

**SEVEN SPRINGS WASH
FCD GAGE ID# 21807**

STATION DESCRIPTION

LOCATION – The gage is located in northeast Maricopa County about fifteen miles north of Carefree. Latitude N 33° 57' 37.0"; Longitude W 111° 50' 36.9". Located in S09 T7N R5E in the Humboldt Mountain 7.5-minute quadrangle.

ESTABLISHMENT – Gaging was established on March 14, 2002.

DRAINAGE AREA – The drainage area is about 7.9 mi².

GAGE – The gage is a pressure transducer type instrument. The transducer diaphragm is at elevation 0.60 feet gage height, levels of February 7, 2018.

There is one crest-stage gage at this location. Pin elevation is 2.05 feet gage height, levels of February 7, 2018.

There is no staff gage at this location.

ZERO GAGE HEIGHT – Zero gage height is defined as 3,481.673 feet NAVD88.

HISTORY – No previous history at this location. Station moved about 850 feet upstream October 24, 2005 following a significant flood in September 2005. The flood changed the channel at the former location significantly and was no longer suitable for gaging. Gage elevations redefined for new site. There is an approximate 11.3-foot shift upward in gage height elevations.

REFERENCE MARKS –

BM-7SPRING is an FCDMC brass cap located on the right bank near the old gage location. It is at elevation -1.893 feet gage height and 3,479.78 feet NAVD88, levels of February 7, 2018.

BM-50218 is an FCDMC brass cap located near the road on the far left bank of the wash. It is at elevation 10.211 feet gage height and 3,491.884 feet NAVD88, levels of February 7, 2018.

RM-1 is a rebar on the right bank in the gage cross section. It is at elevation 9.910 feet gage height and 3,491.583 feet NAVD88, levels of February 7, 2018.

RM-2 is a rebar on the left bank near the main channel in the gage cross section. It is at elevation 9.576 feet gage height and 3,491.249 feet NAVD88, levels of February 7, 2018.

RP-1 is a chiseled 'X' in the concrete base of the crest-stage gage. It is at elevation 2.084 feet gage height and 3,483.757 feet NAVD88, levels of February 7, 2018.

RP-2 is a chiseled 'X' on a large rock located about 20 feet upstream of the gaging. It is at elevation 2.571 feet gage height and 3,484.244 feet NAVD88, levels of February 7, 2018.

RP-3 is the top of the crest-stage gage mounting pole. It is at elevation 6.557 feet gage height and 3,488.230 feet NAVD88, levels of February 7, 2018.

CHANNEL AND CONTROL – The channel is straight up and downstream from the gage cross section for several hundred feet. The control at flows less than about 1.5 feet have control based on local conditions. Above about 1.5 feet the channel is the control.

The channel bottom is a mostly a fractured friable bedrock. There is some sand and gravel present also. There is a significant left overbank which is mostly fine grained materials with some burned and some living vegetation. There is no right overbank in the gage cross section reach.

RATING – The current rating is Rating #3, applied as of Water Year 2020. The rating was developed from a 5 cross section survey done in February 2020. An HEC-RAS model was developed from the survey data. The previous rating was developed from 2005 survey data and was applied as of the gage re-installation at new location. That rating was based on survey data from three cross sections. An HEC-RAS model was developed from the survey data.

DISCHARGE MEASUREMENTS – Indirect discharge measurements could be made in a suitable cross section identified following a flow. Direct measurements could be made by wading the channel at the forest road crossing just downstream of the gage.

POINT OF ZERO FLOW – The PZF is at about 0.00 feet gage height.

FLOODS – A flood of about 12,000 cfs at 10.75 feet gage height (old datum/location) occurred on September 3, 2005. The largest flow recorded at the new gage location was about 3,000 cfs and 8.26 feet gage height on January 21, 2010.

REGULATION – None

DIVERSIONS – None known

ACCURACY – Fair

UPDATE - January 17, 2024
D E Gardner