

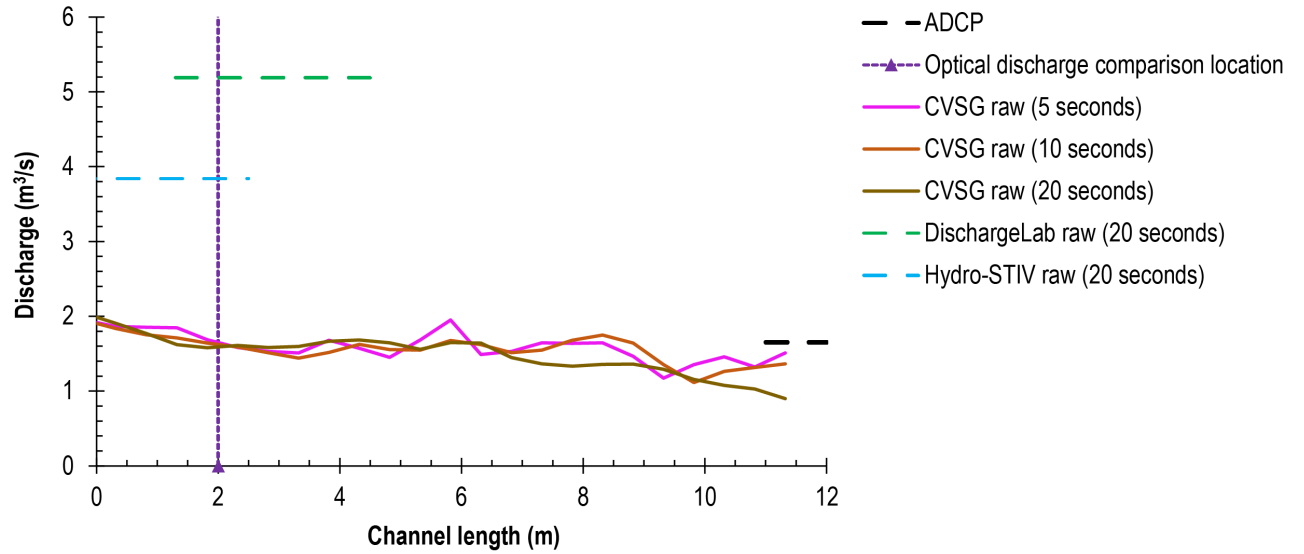


Figure S1: Raw discharge measurements using different technologies along the length of the irrigation channel in NSW, Australia.

