Most current list of CA reference stream gages is based on list compiled by project partners at USGS using all available reference years for each reference gage location. This original list included 260 reference gages. UC Davis then performed QA and classification of the gages in this new list.

Reference years for the gages were provided by USGS. In two cases, the provided reference years were out of the bounds of the available data. Therefore, these gages were included in the reference list, but their data was never utilized by the functional flows calculator.

UCD performed a quality control check of the new list of gages and excluded gages from the final list based on the following issues:

1. Gages weren’t in the state of CA (some provided were in Nevada). (9)
2. Gage didn’t overlay any NHD stream of Order 2 or higher. (It is assumed these gages were on first order streams). (12)
3. The gages had suspect quality based on 1) visual assessment of the gage’s annual hydrograph, 2) further inspection if needed into basic summary metrics. Gages were flagged if they had a high number of zero-flow days and/or median/mean flow very close to zero. Again, summary stats were only investigated for gages which already raised a flag upon visual hydrograph assessment. (12)

After this initial QA, 227 reference gages remained.

Of this new list of 227 gages, 191 were found from the UC Davis original list and were given a hydrologic class according to the UCD classification analysis. Gages were paired with their preexisting class number based on USGS Gage ID. Then, the remaining 36 gages were assigned a class based on the class of the stream segment they overlaid. This was determined using visual inspection and ArcGIS locational data.

Additional changes:

One additional gage was added to the reference list that had been previously excluded. This was a gage in Class 9 (Hat Creek), that had originally been used in the UCD river classification analysis. This was considered important to add in because before its addition, class 9 only had 1 gage. Reference years were considered 1968-1988 based on the standards for the original UCD analysis.

Now list has 228 gages.

(Mid Feb 2018): One gage removed because it was discovered to have nearly all zeros in the data (Pine Creek nr Mojave, 10264750).

Now list has 227 gages.

(3/1/18): Two naturalized gages from Class 2 removed (11191000 and 11289650) because of suspicious results from FFC.

Now list has 225 gages.

(4/18/18): Naturalized gage 11302000 from class 2 removed because it’s reference years are listed from 1956-1956, meaning it essentially has no reference data.

Now list has 224 gages.

(6/7/18): Data for gage 11406999 (Oroville) is changed from naturalized CDEC to naturalized SWAT data.

(7/3/18): Gage 10287070 is removed after visual inspection of hydrographs because it’s data appears impaired. Also, gages 11418000, 10340500, 11294500, 11433500, 11445500, 11377100, 11156500, 11372000 have 1-5 years of data removed at the end of their unimpaired range because visual inspection reveals that they became impaired earlier than previously determined. Gages 11316800 and 11318500 have their unimpaired ranges extended because visual inspection reveals that their data in their entire period of record appears unimpaired.

Now list has 223 gages.