STONERIDGE DAM
FCD GAGE ID# 77307

STATION DESCRIPTION

LOCATION – The dam and gage are located in the town of Fountain Hills. Access to the gage is from Fountain Hills Boulevard and Cholla Drive. Latitude N 33° 35' 41". Longitude W 111° 44' 01". Located in the NW1/4 NW1/4 S22 T3N R6E, in the Granite Reef Dam 7.5-minute USGS quadrangle.

ESTABLISHMENT – The gage was installed on December 11, 1996.

DRAINAGE AREA – 0.89 mi^2

GAGE – The gage is a pressure transducer type instrument. The transducer diaphragm is at 1.30 feet gage height, levels of January 18, 2018.

ZERO GAGE HEIGHT - is defined the invert of the inlet of the principal outlet. It is equivalent to 1,680.935 feet NAVD88, levels of January 18, 2018.

HISTORY – No known history prior to installation. Gage installed December 11, 1996.

REFERENCE MARKS –

BM-5968 is an FCDMC brass cap located at the top of the dam near the station tube. It is at elevation 31.405 feet gage height and 1,712.340 feet NAVD88, levels of January 18, 2018.

RM-1 – was established November 19, 1996 as a mark on the top of the inlet headwall and was marked with green paint. A chiseled 'X' was added during the survey of 2018 and was painted white. It is at elevation 4.050 feet gage height and 1,684.985 feet NAVD88, levels of January 18, 2018.

RM-2 is a new 'X' on the upstream headwall near RM-1. It is at elevation 4.038 feet gage height and 1,684.973 feet NAVD88, levels of January 18, 2018.

RM-3 is a chiseled 'X' on top of the downstream headwall. It is at elevation 2.590 feet gage height and 1,683.525 feet NAVD88, levels of January 18, 2018.

RM-4 is a chiseled 'X' on the right side of the spillway crest. It is at elevation 23.971 feet gage height and 1,704.906 feet NAVD88, levels of January 18, 2018.

RM-5 is a chiseled 'X' at the center of the spillway crest. It is at elevation 24.033 feet gage height and 1,704.968 feet NAVD88, levels of January 18, 2018.

RM-6 is a chiseled 'X' at the left end of the spillway crest. It is at elevation 24.309 feet gage height and 1,705.244 feet NAVD88, levels of January 18, 2018.

RM-7 is a chiseled 'X' on the top of concrete bank protection at the left side of the spillway. It is at elevation 31.252 feet gage height and 1,712.187 feet NAVD88, levels of January 18, 2018.

RM-8 is a rebar at the right end of the top of dam just before the spillway. It is at elevation 31.363 feet gage height and 1,712.298 feet NAVD88, levels of January 18, 2018.

RP-1 is the inlet of the invert of the principal outlet. It is at elevation 0.000 feet gage height and 1,680.935 feet NAVD88, levels of January 18, 2018.

RP-2 is the outlet invert elevation. It is at -1.464 feet gage height and 1,679.471 feet NAVD88, levels of January 18, 2018.

CHANNEL AND CONTROL – The principal outlet for the dam is a 30-inch RCP, 240 feet in length. The emergency spillway for the dam a weir type spillway with a concrete sill crest on the right side of the dam.

PRINCIPAL OUTLET / EMERGENCY SPILLWAY –

The principal outlet is a 30-inch diameter reinforced concrete pipe. The culvert inlet is at elevation 0.000 feet gage height. The culvert invert at the outlet is at elevation -1.464 feet gage height. The culvert length of the culvert is 240 feet.

The emergency spillway is on the right side of the dam. The minimum spillway crest elevation was found to be 23.97 feet gage height and 1,704.91 feet NAVD88, levels of January 18, 2018.

The minimum top of dam elevation was found to be about 31.0 feet gage height, or 1,711.90 feet NAVD88, levels of January 18, 2018.

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 at lower flows. Flows through the emergency spillway are probably too dangerous to attempt.

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

FLOODS / SIGNIFICANT IMPOUNDMENTS – The peak event of record occurred on August 13, 2021 at a stage of 10.48 feet gage height, and 9.0 acre-feet.

REGULATION – Stoneridge Dam regulates flows through the natural wash.

DIVERSIONS – None known

ACCURACY – Good

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

UPDATE – January 2, 2024
DE Gardner