Station Analysis Template: Index-Velocity Records

Analysis Period: *Dates of record associated with this analysis*
Analyst: *Name of record-period analyst*

Gage Height Record: *State the quality of the gage height record (good, fair, poor) for the analysis period. State the range of stage experienced during analysis period (min and max). Included general discussion of periods with any problems (missing record, for example).*

> **Datum**: *Provide the date of the most recent levels. If 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 where the backup data came from, the quality of the backup data, why there was a gap in the primary time-series, and the period that contains the merged data*
>
> **Ice Affected**: *Provide dates for periods when recorded gage heights are affected by ice.*
>
> **Edits**: *Discuss all edits to the recorded gage heights, including reasoning for the erroneous values and methods used in making edits. Provide dates for any gaps in recorded gage heights.*
>
> **Gage-Height Corrections**: *Clearly describe the reasoning and timing for any gage height corrections. Blanket statements for small instrument drift can be provided. Larger corrections need detailed discussion.*
>
> **Other Corrections**: *Provide the reasoning and application period for any flushing, purge, or drawdown corrections. Provide detailed discussion on any other types of corrections that were developed, their period of applicability, and why they were deemed necessary for the analysis period. (Note: corrections that vary by stage such as drawdown corrections require a well defined relationship built upon direct observations of the reference gage and recorder over a range of stage and events. Document(s) with supporting plots/analyses/discussions should be referenced and properly stored in accordance with WSC policy)*
>
> **Peak Stage**: *Provide the maximum recorded peak stage value, and the independent peak stage value (including the independent peak stage device type). The results of the verification procedure should be described including which peak stage value was determined to be the valid maximum stage for the analysis period (See OSW TM 14.06). Finally, indicate how this peak value relates to the previous peaks for the water year.*

Stage-Area Rating: *Indicate rating(s) by number that are active for analysis period. Include information on when the rating was initially activated, when it was created, and when it was last verified. Reference archive location of detailed stage-area rating documentation.*

> **Area Survey:** *Methods and equipment used to survey standard cross-section for current stage-area rating in use (if methods vary among surveys)*
> **Stage-Area Rating Validation:** *Date and time of field survey. Description of survey, comparison of areas, and comparison of cross-section shape*

Velocity Record: *State the quality of the velocity record (good, fair, poor) for the analysis period. State the range of velocity experienced during analysis period (min and max). Include general discussion of periods with any problems (missing record, for example). Describe any review of associated quality assurance data such as Signal-to-noise ratios (SNRs) and beam check data.*

> **Backup Data**: *Describe where the backup data came from, the quality of the backup data, why there was a gap in the primary time-series, and the period that contains the merged data*
>
> **Edits**: *Discuss all edits to the recorded velocities, including reasoning for the erroneous values and methods used in making edits. Provide dates for any gaps in recorded velocities.*

Index Velocity Rating: *Indicate rating(s) by number that are active for analysis period. Include information on when the rating was initially activated and when it was created. Provide general assessment of how measurements made during analysis period compare with active rating curve. Reference archive location of detailed stage-area rating documentation.*

> **Discharge Measurements and Control Conditions:** *Summarize the discharge measurements made during the analysis period; number made, range of flow measured. Justify any measurements excluded from the rating development. Identify/discuss any check measurements made.*
>
> **Velocity Shift Curves:** *Discuss the form of all shift curves developed for the analysis period. Discussion should* include presumed causes, changes with control transitions, as well as any observed trends associated with the plotting position of the measurements.
>
> **Application of Velocity 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. State the range of flow experienced during analysis period (min and max) in relation to recent measurements of discharge. Included general discussion of uncertainty in the computed discharge for the analysis period. This discussion should incorporate the quality of the recorded gage height, recorded velocity, and the quality of the stage-area and velocity-velocity relations for the computed range of flows of the analysis period.*

Estimates: *Provide dates for estimated periods. Describe methods used in developing estimated unit value discharges.*

Hydrographic Comparison: *(Required for all analysis periods unless comparable sites are not available) Provide sites used for hydrographic comparison. Discuss how the comparison was done and document the results of the comparison. When did the site hydrographs compare favorably, when did they compare poorly and why?*

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

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