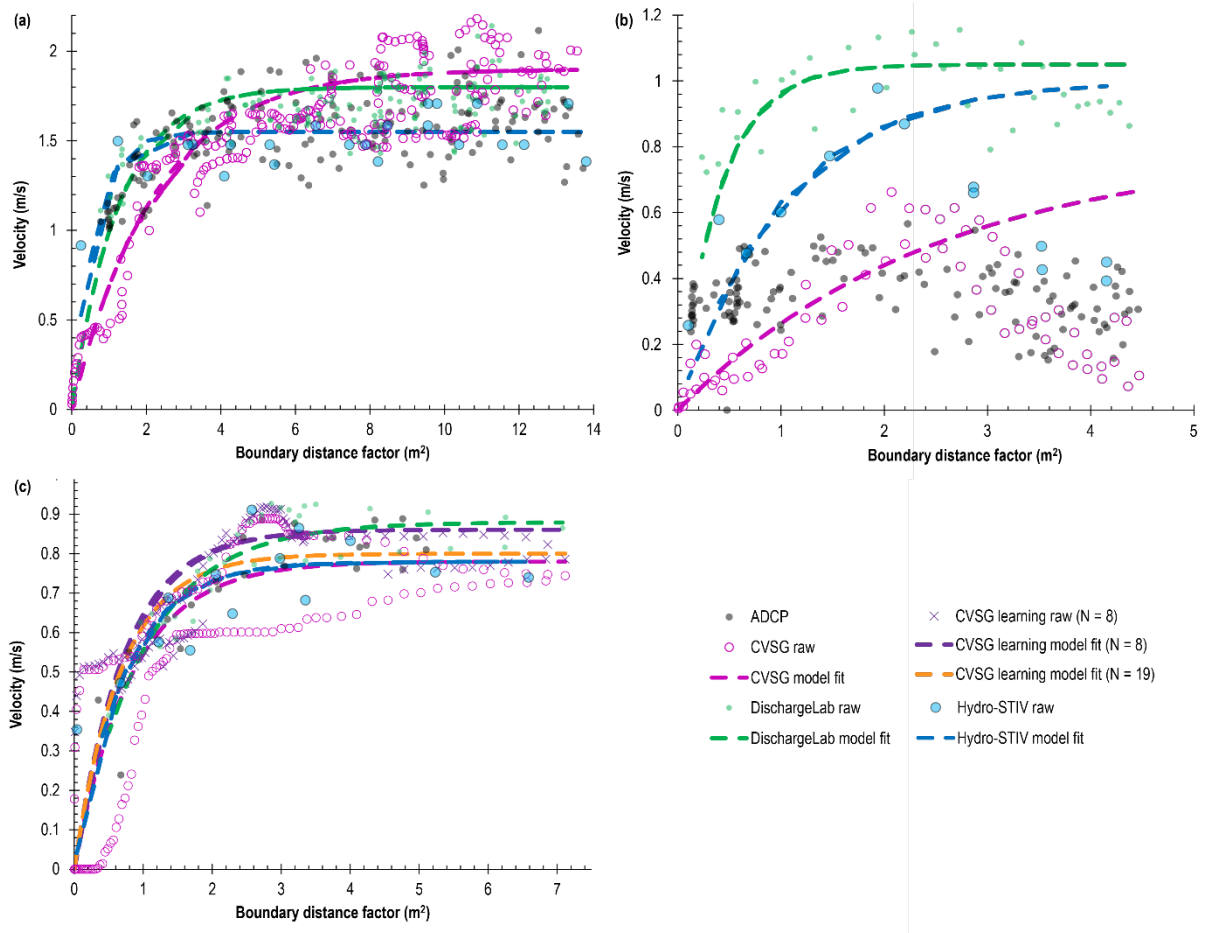


Figure S2: Detailed time point comparison raw and model fitted velocity measurements plotted over the boundary distance factor at (a) Castor River, Ontario, Canada, (b) an irrigation channel in NSW, Australia, and (c) Tyenna River, Tasmania, Australia.

