

**HESPERUS DAM
FCD GAGE ID# 5993**

STATION DESCRIPTION

LOCATION – The dam and gage are located in the town of Fountain Hills. Access to the gage is from Golden Eagle Boulevard north to Richwood Avenue, then turning on Dixie Mine Trail, and finally turning onto Grassland Drive. Latitude N 33° 38' 14". Longitude W 111° 44' 47". Located in the SE1/4 NW1/4 S04 T3N R6E, in the Fort McDowell 7.5-minute USGS quadrangle.

ESTABLISHMENT – The gage was installed on December 18, 1996.

DRAINAGE AREA – 2.91 mi²

GAGE – The gage is a High Sierra Electronics pressure transducer. The PT diaphragm is at 1.03 feet gage height.

ZERO GAGE HEIGHT - Zero is the invert of the inlet of the primary outlet. Elevation 1,851.88 feet M.S.L.

HISTORY – Gage installed December 18, 1996. No other history at this location.

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 5.95 feet gage height, or 1,857.83 feet M.S.L., levels of November 19, 1996.

RP1 – is the inlet invert elevation. Its elevation is 0.00 feet gage height, or 1,851.88 feet M.S.L. from the G.V. Sabol Fountain Hills North ADMS.

CHANNEL AND CONTROL – The principal outlet for the dam is a 48-inch RCP, 172.6 feet in length. The emergency spillway for the dam is a spillway on the right side of the dam.

PRINCIPAL OUTLET / EMERGENCY SPILLWAY –

The principal outlet is a 48-inch diameter reinforced concrete pipe. The culvert inlet is at elevation 0.00 feet gage height, or 1,851.88 feet M.S.L. The culvert invert at the outlet is at elevation –0.06 feet gage height, or 1,851.82 feet M.S.L. Length of the culvert is 172.6 feet.

The emergency spillway is located on the right side of the dam. The spillway crest elevation is 37.1 feet gage height, or 1,888.98 feet M.S.L.

Top of dam elevation is at about 42.3 feet gage height, or 1,894.18 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. Flows through the auxiliary spillway can be made if safe to do so.

POINT OF ZERO FLOW – The point of zero flow is the inlet invert of the discharge culvert, at 0.00 feet gage height.

FLOODS / SIGNIFICANT IMPOUNDMENTS – An event occurred on September 10, 2002 with a peak stage of 8.93 feet and 2.6 acre-feet.

REGULATION – Hesperus Dam regulates flows through the natural wash.

DIVERSIONS – None known

ACCURACY – Good

JUSTIFICATION – Monitor flows and impoundments in Hesperus Dam for safety in the town of Fountain Hills.

UPDATE – July 7, 2016
 DE Gardner