The validation module is to compare the parflow simulation with USGS observed streamflow.

Files in the folder:

* MMF Overview CONUSv1 validation.pdf – the validation results from Mary Michael Forrest for CONUS1.0.
* MM\_PlotStreamflowTimeseries.R – R script from Mary Michael Forrest of plotting the figure on page 5 of the pdf file
* NWM\_Gage\_Adjustments\_attribute\_table\_20200510.csv – the attribute table for all USGS gages for CONUS2.0, will be updated later about the GageII info
* USGS\_data\_download.ipynb – jupyter notebook script for extracting and plotting USGS gauge data

Assessment metrics:

The calculation of the metrics can be found in MM\_PlotStreamflowTimeseries.R line 112-146. Here are the equations for the metrics.

* Percent Bias
* Spearman rho
* R2
* RMSE