

**MARTINEZ CREEK
FCD GAGE ID# 7013**

STATION DESCRIPTION

LOCATION – The gage is located in Yavapai County approximately one mile upstream from the Scenic Loop Road crossing of the wash. The gage instrumentation is located on the left bank of the channel. Latitude N34° 01' 42.3", Longitude W112° 47' 30.5". Located in the NE1/4, NE1/4 S20, T8N R5W, in the Flores 7.5-minute quadrangle.

ESTABLISHMENT – November 23, 1994.

DRAINAGE AREA – 109 mi²

GAGE – The gage is a pressure transducer type located on the left bank of the channel approximately 1 mile upstream from Scenic Loop Road. The PT diaphragm is at 2.80 feet gage height, levels of September 25, 2002.

There are no staff gages at this location.

There are no crest gages at this location.

ZERO GAGE HEIGHT – Zero gage height is defined as 2.75 feet below the current level of the PT diaphragm. Prior to July 10, 2002, the PT was at 0.00 feet gage height. Zero gage height is equal to 2,305.81 feet NAVD 1988.

HISTORY – Gage established on November 23, 1994. Due to significant channel degradation near the gage, the PT diaphragm was lowered 2.79 feet on August 31, 1999. Zero gage height datum also changed and was lowered 2.79 feet on August 31, 1999. PT raised 2.80 feet on July 10, 2002.

REFERENCE MARKS –

RM-MRTNZ – Formerly known as RM1. Metal pipe end located near the gage standpipe, up on the high ledge above the channel. Originally the monument was given an arbitrary elevation of 1000.00 feet, and is equal to 38.82 feet gage height. Elevation is 2,344.63 feet NAVD 1988; Northing 1102822.974 feet; Easting 434796.967 feet.

RMB – Blue FCD tag attached to a bolt near the PT conduit on channel wall. Arbitrary elevation of 964.66 feet, gage height elevation of 3.48 feet, and NAVD 1988 elevation of 2,309.29 feet, levels of August 31, 1999.

RP1- Chiseled X in **upstream cross section**. The point is located on the left bank and is chiseled into the top of a large boulder. Elevation 9.84 feet, and is **not tied to any datum**, except at the upstream cross section itself.

CHANNEL AND CONTROL – The channel is best described as a sand channel at the gage as well as up- and downstream. Cobbles exist, but are not prevalent. The channel makes a 90 degree turn at the gage location. For low flows < 1000 cfs, the channel is probably in control. Once flows get above 1000 cfs (?) the flow probably follows another path and doesn't necessarily stay within the main channel. High water marks indicate that water "piles up" against the rock wall where the gage is situated.

RATING – The current rating is Rating #5. It was developed to reflect the movement of the pressure transducer and the aggradation of the channel. Only the low end of the rating was affected. Flows above about 7 feet gage height are not impacted. Because the channel changes following each flow event, the rating is reevaluated after each event. The flow below 3,000 cfs is estimated. Rating #4 is based on a slope conveyance for an event of June 20, 2000 and a slope area computation for an event of August 1, 2000. The low end of the rating was refined. At 8.9 feet gage height and above, no modification of rating #3 was made. Rating #3 was developed using survey data from the August 31, 1999 survey, a slope-area survey of August 2, 1999, and the upper portion of Rating #2.

DISCHARGE MEASUREMENTS – Direct measurements could be made downstream of the gage cross section where the large bend has straightened out. Indirect measurements for smaller flows could be done in that area also. A slope area indirect discharge measurement was done near the road following the July 25, 1999 event because the channel near the gage had changed so much.

POINT OF ZERO FLOW – The PZF is at about 2.0 feet gage height, estimated levels of July 18, 2002.

FLOODS – A discharge of approximately 8,550 cfs and 8.9 feet gage height occurred on July 25, 1999. A flood of 6,500 cfs occurred on September 26, 1997.

REGULATION – None known

DIVERSIONS – None known

ACCURACY – Poor due to gage location and frequent degradation/aggradation cycles following most events. Accuracy probably improves to fair for higher flows which are not affected as greatly by channel changes.

JUSTIFICATION – Monitor flows in Martinez Creek for city of Wickenburg flood warning. City to close Scenic Loop Road and Rincon Road. Also, monitor input to the Hassayampa River about one mile upstream of confluence with Sols Wash.

UPDATE – July 19, 2011
D E Gardner