

DESCRIPTION OF GAGING STATION ON SAN CLEMENTE CREEK

Location – Lat 36.4325, long -121.7150, approximately one quarter mile upstream of the Carmel River re-route channel at former San Clemente Reservoir site.

Establishment - Staff gage station established November 23, 1981 by G. Matthews. Re-established as a recording station Sept. 19, 1991 by G. W. James.

Drainage area - 15.6 sq. mi.

Gage - Campbell Scientific (CS) CR300 data recorder/CS451-7.25 psig pressure transducer system. Gage housing consists of steel recorder shelter supported by 3-inch galvanized pipe. Two-inch pipe (conduit) runs approx. 30 ft. down left bank to active channel. Two enameled staff gages staggered along left bank installed Nov. 28, 2000, ranges: 1.30-3.34 ft. (lower), 3.34-5.08 ft. (upper).

History - No other gages have been operated on this stream. This station was non-recording until Water Year 1992 when an Environmental Monitoring Systems (ENMOS) recorder and pressure transducer system was installed. Three subsequent CS recorder upgrades include the following: BDR-320, CR510 and CR300 installed Sept. 25, 1992, Oct. 26, 1999 and Aug. 15, 2018, respectively. On Dec. 5, 1991 gage datum was permanently changed by lowering the staff gage 1.50 ft. This was done to prevent negative stage readings which occurred at low flows at the previous datum.

Reference and benchmarks - The top of the 3-inch galvanized 'T' at the base of the recorder shelter riser is elevation 8.06 ft. gage datum (surveyed Nov. 28, 2000). Following the February 1998 floods, two re-bar reference points were established to determine gage height. RP1 at upper orifice is elev. 3.95 ft, and RP2 at lower orifice is elev. 1.78 ft. gage datum. RP1 was removed upon Nov. 28, 2000 staff gage installation.

Channel - One channel at all stages. Right bank is steep and rocky, left bank is gently sloping with moderate vegetal cover. Channel bed is composed of boulder and cobble.

Control - Low and medium stage control is a cobble riffle approx. 80 ft. downstream from gage. Channel control at high flows.

Discharge measurements - Low and medium stage measurements are normally made by wading 300 to 500 ft. upstream of the gage. High flow measurements obtained by the slope area method as there is no high flow measuring facility. Maximum wading flow is approx. 130 cfs at site 300 ft. upstream of gage.

Floods - Flood of February 3, 1998 reached a stage of 9.38 ft. gage datum as indicated by high water marks (HWM) at the gage. Floods on January 9, 1995 and March 10, 1995 reached stages of 7.92 ft., and 7.82 ft. respectively, based on HWM. Flood of Feb. 20, 2017 reached a stage of 7.59 ft. based on recorder.

Point of zero flow - Approx. 1.00 ft., gage datum. Varies due to scour and fill at control.

Winter flow - No ice.

Regulation - Streamflow affected by diversion to storage and flow bypass requirements at several seasonal dams/lakes upstream. Water is stored/released at these lakes during the spring/fall, respectively.

Diversion - Diversion to storage at seasonal dams and numerous small diversions for domestic and riparian uses.

Accuracy - Stage records are fair to good. High flows are defined by the slope-area method and computed records above 250 cfs are considered poor.

Cooperation -