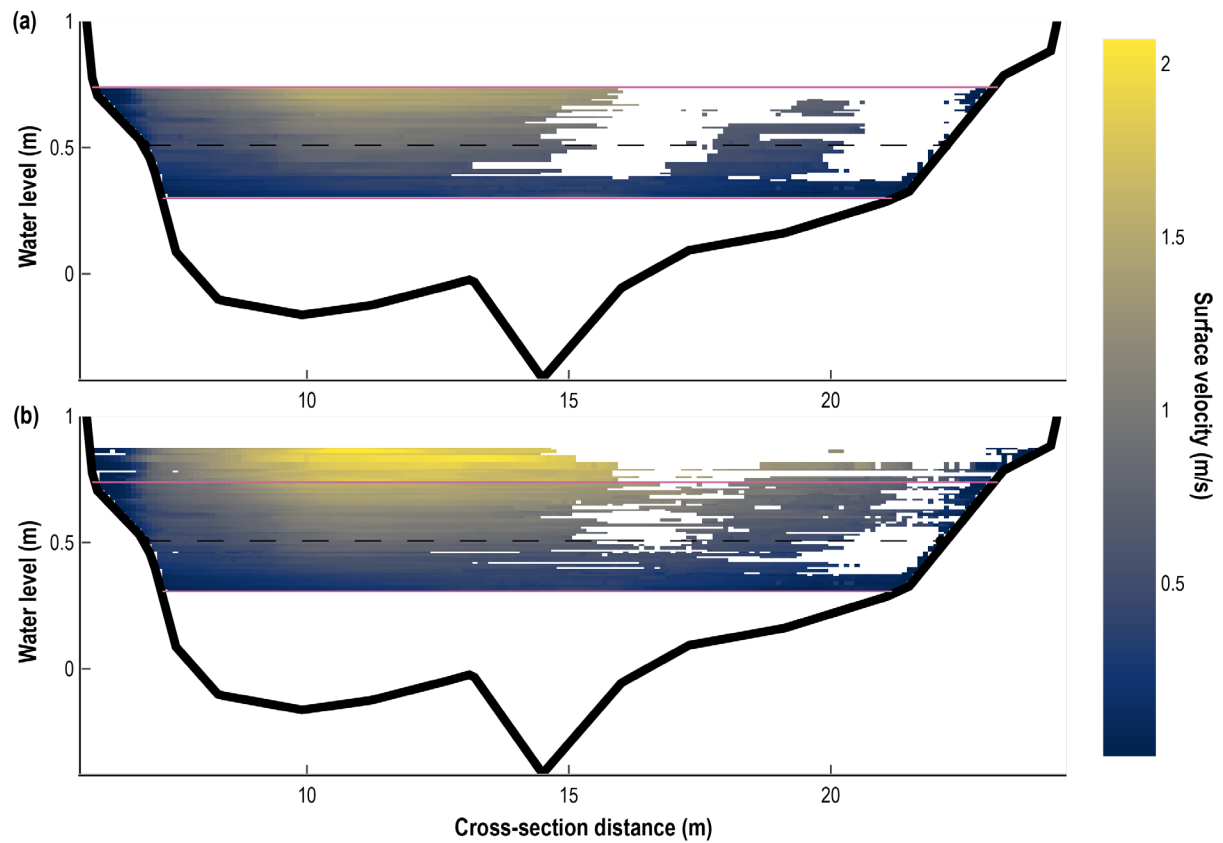


Figure S3: CVSG raw surface velocity learning distributions over solid black cross-section profile used for surface velocity profile model fitting on (a) 30 March 2021 12:12 LT, and (b) 29 April 2021 16:59 LT at Tyenna River, Tasmania, Australia. Black dashed line indicates the same water level (0.509 m) recorded at these times.

