

WHITE TANK FRS #4
FCD GAGE #6822
FCD GAGE #6823

STATION DESCRIPTION

LOCATION - The dam is located south of I-10 and north of Van Buren Street and is along the west side of Jackrabbit Trail (195th Avenue). The gages are nearest the southeast part of the dam. Latitude W 33° 27' 04"; Longitude W 112° 29' 40". Located in SE1/4 SW1/4 S05 T1N R2W in the Perryville 7.5-minute USGS quad map.

ESTABLISHMENT – Gaging was established on January 9, 1986.

DRAINAGE AREA - 18.6 mi²

GAGE – There are two pressure transducer stations currently located in at this dam. The first ID6822 is located at the east principal spillway (outlet). The elevation of this gage is 1,041.07 feet NAVD88, levels of November 29, 2011. The second, ID6823 gage is a pressure transducer type instrument, at elevation 1,032.50 feet NAVD88, levels of November 29, 2011.

There are three staff gages at this dam all located at the east outlet. Each is a five-foot gage measuring from 0 – 5, 5 – 10, and 10 - 15 feet, respectively. Five feet on the 0 – 5 foot staff gage is at elevation 1,044.803 feet NAVD88. Therefore, zero foot on the staff gage is equal to 1,039.803 feet NAVD88.

There are no crest gages at this location.

ZERO GAGE HEIGHT – Zero gage height is currently not defined. It will be reestablished upon completion of the dam rehabilitation and when the station gage is permanently set. However, *with regard to the staff gages only*, zero feet is equal to 1,039.803 feet NAVD88.

HISTORY – No previous history at this location. Station established on January 9, 1986. At that time a PT station was installed at the west outlet. Station removed for dam rehabilitation on June 1, 2011. Stations reinstalled in temporary locations for the duration of the dam rehabilitation. The station with level ID 6823 was installed in the pool area on November 17, 2011. PT elevation is at 1,032.50 feet NAVD88. The station with level ID 6822 was installed on November 22, 2011 near the crest of dam at east outlet station 17+32 is at elevation 1,041.07 feet NAVD88.

REFERENCE MARKS -

RP-10002 is a chiseled 'X' on the headwall of the east outlet at station 17+32. The elevation of this point is 1,043.817 feet NAVD88. It is not defined regarding gage height at this time.

RP-10003 is a chiseled 'X' on the headwall of the west outlet at station 58+53. Elevation is 1,046.990 feet NAVD88.

CHANNEL AND CONTROL - There are two primary outlets from the dam. A 30-inch and 36-inch CMP culverts of 85 feet and 168 feet in length, respectively. There are two auxiliary spillway outlets from the structure. Both are essentially identical with one located on the east end of the structure and one on the west end of the structure.

PRIMARY / AUXILIARY OUTLETS

The first primary outlet is a 30-inch CMP culvert located toward the eastern end of the structure. The lip of the inlet is at elevation 1,040.82 feet NAVD88. The culvert length is 85 feet. The second primary outlet is a 36-inch CMP culvert located toward the west end of the structure. The lip of the inlet elevation is 1,043.53 feet NAVD88. The west culvert is 168 feet in length.

There are two auxiliary spillways, one west and one east. The east spillway is lower than the west spillway. The east spillway crest is at elevation 1,051.40 feet NAVD88. The west spillway crest is at elevation 1,051.50 feet NAVD88.

Top of dam elevation is approximately 1,056.0 feet NAVD88.

RATING -

The current discharge rating is Rating #5, applied as of October 1, 2011. The rating was developed from new discharge calculation associated with the rehabilitation of the dam. The current capacity rating is Rating #4, applied as of October 1, 2011. The rating was developed from recent survey data of the dam in association with the rehabilitation of the dam.

DISCHARGE MEASUREMENTS - None

POINT OF ZERO FLOW - The lip of the east culvert inlet is at -2.63 feet gage height. The lip of the west culvert (gage location) is at -2.35 feet gage height. Assuming gates are open, flow should begin through the east culvert first. 1040.633

The east auxiliary spillway will begin to flow at 7.8 feet gage height, and the west auxiliary spillway will begin to flow at 8.1 feet gage height.

FLOODS / SIGNIFICANT IMPOUNDMENTS –

An impoundment of 644 acre-feet and 0.75 feet gage height, was recorded on August 15, 1990.

REGULATION - The dam is a regulation of flows from the inlet channel north of the dam.

DIVERSIONS - I-10 acts as a diversion of natural overland flows into the dam on the north. There is also a large borrow pit in the impound area of the dam, that will store a significant amount of water before the gage reads water.

ACCURACY - Fair to good.

JUSTIFICATION - Monitor White Tank FRS #4 for storage and failure.

UPDATE - January 10, 2012
 DE Gardner