

**BUCKEYE #3 FRS
FCD GAGE ID# 6813**

STATION DESCRIPTION

LOCATION – The gage is located at the outlet of the structure which runs along the north side of Interstate 10 at the south end of the White Tanks Mountains. Access to the gage is from Watson Road. Head north on Watson Road to the structure. Latitude 33° 27' 10" N, Longitude 112° 33' 20" W. Located in the SW1/4 NW1/4 NW1/4 S10 T1N R3W in the Valencia 7.5-minute quadrangle.

ESTABLISHMENT – November 23, 1992

DRAINAGE AREA – 9.3 square miles

GAGE – The gage is a pressure transducer type located at the principal outlet. The pressure transducer is located near the inlet of the invert. The PT diaphragm is at – 4.08 feet gage height, or elevation 1,146.99 feet NAVD 1988, levels of March 18, 2004.

There is one staff gage on the cage surrounding the outlet works. There are four additional staff gages up the face of the dam near the outlet. The 0.00 on the staff gages is located at 1,151.07 feet NAVD 1988, which corresponds to 0.00 feet gage height, levels of March 18, 2004.

There is no crest gage at this location.

ZERO GAGE HEIGHT - is defined as 0.0 feet on the staff gage mounted to the trash rack and the staff gages on the dam near the outlet. Zero gage height is 1,151.07 feet NAVD 1988.

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

REFERENCE MARKS –

RM 12 – A 40D nail set 2,332 feet (+/-) WSW of the NE corner of Section 10, T1N, R3W. It is at Station 155+00 of Buckeye FRS #3. It is at the headgate for small drainage culvert per the McLain Harbers survey under FCD Contract 93-51. Elevation 20.96 feet gage height, or 1172.03 feet NAVD 1988, levels of March 18, 2004.

RM 5 – Elevation 18.35 feet gage height, levels of December 21, 1995. A ½ inch iron rod set 2,899 feet (+/-) SW of the NE corner of Section 36, T2N, R3W. Set at the high point of the berm at the NE side of the spillway. From McLain Harbers FCD Contract 93-51.

RP 1 – Elevation = 1,170.76 feet NAVD 1988, gage height = 19.69 feet, levels of December 21, 1995. Top of south bolt holding pipe containing pressure transducer line, three feet east of gage.

RP 2 – Elevation = 1,172.36 feet NAVD 1988, gage height = 21.29 feet, levels of December 21, 1995. Top of west bolt for headgate bracket, near RM 12.

RP 3 – Top of south most bolt holding rack structure to wingwall above the outlet. Elevation 3.11 feet gage height, or 1,154.18 feet NAVD 1988, levels of March 18, 2004.

CHANNEL AND CONTROL –

The principal outlet is an ungated 30-inch diameter reinforced concrete pipe. Higher flows are controlled by a spillway on the east end of the structure.

PRINCIPAL OUTLET / EMERGENCY SPILLWAY –

The principal outlet is an ungated 30-inch diameter reinforced concrete pipe 560 feet long. The invert of the inlet is at elevation 1,146.89 feet NAVD 1988, gage height –4.18 feet, and the invert of the outlet is at elevation 1,130.79 feet NAVD 1988.

The emergency spillway is located on the east end of the structure. The width of the spillway is approximately 400 feet. The crest of the spillway has the hydraulic characteristics of a weir. The low point in the crest of the spillway is at an elevation of 1,165.07 feet NAVD 1988, and 14.00 feet gage height.

Top of dam elevation is at about 20.3 feet gage height and 1,171.37 feet NAVD88.

RATING – The current discharge rating is Rating #3. The rating for the principal outlet is an HY8 culvert analysis dated August 19, 1993 with datum adjusted from the level survey of December 21, 1995. The spillway is rating via an HEC-RAS backwater analysis was that was done using level data from the December 21, 1995 survey and from the McLain Harbers FCD 93-51 topographic mapping. The analysis is dated November 6, 1996.

The current capacity rating is Rating #3. The capacity rating was done by 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 22, 1997.

DISCHARGE MEASUREMENTS –

POINT OF ZERO FLOW – The PZF at the principal outlet is –4.18 feet gage height, or 1,146.89 feet NAVD 88. The PZF at the spillway is about 14.0 feet gage height.

FLOODS / SIGNIFICANT IMPOUNDMENTS – None recorded

ACCURACY – Fair

JUSTIFICATION – Monitor Buckeye FRS #3 for Operations and Maintenance and for public safety.

UPDATE – July 7, 2016
DE Gardner