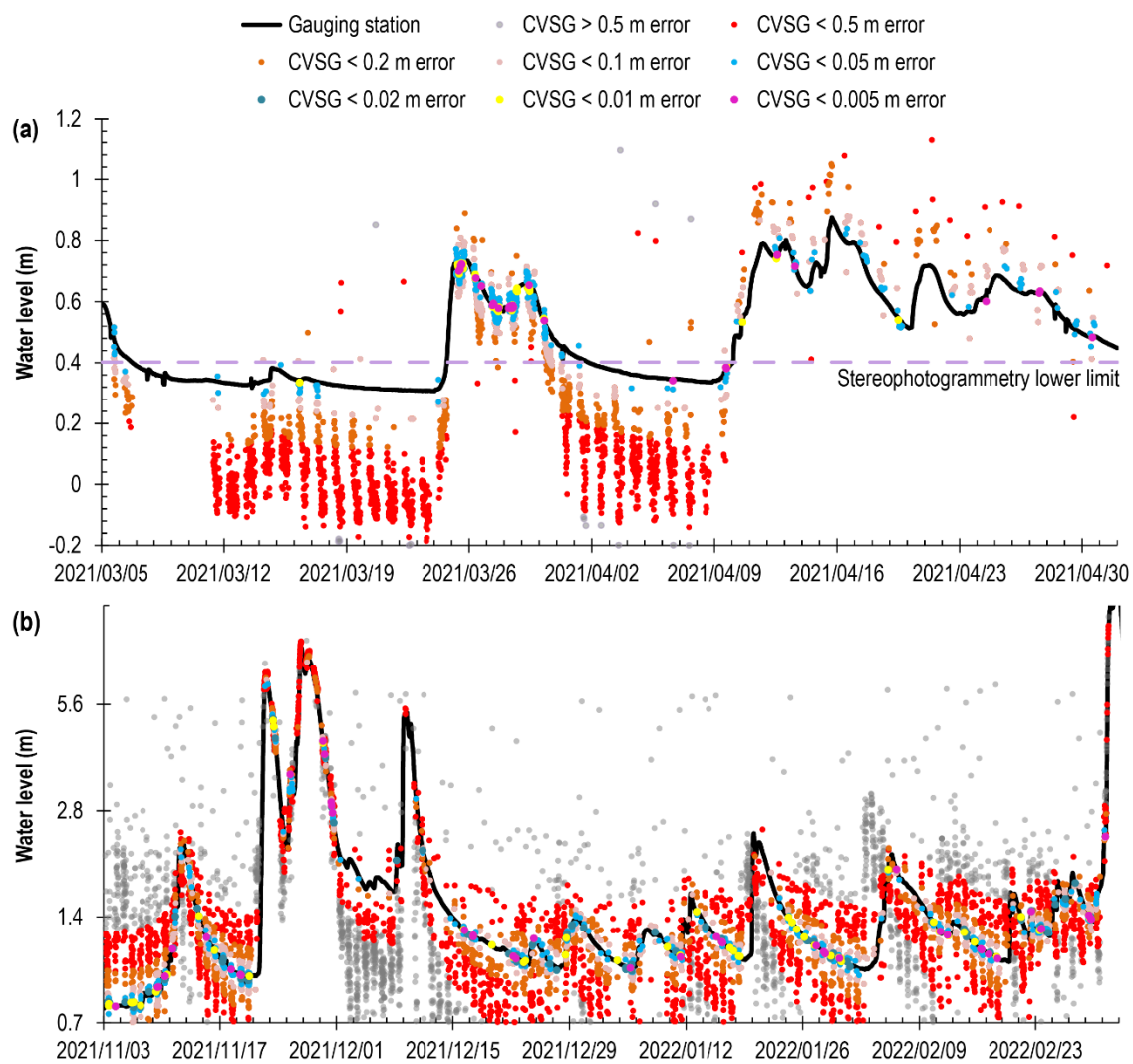


Figure S4: Stereophotogrammetry estimated CVSG water level timeseries classified according to error magnitude from (a) Tyenna River, Tasmania, Australia, and (b) Paterson River, NSW, Australia on a logarithmic scale.

