

**BUCKEYE #2 FRS
FCD GAGE #44507**

STATION DESCRIPTION

LOCATION – The gage is located at the outlet of the structure that runs along the north side of Interstate 10 on the southwestern edge of the White Tanks Mountains. The west end of the structure is located just west of Miller Road. Latitude 33° 26' 26" N, Longitude 112° 35' 47" W. Located in SE1/4 NW1/4 SE1/4 S07 T1N R3W, in the Valencia 7.5-minute quadrangle.

ESTABLISHMENT – November 11, 1992

DRAINAGE AREA – 5.7 square miles

GAGE – The gage is a pressure transducer type located on the top of the structure near the outlet works. The pressure transducer is located near the invert to the inlet. The PT diaphragm is at –1.39 feet gage height or 1,096.712 feet NAVD 1988, levels of March 13, 2018.

There is one staff gage located on the cage around the outlet works. The elevation of the 0.00 reading on the gage is at elevation 1,098.102 feet NAVD 1988, = 0.00 gage height, levels of March 13, 2018.

There is no crest gage at this location.

ZERO GAGE HEIGHT - is defined as 0.00 feet on the staff gage mounted to the trash rack at the principal outlet. Elevation 1,098.102 feet NAVD 1988, levels of March 13, 2018.

HISTORY – No previous history at this location. Elevations in this station description were updated on July 7, 2016 to reflect more recent dam safety survey data.

REFERENCE MARKS –

BM-(C-1) is an FCDMC brass cap settlement marker located about 200 feet northwest of the station tube. It is at elevation 20.989 feet gage height 1,119.091 feet NAVD 1988, levels of March 13, 2018.

RM-A is a brass tablet near the center of concrete on the spillway. It is marked as point #4001 on the spillway sill. It is at elevation 15.067 feet gage height and 1,113.169 feet NAVD 1988, levels of March 13, 2018.

RM-1 is a chiseled 'X', marked as point #3051, on the left side of the inlet headwall. It is at elevation 3.952 feet gage height and 1,102.054 feet NAVD88, levels of March 13, 2018.

RM-2 is a chiseled 'X', marked as point #3050, on the right side of the inlet headwall. It is at elevation 3.972 feet gage height and 1,102.074 feet NAVD88, levels of March 13, 2018.

RM-3 is a chiseled 'X', marked as point #4000, on the left side of the spillway sill. It is at elevation 15.008 feet gage height and 1,113.110 feet NAVD88, levels of March 13, 2018.

RM-4 is a chiseled 'X', marked as point #4002, on the right side of the spillway sill. It is at elevation 14.989 feet gage height and 1,113.091 feet NAVD88, levels of March 13, 2018.

RP-1 is a chiseled 'X' at the lip of the drop into the inlet. It is at elevation -0.030 feet gage height and 1,098.072 feet NAVD88, levels of March 13, 2018.

RP-2 is a chiseled 'X' on the concrete at the transducer gage as found on March 13, 2018. It is at elevation -1.521 feet gage height and 1,096.581 feet NAVD88, levels of March 13, 2018.

CHANNEL AND CONTROL –

The principal outlet is an ungated 4-foot diameter reinforced concrete pipe 2,194 feet long. The emergency spillway is located on the west end of the structure.

PRINCIPAL OUTLET / EMERGENCY SPILLWAY –

The principal outlet is an ungated 48-inch diameter RCP. The culvert inlet invert elevation is -1.54 feet gage height, or 1,096.56 feet NAVD 1988, levels of March 13, 2018. The invert of the outlet is at -12.96 feet gage height, or 1,085.17 feet NAVD 1988. The length of the outlet culvert is 2,194 feet.

The emergency spillway is located on the west end of the structure, a few hundred feet to the right of the principal outlet. The crest of the spillway is at 15.00 feet gage height or 1,113.17 feet NAVD 1988, levels of December 21, 1995. The spillway width is approximately 360 feet.

The top of dam elevation is 20.43 feet gage height, or 1118.60 feet NAVD 1988.

RATING – The current discharge rating is Rating #3. The rating for the principal outlet is an HY8 culvert analysis dated July 8, 1993 with datum adjusted from the level survey of December 21, 1995. The spillway rating is from an HEC-RAS backwater analysis was

performed using level data from the December 21, 1995 survey and from the McLain Harbers FCD 93-51 topographic mapping. The analysis is dated October 22, 1996.

The current capacity rating is Rating #3. The rating is from an analysis of DTM data from the McLain Harbers FCD 93-51 contract. The DTM analysis was done July 17, 1997 and the final analysis is dated July 28, 1997.

DISCHARGE MEASUREMENTS – Measurements can be made of the principal outlet by direct measurement in the outlet channel.

FLOODS – None

POINT OF ZERO FLOW – The principal outlet begins flow at -1.54 feet gage height, elevation 1,096.56 feet NAVD 1988, levels of March 13, 2018.

The emergency spillway will begin to flow at about 15.0 feet gage height, and 1,113.10 feet NAVD88.

ACCURACY – Fair

JUSTIFICATION – Monitor the water level behind Buckeye FRS #2 for operations and maintenance and for public safety.

UPDATE October 25, 2023
 ES Thomas