

**NORTH HEIGHTS DAM  
FCD GAGE ID# 5983**

**STATION DESCRIPTION**

**LOCATION** – The dam and gage are located in the town of Fountain Hills, northwest of Golden Eagle Park. Latitude N 33° 37' 21". Longitude W 111° 44' 54". Located in the SE1/4 NW1/4 S09 T3N R6E, in the Granite Reef Dam 7.5-minute USGS quadrangle.

**ESTABLISHMENT** – The gage was installed on October 11, 1996.

**DRAINAGE AREA** – 2.13 mi<sup>2</sup>

**GAGE** – The gage is a pressure transducer type instrument. The transducer diaphragm is at 0.25 feet gage height.

**ZERO GAGE HEIGHT** – Zero gage height is the inlet invert of the outlet culvert. Elevation is 1,778.97 feet M.S.L.

**HISTORY** – No previous history at this location. Gage installed October 11, 1996. Base value adjusted to 0.13 to account for larger static zero value transmitted. PT remains at 0.29 feet gage height. PT set to 0.25 feet gage height as of June 12, 2002.

**REFERENCE MARKS** –

RM1 – was established November 19, 1996 as a mark on the top of the inlet headwall and was marked with green paint. Elevation 6.28 feet gage height, or 1,785.25 feet M.S.L., levels of November 19, 1996.

RP1 – is the inlet invert elevation. Its elevation is 0.00 feet gage height, or 1,778.97 feet M.S.L. from the G.V. Sabol Fountain Hills North ADMS.

**CHANNEL AND CONTROL** – The primary outlet for the dam is a 48-inch RCP, 195.5 feet in length. The auxiliary outlet for the dam is a spillway on the left side of the dam.

**PRIMARY / AUXILIARY OUTLET** –

The primary outlet is a 48-inch diameter reinforced concrete pipe. The culvert inlet is at elevation 0.00 feet gage height, or 1,778.97 feet M.S.L. The culvert invert at the outlet is at elevation –2.87 feet gage height, or 1,776.10 feet M.S.L. Length of the culvert is 195.5 feet.

The auxiliary outlet is the spillway on the left side of the dam. The spillway crest elevation is 31.8 feet gage height, or 1,810.80 feet M.S.L.

Top of dam elevation is at about 39.8 feet gage height, or 1,818.80 feet M.S.L.

**RATING** – The rating for the discharge is from an analysis by G.V. Sabol for the Fountain Hills North ADMS. The current discharge rating is Rating #1.

The capacity rating is also from the Fountain Hills North ADMS. The current capacity rating is Rating #1.

**DISCHARGE MEASUREMENTS** – It may be possible to capture a discharge measurement from the outlet channel. With safety in mind, it may be possible to capture a measurement from the emergency spillway, if and when it flows.

**POINT OF ZERO FLOW** – The point of zero flow is the invert of the outlet culvert, at 0.00 feet gage height. The PZF of the spillway is at about 31.8 feet gage height.

**FLOODS / SIGNIFICANT IMPOUNDMENTS** – The peak event occurred on September 10, 2002, with a peak stage of 14.82 feet and 16.0 acre-feet of storage.

**REGULATION** – North Heights Dam regulates flows through the natural wash.

**DIVERSIONS** – None known

**ACCURACY** – Good

**JUSTIFICATION** – Monitor flows and impoundments in North Heights Dam for public safety in the town of Fountain Hills.

**UPDATE** – August 17, 2011  
D E Gardner