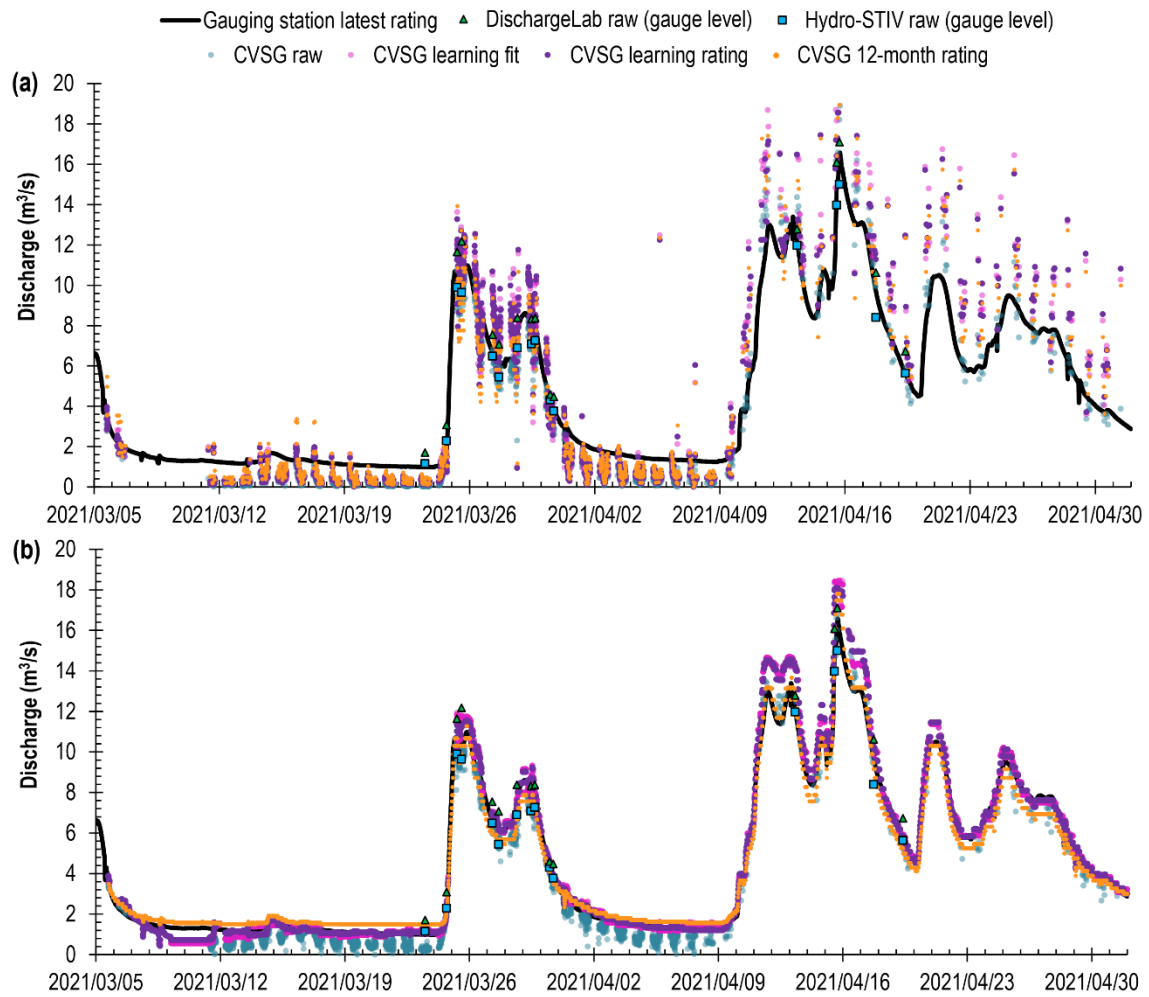


Figure S5: Timeseries discharge estimates at Tyenna River, Tasmania, Australia with parallel analysis from (a) CVSG using stereophotogrammetry estimated water level, and (b) CVSG using gauged water level.

