

**PHOENIX BASIN #99**  
**FCD GAGE ID= 50127, DEVICE ID= 12707**

**STATION DESCRIPTION**

**LOCATION** – The dam is located near the southwest corner of 32nd Street and SR 51. The gage is located at the principal outlet of the dam. Latitude N 33° 34' 30.1" Longitude W 112° 00' 50.1". Located in the S26 T3N R3E in the Sunnyslope 7.5-minute quadrangle.

**ESTABLISHMENT** – The gage was established on July 7, 2009.

**DRAINAGE AREA** – 0.13 mi<sup>2</sup>, via USGS Streamstats.

**GAGE** – The gage is a pressure transducer type instrument located at the principal outlet. The orifice is at elevation 0.00 feet gage height, or 1,441.71 feet NAVD88, levels of July 9, 2009. The transducer is located in a 9.0 foot depression. The invert is located about 9 feet below the surrounding pool.

There are no staff gages at this dam.

There are no crest gages at this location.

**ZERO GAGE HEIGHT** - Zero is defined as the invert of the inlet, elevation 1,441.71 feet NAVD88. The zero had previously been defined as 1,439.70 feet Mean Sea Level and were based on the 1978 as-builts elevation for the crest of the emergency spillway.

**HISTORY** – No history at this location prior to gage installation. Dam was constructed in 1978 and likely modified during construction of SR 51 in the mid-1990's. The trash rack was replaced in 2010 or early 2011. FCDMC brass tablet installed in 2015.

**REFERENCE MARKS** –

BC-4843 is a FCDMC brass cap located close to the station tube. Elevation is 25.75 feet gage height, or 1467.46 feet NAVD88, levels of May 1, 2025.

BC-PH-99-5A is a phoenix brass cap located on top of the dam. Elevation is 25.44 feet gage height, or 1467.15 feet NAVD88, levels of May 1, 2025.

RP-1 is the top northeast corner of the trash rack at the principal outlet. Elevation is 12.45 feet gage height, or 1,454.16 feet NAVD88, levels of May 1, 2025.

RP-2 is a new reference point the southeast corner of the concrete ring around the outlet painted white. Elevation is 9.17 feet gage height 1450.88 feet NAVD88, levels of May 1, 2025.

RP-3 was not found during the survey of February 24, 2016 and is considered lost.

RP-4 is the right top of the spillway crest. It is at elevation 19.82 feet gage height, or 1,461.53 feet NAVD88, levels of February 24, 2016. Remeasured and reaffirmed May 1, 2025.

**CHANNEL AND CONTROL** – The principal outlet from the dam is a reinforced concrete pipe culvert. Diameter of the culvert is 27 inches with at 16-inch by 16-inch plate over the invert opening. The culvert length is 128 feet. The emergency spillway for the dam is located north of the principal outlet.

**PRIMARY / AUXILIARY OUTLET** –

The principal outlet is a 48-inch diameter concrete culvert pipe, located within a depression southwest of the emergency spillway. There is a nine foot drop from the surrounding pool area to the bottom of the depression and the invert of the outlet pipe. Actual culvert dimensions aside from the pipe diameter are not known. The culvert was assumed to have a slope of 0.002 feet/feet and a length of 400 feet, with a capacity of 150 cfs, for computation purposes.

The emergency spillway is located to the east of the principal outlet along the north side of the dam. The bottom width of the spillway is 40 feet. The minimum spillway crest is at about 19.80 feet gage height, or 1,461.51 feet NAVD88, levels of February 24, 2016.

The minimum dam crest elevation is at about 24.3 feet gage height, or about 1,466.00 feet NAVD88, from As-Builts, and verified by 2009 survey. The minimum elevation occurs on the east side of the dam.

**RATING** – The current discharge rating is Rating #1. The rating was computed from a culvert analysis using assumed culvert dimensions. The spillway rating was provided from the as-builts.

The current capacity rating is Rating #1. Rating #1 was taken from the As-Built design plans.

**DISCHARGE MEASUREMENTS** – Direct measurements could be taken in the outlet wash/channel below the dam.

**POINT OF ZERO FLOW** – Flow begins through the primary outlet at 0.00 feet gage height. Flow begins through the auxiliary spillway at approximately 19.8 feet gage height.

**FLOODS / SIGNIFICANT IMPOUNDMENTS** –

**REGULATION** – None upstream of the dam. The dam regulates natural flows from the Phoenix Mountains Preserve in the Dreamy Draw area.

**DIVERSIONS** – None

**ACCURACY** – Poor

**JUSTIFICATION** – Monitor water levels behind dam for public safety.

**UPDATE** – May 5, 2025  
ES Thomas