

Station Analysis Template: Crest-Stage Gage Peak Streamflow Records

Analysis Period: *Dates of record associated with this analysis*

Analyst: *Name of record-period analyst*

Gage Height Record: *Discuss the quality of the crest-stage gage (CSG) peak gage height record for the analysis period. State the range of stage recorded by the CSG during analysis period (min and max). Included general discussion of periods with any problems (CSG failure, for example).*

Datum: *Provide the date of the most recent levels and the elevation of the CSG index(es) for the analysis period. If levels were run during analysis period, discuss the results of the level run, provide the reasoning / justification for any datum correction, and explain how the datum correction was applied, include dates.*

Backup Data: *Describe source of the backup high-water mark peak stage values, the quality of the backup values, and why the CSG failed to record the peak stage.*

Ice Affected: *Document any CSG recorded peak stage values that were affected by ice.*

Discredited Peaks: *Document any discredited CSG recorded peak stage values and provide reasoning why they were discredited.*

Peak Stage: *Provide the maximum CSG recorded peak stage value for the analysis period. Indicate how this peak relates to the previous peaks observed during the water year.*

Stage-Discharge Relation: *Indicate rating(s) (by number) active for analysis period. Include information on when the rating was initially activated and when it was created. Rating description should be stored in SIMS station description element RATING (OPS). All rating descriptions should be contained in this element with the newest (active) description at the top. Provide general assessment of how measurements made during analysis period plot on active rating curve.*

Discharge Measurements and Control Conditions: *Summarize the discharge measurements (including observations of zero flow) made during the analysis period; number made, range of flow measured, and the hydraulic controls that were in effect for each measurement. Document the condition of the hydraulic control for each measurement or inspection (reference/cite any archived photos that corroborate described conditions). Identify/discuss any check measurements made or any measurements made but marked as not used.*

Shift Curves: *Discuss the form of all shift curves developed for the analysis period. This includes selected merge gage heights and selected hinge gage heights. Discussion should be focused on how the shift curves relate to the hydraulic control and the observed control conditions--what is presumed to have caused the measurements to plot where they do with respect to the rating curve?*

Application of Shift Curves: *Describe how the developed shift curves were applied to the time series. Discussion should relate the causes (discussed in Shift Curves section) to the application. The shift curves should be applied to the time series in a manner that agrees with the cause for the changes to the hydraulic control. If multiple events occurred between measurements explain which event (or events) were used to apply the shifts and why. Provide justification whenever a shift is simply prorated from visit to visit.*

Computed Discharge: *State the quality (excellent, good, fair, poor) of the computed discharge record for the analysis period and provide brief reasoning for the assigned quality. State the range of peaks computed during analysis period in relation to recent measurements of discharge. Include general discussion of uncertainty in the computed discharge for the analysis period. This discussion should incorporate the quality of the recorded gage height, and the quality of the stage-discharge relation for the computed range of flows of the analysis period.*

Hydrographic Comparison: *(Required for all analysis periods; if no comparison streamflow site is available, a comparison with a precipitation site is required to determine dates and times of peaks) Document sites used for hydrographic comparison. Discuss how dates and times of peaks were determined based upon the comparison. Reference any supporting information (such as plotted hydrographs) that were used in the comparison.*

Peak Streamflow: *Provide the maximum computed peak streamflow value based upon the discussion in the Peak Stage section. Finally, indicate how this peak streamflow value relates to the previous peak streamflows observed during the water year.*

Extremes For 2XXX Water Year: *If analysis period closes out a water year provide maximum instantaneous discharge and corresponding gage height, and peak gage height (if not associated with maximum instantaneous discharge). Include any needed qualification statements for these values. Example shown below.*

Extremes For 2017 Water Year: Maximum discharge, 3,250 ft³/s, May 2, gage height, 12.25 ft. Peak gage height, 14.44 ft, Jan. 29, ice affected.

Comments: *Provide any pertinent remarks or comments for the analysis period that are not contained in the above sections.*