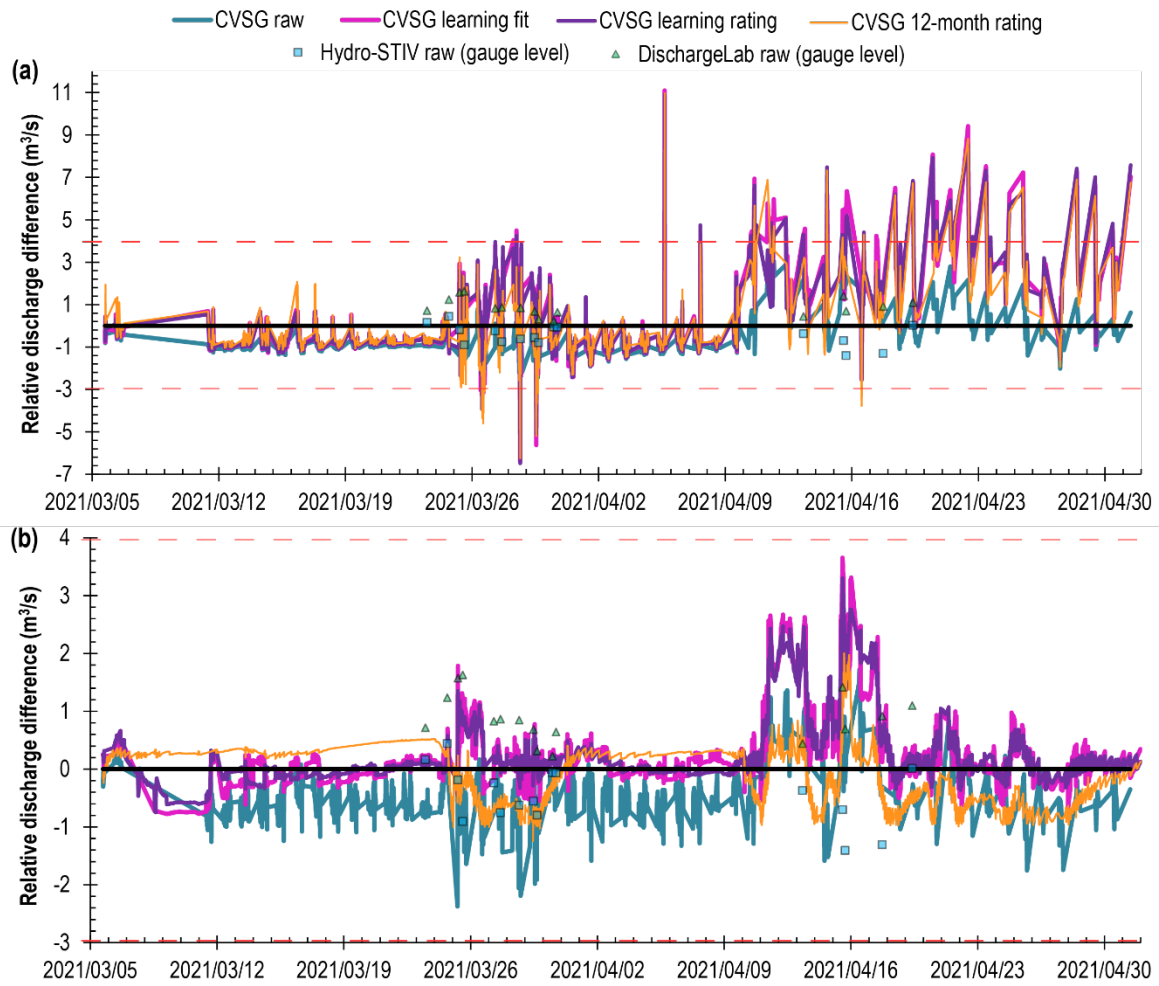


Figure S6: Discharge difference timeseries relative to gauge rating at Tyenna River, Tasmania, Australia with (a) CVSG using stereophotogrammetry estimated water levels, and (b) CVSG using gauge water levels. Red dashed line indicates relative scale change between (a) and (b).

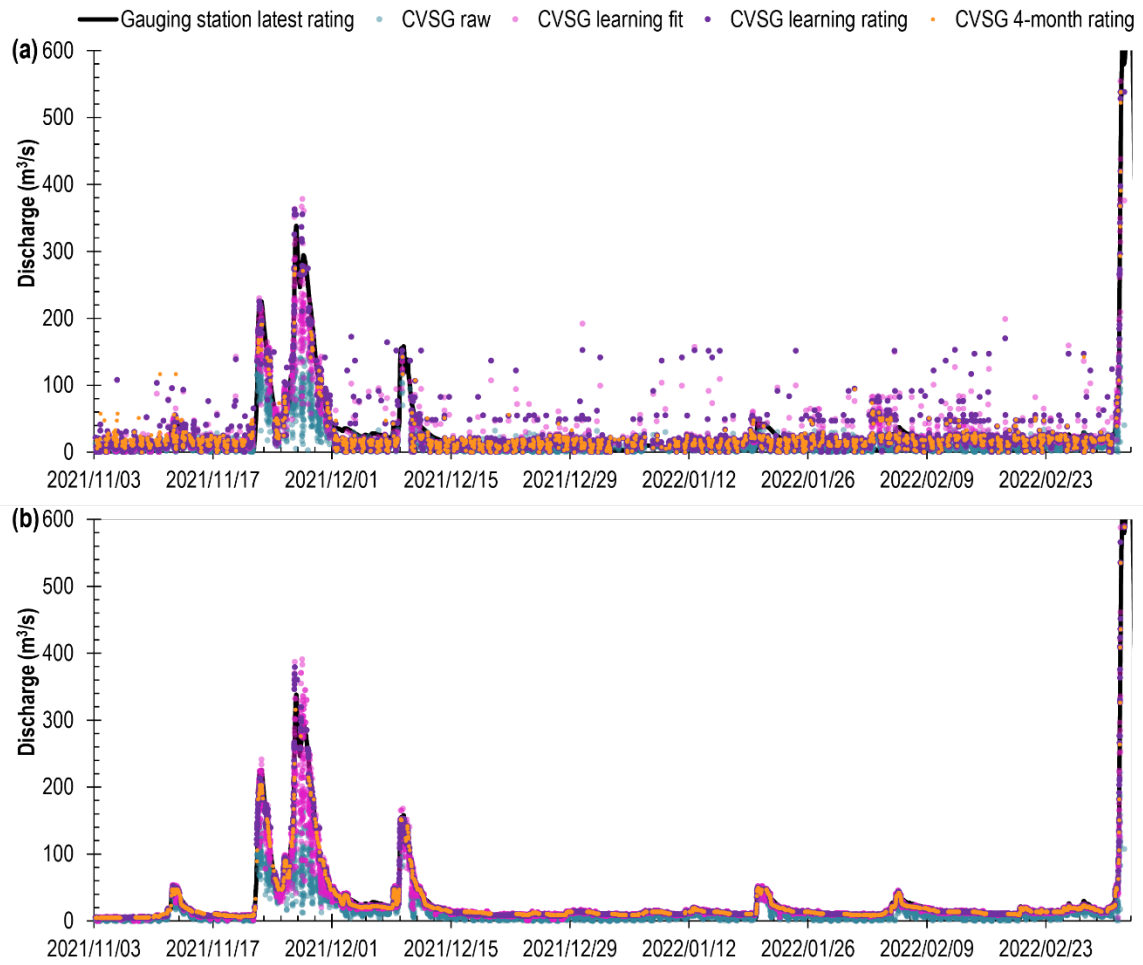


Figure S7: Timeseries discharge estimates at Paterson River, NSW, Australia with parallel analysis from (a) CVSG using stereophotogrammetry estimated water level, and (b) CVSG using gauged water level.

