

GREENE WASH AT SR 84
FCD GAGE ID# 0793

STATION DESCRIPTION

LOCATION – The gage station is located approximately 1.5 miles east of the town of Stanfield on SR 84. The gage site is about one mile upstream from Greene Wash joining Santa Rosa Wash. The PT is located on the center pier of the bridge. Latitude N 32° 52' 45.3", Longitude W 111° 56' 02.6". Located in the SW1/4 SE1/4 SE1/4 S21 T6S R4E in the Stanfield 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established by the District on March 23, 1994.

DRAINAGE AREA – Undetermined

GAGE – The gage is a pressure transducer type instrument on the center pier of the downstream side of the bridge. The PT diaphragm is at elevation 0.10 feet gage height, levels of August 20, 1997.

There is one staff gage at this location on the pier with the PT. It reads directly in gage height, levels of August 20, 1997.

There are two four-foot crest gages at this location. The lower crest gage has a pin elevation of 0.49 feet gage height. The upper crest gage has a pin elevation of 4.44 feet gage height, both levels of August 20, 1997.

ZERO GAGE HEIGHT – Zero is defined by the staff gage zero, in gage height datum.

HISTORY – No previous history at this location. The station was established by the District on March 23, 1994. The original gage datum was defined using the PZF from the August 30, 1994 survey as 0.0 feet gage height. Two crest gages were installed July 23, 1997. The gage datum was redefined to correspond with the painted staff gage (white with black numbers incremented in tenths) after the August 20, 1997 survey. The new datum was applied to the gage record back to the beginning of Water Year 1997. The new datum is 1.37 feet lower than the previous datum from installation through Water Year 1996. Slope area survey markers were established on May 18, 2000 in three cross sections approximately 300 feet downstream from the bridge.

REFERENCE MARKS –

RM1 is an ADOT brass cap on the southeast corner of the SR 84 bridge. Elevation 14.31 feet gage height, levels of August 20, 1997.

RM2 is the concrete at base of downstream side of bridge pier to which the PT, crest gage, and staff gage are mounted. Elevation -0.10 feet gage height, levels of August 20, 1997.

RM3 is an ADOT brass cap on the southwest corner of the SR 84 bridge. Elevation 14.18 feet gage height, levels of May 18, 2000.

Three slope area cross sections were established on May 18, 2000. The first cross section is approximately 300 feet downstream from the bridge.

Cross section one is located approximately 300 feet downstream from the bridge. LBXS1 is a 3/4-inch rebar painted white. Elevation 7.61 feet gage height, levels of May 18, 2000. RBXS1 is a 3/4-inch rebar painted white. Elevation 8.65 feet gage height, levels of May 18, 2000.

Cross section two is located approximately 150 feet downstream from cross section one. LBXS2 is a 3/4-inch rebar painted white. Elevation 7.58 feet gage height, levels of May 18, 2000. RBXS2 is a 3/4-inch rebar painted white. Elevation 8.66 feet gage height, levels of May 18, 2000.

Cross section three is located approximately 200 feet downstream from cross section two. LBXS3 is a 3/4-inch rebar painted white. Elevation 7.00 feet gage height, levels of May 18, 2000. RBXS3 is a 3/4-inch rebar painted white. Elevation 6.88 feet gage height, levels of May 18, 2000.

CHANNEL AND CONTROL – The channel is trapezoidal in shape with natural bottom and levied banks on both sides. Approximately 1.5 miles downstream, the channel joins Santa Rosa Wash.

The control for this site is relatively insensitive and is channel control through the range of stages until the bridge becomes impacted at higher stages. A small low flow channel passes under the bridge near the PT and controls flow until the large primary channel begins to control above about one foot gage height.

RATING – The current rating is Rating #3 and is a revision of rating #2 following a slope-conveyance measurement for the event of September 5, 1997. Rating #2 used rating #1 and modified its datum for Water Year 1997. Rating #1 was developed using surveyed cross sections in an HEC-2 model step backwater analysis by T. M. Donaldson.

DISCHARGE MEASUREMENTS – Wading measurements can be made in the channel downstream of the bridge. High flow measurements could be taken from the bridge, traffic permitting. A slope area section beginning approximately 300 feet downstream of the gage has been established for slope area surveying.

POINT OF ZERO FLOW – The PZF was measured to be –1.46 feet gage height, levels of August 20, 1997.

FLOODS – A flood of 680 cfs at 2.11 feet gage height occurred on January 7, 1995. A flood of 870 cfs at 2.63 feet gage height occurred on February 17, 1995. A flood of 450 cfs at 1.96 feet gage height occurred on September 5, 1997. All are in WY1997 datum.

REGULATION – None known

DIVERSIONS – Santa Cruz River and Greene Canal are connected in some manner upstream from this station.

ACCURACY – Fair

JUSTIFICATION – Monitor flows to the Gila River through Santa Rosa Wash below Maricopa Road for impacts on Holly Acres near the Salt and Gila confluence.

UPDATE – July 18, 2011
D E Gardner