

**SOLS WASH AT SR 71
FCD GAGE ID# 5276**

STATION DESCRIPTION

LOCATION – The gage is located approximately 1/2 mile west of the junction of SR71 and US93 on SR71. The gaging equipment is located on the south side of the SR71 bridge. Latitude N 34° 07' 7.1", Longitude W 112° 57' 45.1". Located in the NW1/4 SW1/4 S14 T9N R7W in the Congress SW 7.5-minute quadrangle.

ESTABLISHMENT – Gaging was established on September 10, 2001.

DRAINAGE AREA – The drainage area is about 10 mi².

GAGE – The gage is a pressure transducer type instrument. Gage elevation is 0.30 feet gage height, levels of September 19, 2001.

There is no crest gage at this location.

There is one staff gage at this location. It is located in the culvert near the pressure transducer. It reads in gage height.

ZERO GAGE HEIGHT – Will be defined as the bottom of the concrete culverts. It is defined as 2,735.91 feet M.S.L. from the quadrangle map.

HISTORY – No previous gaging history at this location. A precipitation gage existed about 1/2 mile east of this site for many years. Station installed September 10, 2001.

REFERENCE MARKS –

RM-SOLS71 is an FCD brass cap located just southeast of the bridge, in a clearing on the outside of the fence. Elevation 4.09 feet gage height, or 2,740.00 feet MSL, from the USGS topographic map, levels of September 19, 2001. Northing and Easting are both arbitrarily set at 10000 feet.

RP-1 is a chiseled 'X' located just in front of the first pier near the PT. Elevation 0.00 feet gage height, levels of September 19, 2001.

There are six monumented cross sections. Only the stakes at the gage cross section have been tied to gage height.

CHANNEL AND CONTROL – The channel is composed mainly of granitic soils with some exposed caliche. The cross section at the bridge is a 3 barrel 5 foot by 10 foot concrete

box culvert. The control is the channel downstream from the gage. There is a slight drop off from the apron of the box culverts of about one foot. At low flows, this drop controls the flow, and acts somewhat like a weir. At higher flows, the channel is control for all flows to about 1,000 cfs. Beyond this discharge, flow will spread out of the channel into the unconfined overbanks.

RATING – The current rating is Rating #1, applied as of gage installation. The rating is based on survey data from six cross sections. An HEC-RAS model was developed from the survey data.

DISCHARGE MEASUREMENTS – Indirect discharge measurements could be made in the five cross sections (2 – 6) downstream of the gage. Direct measurements could be made by wading the channel at low flows. There is no room available to measure the flow from the SR 71 bridge.

POINT OF ZERO FLOW – The PZF is the bottom of the concrete culvert apron, at 0.00 feet gage height, at all locations across the bottom of the apron.

FLOODS – The peak flood of record is 348 cfs and 1.83 feet gage height, occurring on August 8, 2008.

REGULATION – None known, but there may be some stock tanks upstream

DIVERSIONS – None known

ACCURACY – Fair

UPDATE July 20, 2011
 D E Gardner