

**PHOENIX BASIN #2A
FCD GAGE ID# 8907**

STATION DESCRIPTION

LOCATION – The dam is located south of Thunderbird Road on the east side of 7th Street. The impound basin is located within the Lookout Mountain Golf Course. The gage is located at the principal outlet of the dam. Latitude N 33° 36' 12.9" Longitude W 112° 03' 53.0". Located in the S16 T3N R3E in the Sunnyslope 7.5-minute quadrangle.

ESTABLISHMENT – The gage was established on June 29, 2009.

DRAINAGE AREA – About 0.47 mi²

GAGE – The gage is a pressure transducer type instrument located at the principal outlet. The transducer is at elevation 0.00 feet gage height, or 1,393.72 feet NAVD88, levels of February 24, 2016.

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 1,393.62 feet NAVD88.

HISTORY – No history at this location prior to gage installation. Dam was constructed in 1978. Gaging was established on June 29, 2009. The permanent bench mark was installed in late 2015.

REFERENCE MARKS –

BM-4789 is and FCDMC brass cap located east of the station tube on top of the dam structure. Elevation is 23.093 feet gage height, or 1,416.710 feet NAVD88, levels of February 24, 2016. Remeasured and reaffirmed May 5, 2025.

BM-PH-2A-12A is a city of phoenix brass cap located close to the station tube on top of the dam. Elevation is 23.81 feet gage height, or 1417.43 feet NAVD88, levels of May 5, 2025.

RP-1 is the concrete apron at the invert of the outlet. Elevation 0.00 feet gage height, or 1,393.617 feet NAVD88, levels of February 24, 2016. Remeasured and reaffirmed May 5, 2025.

RP-2 is the right top of the inlet headwall. It is at elevation 4.015 feet gage height, or 1,397.632 feet NAVD88, levels of February 24, 2016. Remeasured and reaffirmed May 5, 2025.

CHANNEL AND CONTROL – The principal outlet from the dam is a reinforced concrete pipe culvert. Diameter of the culvert is 27 inches. A steel plate with a 16-inch by 16-inch opening covers the culvert entrance. The culvert length is 204 feet. The emergency spillway for the dam is located east of the principal outlet.

PRINCIPAL OUTLET / EMERGENCY SPILLWAY –

The principal outlet is a 27-inch diameter concrete culvert pipe, fitted with a metal plate with a 16-inch by 16-inch opening. The invert of the inlet is at 0.00 feet gage height, or 1,393.60 feet NAVD88. The invert of the outlet is at –2.0 feet gage height, or 1,391.60 feet NAVD88. The culvert length is 204 feet. Flow begins through the culvert at 0.00 feet gage height through a square orifice covering the culvert pipe. All elevations are from the As-Built drawings, updated to NAVD88 elevations.

The emergency spillway is located to the east of the principal outlet. The bottom width of the spillway is 80 feet. The minimum spillway crest is at about 16.5 feet gage height, or 1,410.10 feet NAVD88, from As-Builts.

The minimum top of the dam elevation is at about 22.5 feet gage height, or about 1,416.10 feet NAVD88, from As-Builts.

RATING – The current discharge rating is Rating #2. The rating was taken from the analysis done by Black and Veatch.

The current capacity rating is Rating #2. Rating #2 was taken from the analysis done by Black and Veatch.

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 16.5 feet gage height.

FLOODS / SIGNIFICANT IMPOUNDMENTS – The largest event recorded occurred on September 8, 2014, at 11.50 feet gage height, 23.5 acre-feet, and 39.2 percent full.

REGULATION – None upstream of the dam.

DIVERSIONS – None

ACCURACY – Fair

JUSTIFICATION – Monitor water levels behind dam for public safety.

UPDATE – April 2, 2026
E.S. Thomas