

**GILA RIVER AT ESTRELLA PKWY
FCD GAGE ID# 6853**

STATION DESCRIPTION

LOCATION – The gage is located at the Estrella Parkway crossing of the Gila River in the town of Goodyear. Gaging equipment is located in a stilling well on the downstream side of the bridge. Latitude N 33° 23' 15", Longitude W112° 23' 30". Located in the NE1/4 SE1/4 S31 T1N R1W in the Perryville 7.5-minute quadrangle.

ESTABLISHMENT – FCD established gaging on December 2, 1992. The USGS established gaging on August 11, 1992.

DRAINAGE AREA – The drainage area is about 45,585 mi².

GAGE – The gage is a pressure transducer type instrument. The PT diaphragm is at elevation 1.92 feet gage height (USGS datum), levels taken from the inside staff gage.

There is no crest gage at this location.

There are two staff gages at this location, one inside, and one outside of the stilling well. Both read in gage height and are ranged from 3.36 to 23.74 feet.

ZERO GAGE HEIGHT – Is defined as 0.00 feet on the staff gages (currently several feet below the channel bottom).

HISTORY – No previous history at this location. Gaging established on August 11, 1992. Bottom of stilling well was washed away during winter 2010 flows. PT was reset with a different elevation when repairs were done in July 2010. PT was found to be at 1.92 feet gage height during the station visit of May 22, 2014. Effective date for this elevation is July 1, 2014.

REFERENCE MARKS –

BM-1 is a brass cap located southwest of intersection of Vineyard Road and Estrella Parkway, mounted in concrete at west edge of road surface, in center of white painted "Y" (aerial photo marker). Elevation 33.38 feet gage height, and 916.49 feet MSL.

RM-1 is high point of nut on one-half inch bolt, anchored in downstream side of gage pier. Elevation 9.07 feet gage height.

RM-2 is the high point of nut on one-half inch bolt, anchored on downstream stream ward side of first pier from left bank. Elevation 11.97 feet gage height, or 883.11 feet MSL.

CHANNEL AND CONTROL – The low flow channel is a fairly straight pond, extending 900 feet upstream and downstream from gage, on the left bank side of the channel. Left bank and right bank of low flow channel is mostly lined with thick brush and salt cedar trees approximately four feet high and up to twenty feet wide in some areas. The main channel at gage is 2,000 feet wide with pockets of scattered brush and salt cedars. Both banks at the bridge are lined with large ragged rock boulders, to protect inclined banks near the bridge. The entire channel is composed of sand, pebbles, and cobbles. The low flow control is a cobble riffle, 700 feet downstream. At medium and higher flows, the channel is the control.

RATING – The USGS maintains ratings at this location. The current rating is USGS rating #3.

DISCHARGE MEASUREMENTS – Direct measurements can be obtained by wading at low flows. Higher flow direct measurements are made by bridge measurement. Indirect measurements can be made in reaches both up and downstream of bridge.

POINT OF ZERO FLOW – The PZF is not determined.

FLOODS – Peak flood of 162,000 cfs at 19.15 feet gage height on January 9, 1993.

REGULATION – Regulation occurs at several conservation and non-conservation structures in the watersheds above the gage site.

DIVERSIONS – Diversions occur at Coolidge Dam, Granite Reef Diversion, and New Waddell Dam for domestic and irrigation purposes.

ACCURACY – Fair

UPDATE - July 1, 2014
D E Gardner