

**NEW RIVER AT BELL ROAD  
FCD GAGE ID# 61707 (5598)**

**STATION DESCRIPTION**

**LOCATION** – The station is located just west of the Loop 101 freeway on the downstream side of the Bell Road bridge over New River. The gage equipment is located near the second pier of the bridge. Latitude N33° 38' 16.4", Longitude W112° 14' 23.3". Located in the NW1/4 NE1/4 NE1/4 S03 T3N R1E in the Hedgpeth Hills 7.5-minute quadrangle.

**ESTABLISHMENT** – The District established a gage at this location on April 4, 1990.

**DRAINAGE AREA** – 185 mi<sup>2</sup> most of which originates above New River Dam.

**GAGE** – The gage is a pressure transducer type instrument. The PT diaphragm is at gage height 0.30 feet, levels of January 9, 2018.

There are two staff gages at this location. The first is located near the pressure transducer. It reads directly in gage height but is currently covered in graffiti. The second staff gage is painted on the second pier from the right bank. All staff readings from levels of March 18, 2025.

There is one crest gage at this location, and it is located just upstream of the pressure transducer gage. It has a pin elevation of 0.29 feet gage height, levels of January 9, 2018.

**ZERO GAGE HEIGHT** - Zero feet gage height is equivalent to 1,192.113 feet NAVD 1988, levels of January 9, 2018.

**HISTORY** – The USGS began gaging on October 1, 1965. The station was discontinued September 30, 1984. The District established gaging on April 4, 1990. The USGS re-established gaging in June 1990. PT surveyed and found to be at 1.67 feet gage height on February 27, 1992. USGS discontinued gaging September 30, 1993. Some modification work to the bridge occurred in 1993 and 1994. The PT was reinstalled on May 11, 1994. PT at 0.1 feet gage height. Crest gages installed on October 16, 1996. References RM1 and RM2 established on April 18, 2000. The upper crest gage was stolen sometime in 2014.

**REFERENCE MARKS** –

BM-5598 is an FCDMC brass cap located about 20 feet south of the station tube on the left bank. It is at elevation 12.017 feet gage height and 1,204.130 feet NAVD88, levels of January 9, 2018.

BM-2 is an ADOT aluminum cap, located about 10 feet east of the FCDMC brass cap. It is at elevation 11.578 feet gage height and 1,203.691 feet NAVD88, levels of January 9, 2018.

RM-1 is a rebar set in the ground on the left bank near the top of the concrete about 20 feet downstream of the bridge. It is at elevation 9.501 feet gage height and 1,201.614 feet NAVD88, levels of January 9, 2018.

RP-1 is a chiseled 'X' in a concrete bridge rail on the left downstream side of the bridge, approximately 5 feet north of the station standpipe. It is at elevation 14.374 feet gage height and 1,206.487 feet NAVD88, levels of January 9, 2018.

RP-2 is a chiseled 'X' in the concrete apron approximately one foot downstream of the pier with the gaging sensors on the downstream side of the Bell Road bridge. It is at elevation 0.012 feet gage height and 1,192.125 feet NAVD88, levels of January 9, 2018.

RP-3 is a chiseled 'X' in the concrete apron on the downstream side of the third pier from the left bank. It is at elevation -0.075 feet gage height and 1,192.038 feet NAVD88, levels of January 9, 2018.

RP-4 is a chiseled 'X' on the right bank pedestrian path. It is at elevation 3.096 feet gage height and 1,195.209 feet NAVD88, levels of January 9, 2018.

**CHANNEL AND CONTROL** – Channel above gage is wide with a mix of sand and cobbles interspersed with desert shrubbery. Below the gage the channel continues as upstream. An old irrigation siphon crosses the river about 220 feet downstream of the bridge. The drop past this feature is significant, about 8-10 feet. The control is the channel for stages above about 2 feet gage height. Below, the flow is somewhat variant and unconstrained.

**RATING** – The current rating is Rating #2 from multiple cross section data up and downstream of Bell Road. An HEC-RAS model was used for analysis. A bridge analysis was not used in the HEC-RAS model.

**DISCHARGE MEASUREMENTS** – Measurements can be made by wading at the channel near the gage. Bridge measurements are probably not possible due to the fencing separating the sidewalk from the edge of the bridge. A suitable indirect reach may be found upstream of Bell Road.

**POINT OF ZERO FLOW** – The PZF is approximately -0.07 feet gage height at the second pier from the right bank. The PZF at the gage pier is 0.00 feet gage height, levels of January 9, 2018.

**FLOODS** – A flood of 14,600 cfs/ 13.5 feet occurred December 19, 1967. A flood of 11,900 cfs and 11.03 feet gage height occurred on September 5, 1970. A flood of 12,500 cfs and 9.35 feet gage height occurred March 2, 1978.

**REGULATION** – New River Dam approximately 6 miles upstream regulates flows through its principal outlet, and allows a maximum of about 4,000 cfs. The dam's emergency spillway can pass much larger floods. No other major tributaries enter between the dam and Bell Road.

**DIVERSIONS** – None known

**ACCURACY** – Fair

**JUSTIFICATION** – Monitor flows in New River channel just above addition of Skunk Creek. Also monitor flows for multiple pedestrian crossings in the riverbed downstream.

**UPDATE** –                      March 18, 2025  
                                         E.S. Thomas