

**QUEEN CREEK AT RITTENHOUSE ROAD  
FCD GAGE ID #6707**

**STATION DESCRIPTION**

**LOCATION** – The gage location is along Rittenhouse Road approximately 2 miles southeast of the town of Queen Creek. The gaging equipment is located on the downstream side of the Rittenhouse Road bridge toward the northwest side. Latitude N 33° 13' 48.9", Longitude W 111° 35' 39.6". Located in the NE1/4 SE1/4 NW1/4 S25 T2S R7E in the Sacaton NE 7.5-minute USGS quadrangle.

**ESTABLISHMENT** – Gaging was established September 14, 1993.

**DRAINAGE AREA** – 236 mi<sup>2</sup>

**GAGE** – The recording gage is a pressure transducer type instrument. The PT is at 2.10 feet gage height, levels of September 9, 2014.

There is one staff gage at this location. The staff gage is located near the PT and crest-stage gage. The staff gage reads directly in gage height, levels of June 19, 2000.

There is no crest gage at this location.

**ZERO GAGE HEIGHT** - is equal to 1,438.06 feet M.S.L.

**HISTORY** – Gaging was established on September 14, 1993. Survey for rating done on January 26, 1994. Crest gage installed on July 25, 1997. Gaging equipment removed for construction in April 2000. Gaging equipment including new staff gage installed May 30, 2000 following construction. Gage datum changed as of May 30, 2000. Datum shifted - 2.03 feet from previous datum. Gage removed for construction on May 27, 2014. Gage reinstalled on June 30, 2014, with the transducer moved to the toe of the right bank.

**REFERENCE MARKS** –

RM-QCRITT is an FCD brass cap located on the northwest corner of the Rittenhouse Road bridge, approximately 8 feet northwest of the station gage standpipe. This mark is presumed to be destroyed.

RM1 is a MCDOT brass tablet located on the SE corner of the bridge. Elevation 17.69 feet gage height, levels of June 19, 2000, or 1,455.75 feet M.S.L., as stamped.

RM2 is a chiseled '+' on the northwest wingwall. RM2 was established on June 19, 2000. Elevation 15.28 feet gage height or 1,453.34 feet M.S.L., levels of June 19, 2000.

**CHANNEL AND CONTROL** – The channel upstream of the gage is relatively straight for several hundred feet. The channel downstream of the gage bends slightly to the right, but is relatively straight approximately 100 feet downstream of the gage. The left bank of the channel is heavily vegetated with very large salt cedar trees. The main channel is vegetated in some locations. The right bank is somewhat vegetated, more so than the main channel but less so than the left bank.

The channel is the control for all but very low flows, about 100 cfs or less. Control at low stages is not well defined.

**RATING** – The current rating is Rating #2 developed from surveyed cross sections downstream from and including the Rittenhouse Road bridge. An HEC-RAS model was developed from the surveyed cross sections.

The previous rating was developed by Donaldson in 1994 following gage installation. The rating was developed similarly from surveyed cross sections and an HEC-2 model. The rating was reviewed in 1996 following an event that scoured the channel approximately one foot. Inclusion of the scour did not alter the rating significantly and thus the original rating was not revised.

**DISCHARGE MEASUREMENTS** – Low flow discharge measurements could be made by wading the channel. Higher flow measurements from the bridge are not advisable since the bridge is not too wide. An indirect reach has not been identified. Downstream is private property. Permission could be requested and obtained from the Schenpf Farms office on Rittenhouse Road.

**POINT OF ZERO FLOW** – The PZF is in the bridge cross section at about 2.6 feet gage height, levels of September 9, 2014.

**FLOODS** – About 827 cfs at 2.25 feet gage height, January 5, 1995.

**REGULATION** – A large gravel pit is located about 4 miles upstream. A CAP diversion structure is located approximately 5 miles upstream and limits normal flow to approximately 1,200 cfs. Further upstream is Whitlow Ranch Dam.

**DIVERSIONS** – Whitlow Ranch Dam provides some diversions for irrigation in the Queen Valley area. A large gravel pit is located about 4 miles upstream.

**ACCURACY** – Poor for low flows. Fair for higher flows.

**JUSTIFICATION** – Monitor flows in Queen Creek for flood warning for low flow crossings of Queen Creek. Also provides information about inflow into the EMF.

UPDATE - September 9, 2014  
D E Gardner