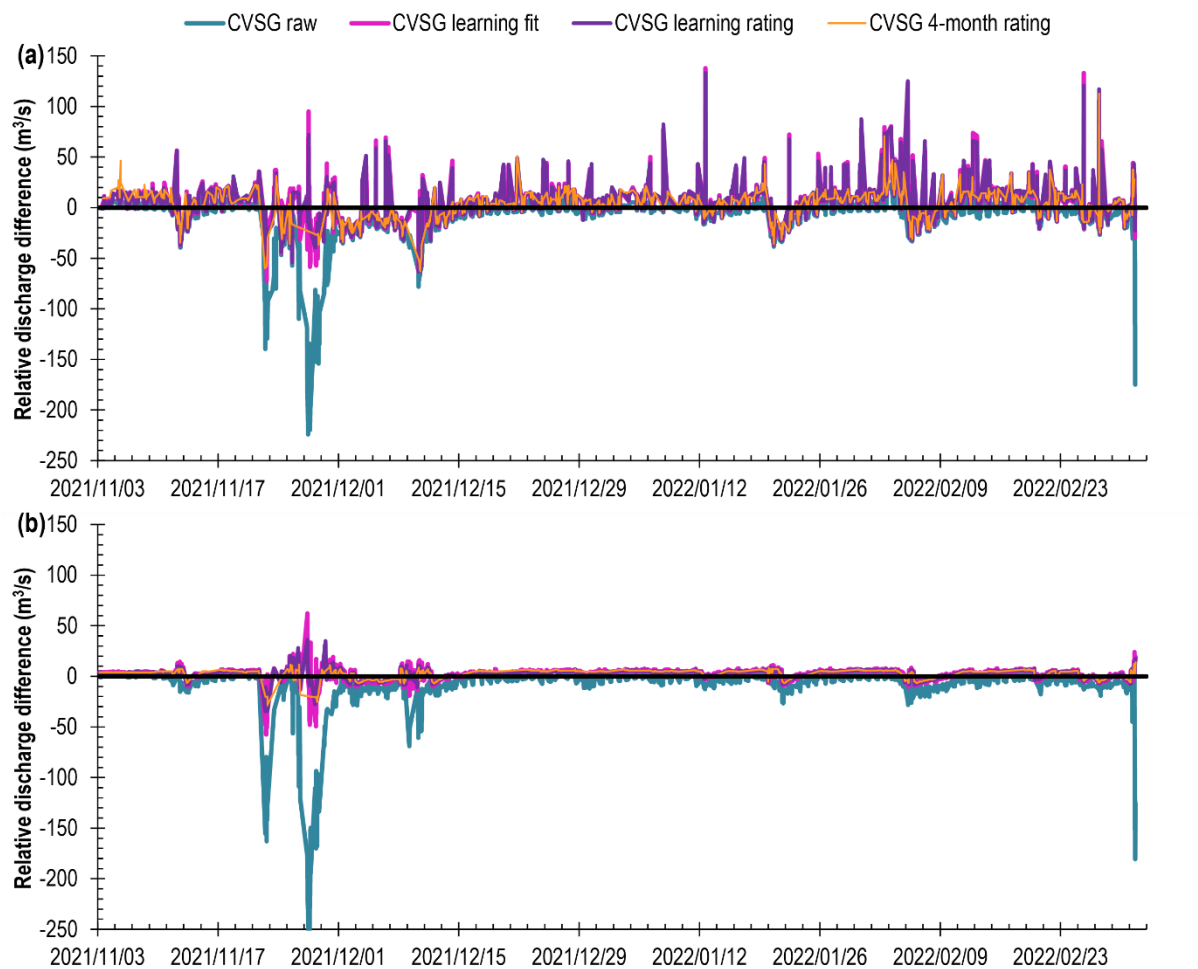


Figure S8: Discharge difference timeseries relative to gauge rating at Paterson River, NSW, Australia with (a) CVSG using stereophotogrammetry estimated water levels, and (b) CVSG using gauge water levels.