

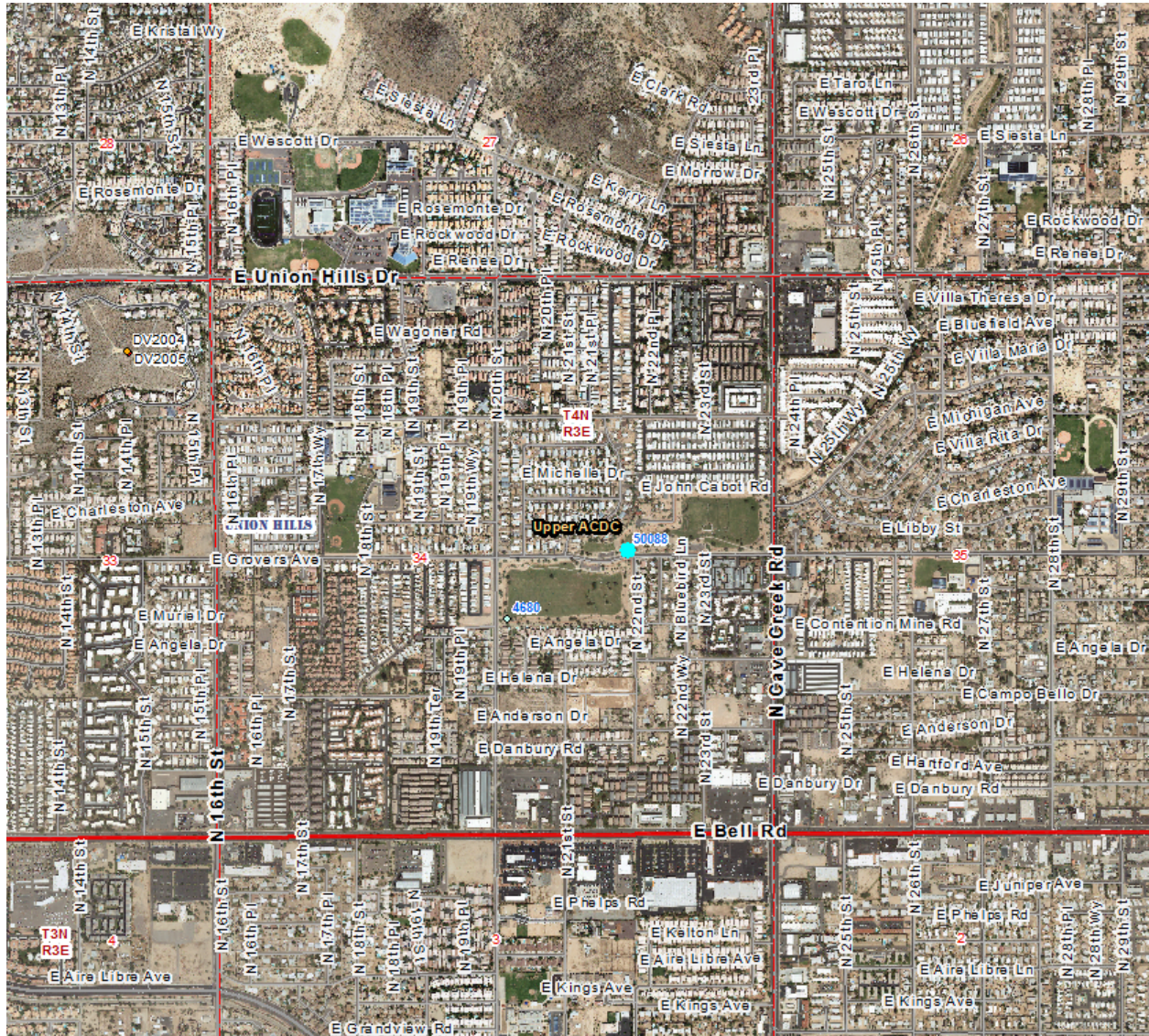
East Fork Cave Creek Basin #3a

FCD ID # 08807, ALERT2 Station ID = 50088

Station Description

Location

The station is located on the north side of Grovers Avenue about 1/4-mile west of Cave Creek Road. The station is located at latitude 33° 38' 52.7" and longitude W112° 02' 07.2". It is in S34, T4N, R3E.



Establishment

The gage was established on October 14, 2015.

Drainage Area

Drainage area is about 3.5 square miles.

History

The lower basin on the south side of Utopia Drive has been gaged since 1994. This station on the upper basin was established on October 14, 2015.

Gage Information

There is one pressure transducer instrument located near the outlet of the basin. The transducer is located on the left outside wall of the outlet. Transducer elevation is at 0.90 feet gage height.

Zero Gage Height

Zero is currently defined as the invert of the left invert, which is at, and defined as 0.000 feet gage height, levels of December 22, 2015. Zero gage height is equivalent to 1,425.27 feet NAVD88.

Reference Marks

BM08807 - is located near the station tube, and is at elevation 14.292 feet gage height and 1,439.560 feet NAVD88, levels of December 22, 2015.

RP-1 is the top of the right most metal plate at the base of the rack above the outlet. Elevation 5.678 feet gage height and 1,430.946 feet NAVD88, levels of December 22, 2015.

RP-2 is the top of the center most metal plate at the base of the rack above the outlet. Elevation 5.658 feet gage height and 1,430.926 feet NAVD88, levels of December 22, 2015.

RP-3 is the top of the left most metal plate at the base of the rack above the outlet. Elevation 5.660 feet gage height and 1,430.928 feet NAVD88, levels of December 22, 2015.

Channel and Control

The gage is installed at the southwest corner of the upper basin (3A). At this location there are 3, 48-inch culverts that convey water to the lower basin. The inverts of the inlets are at zero gage height.

Principal Outlet and Emergency Spillway

The principal outlet consists of 3 identical 48-inch culverts that are about 250 feet in length. They discharge into the lower basin. The elevation of the inlet is 1425.47 feet NAVD88 and the elevation at the outlet into basin 3B is 1421.37 feet NAVD88.

There is no defined spillway at this site. There is a low lying area of the parking lot along the south side of the basin and is near the intersection of Grovers Avenue and 22nd Street. The low elevation is approximately 14.8 feet gage height.

The top of the basin would be at about 15.0 feet gage height, but is subject to the minimum elevation of the "spillway" above. The design gives a maximum depth of 12.5 feet.

Rating

The rating is from the design specifications, both for discharge and volume.

Discharge Measurements

Discharge measurements are not possible at this location.

Point of Zero Flow

Zero flow is at the left invert.

Floods

The largest recorded impoundment occurred on July 30th, 2022. Having a gage height of 6.89, a volume of 37.9 acre-feet filling the basin to 32.3% capacity.

Regulation

The basin regulates natural flows in the East Fork of Cave Creek Wash.

Diversions

No diversions are anticipated to be found in the watershed.

Accuracy

The accuracy is assumed to be fair to good, since it's from the design.

Justification

Provide level data in this basin for flood warning for the city of Phoenix.

Updated:

June 15, 2017

E.S. Thomas