2000. The PT had been in a scour hole at the PT/CSG location within the channel. The PT was found at gage height 0.51 feet from surveys of April 1, 2003 and September 18, 2003. An RTK survey of six cross sections was done on January 14, 2020.

REFERENCE MARKS –

RM-WINTER is an FCD brass tablet set in concrete located about 10 feet northwest of the gage standpipe. Established July 12, 2000. Elevation 6.43 feet gage height and 1,126.43 feet NAVD88, levels of January 24, 2019. Northing = 914098.23 feet, Easting = 396538.60 feet. This RM was previously identified as RM-1.

RM-1 is a new rebar located just streamward of the station tube. It is at elevation 6.784 feet gage height and 1,126.784 feet NAVD88, levels of January 24, 2019.

RM-2 is a new rebar on the right bank in the gage cross section. It is at elevation 5.946 feet gage height and 1,125.946 feet NAVD88, levels of January 24, 2019.

RM-3 is a sign channel post on the right bank about 10 feet downstream of RM-2. It is at elevation 5.567 feet gage height and 1,125.567 feet NAVD88, levels of January 24, 2019.

RM-4 is a sign channel post on the left bank of the cross section about 180 feet upstream of the gage cross section. It is at elevation 5.665 feet gage height and 1,125.665 feet NAVD88, levels of January 24, 2019.

RM-5 is a sign channel post on the right bank of the cross section about 180 feet upstream of the gage cross section. It is at elevation 5.522 feet gage height and 1,125.522 feet NAVD88, levels of January 24, 2019.

RM-6 is a sign channel post on the left bank of the cross section about 180 feet downstream of the gage cross section. It is at elevation 4.931 feet gage height and 1,124.931 feet NAVD88, levels of January 24, 2019.

RM-7 is a rebar on the right bank of the cross section about 180 feet downsteam of the gage cross section. It is at elevation 3.885 feet gage height and 1,123.885 feet NAVD88, levels of January 24, 2019.

RP-1 is the top of the sign channel post to which the PT housing is attached. Elevation 0.735 feet gage height, levels of January 24, 2019.

RP-2 is the upper sign channel post to which the PT flexible conduit is attached near the top of the left bank. Elevation 4.818 feet gage height, levels of January 24, 2019.

There are three slope area cross sections established in the reach. One cross section is located upstream of the gage and one cross section is located downstream of the gage. Flows can occur beyond the limits of the cross-section markers.

Cross section one is located approximately 180 feet upstream of the gage cross section. It is bounded by RM-4 on the left bank and RM-5 on the right bank.

Cross section two is located approximately at the gage cross section. It is bounded by RM-1 on the left bank by RM-1 and the right bank by RM-2.

Cross section three is located approximately 180 feet downstream from the gage cross section. It is bounded by RM-6 on the left bank and RM-7 on the right bank.

CHANNEL AND CONTROL – The channel bed is mainly composed of sand and gravel with some small smooth gravel. The channel is approximately 50 feet wide at the gage. The channel is straight upstream of the gage several hundred feet. Downstream of the gage

the channel is straight for approximately 110 feet. Past 110 feet downstream the channel bends slightly to the right. For low flows the control would be small riffles. For larger flows, the channel becomes the control. Levels above about 4 feet gage height would begin to leave the channel and begin flooding the overbanks, which are heavily vegetated.

RATING – The current rating is Rating #2 developed from an HEC-RAS model of surveyed cross sections in early 2020. The flow was subcritical and the slope through the reach was 0.0049 feet/feet. Rating #1 was the initial rating from a limited number of cross sections surveyed following installation in mid-2000.

DISCHARGE MEASUREMENTS – Low flow direct measurements could be taken by wading near the gage cross section. A slope area reach is defined and established up and downstream of the gage cross section.

POINT OF ZERO FLOW – The PZF for the gage cross section is at approximately 0.26 feet gage height, levels of January 24, 2019.

FLOODS – The USGS recorded a flood of 3,640 cfs on September 25, 1976 at their gage approximately 1.5 miles downstream. The peak discharge recorded at this gage was 1,289 cfs at 4.08 feet gage height on October 15, 2022. Two smaller but similar peaks were 510 cfs at 3.30 feet gage on July 29, 2003. A similar peak occurred on September 8, 2014 with a peak of 505 cfs at 3.31 feet gage height.

REGULATION – Some regulation may occur at the CAP crossing of Winters Wash about six miles upstream.

DIVERSIONS – None known

ACCURACY – Fair at lower flows, poor at stages above about four feet gage height.

JUSTIFICATION – Monitor flows in Winters Wash for the MCDOT flooded road / barricading program.

UPDATE – December 14, 2023
D E Gardner