

http://baydeltaoffice.water.ca.gov/modeling/deltamodeling/DSM2UsersGroup/DSM2UserGroupMeeting_Nov2012.pdf

DSM2 Version 8.1 Calibration Status Update

November 1, 2012

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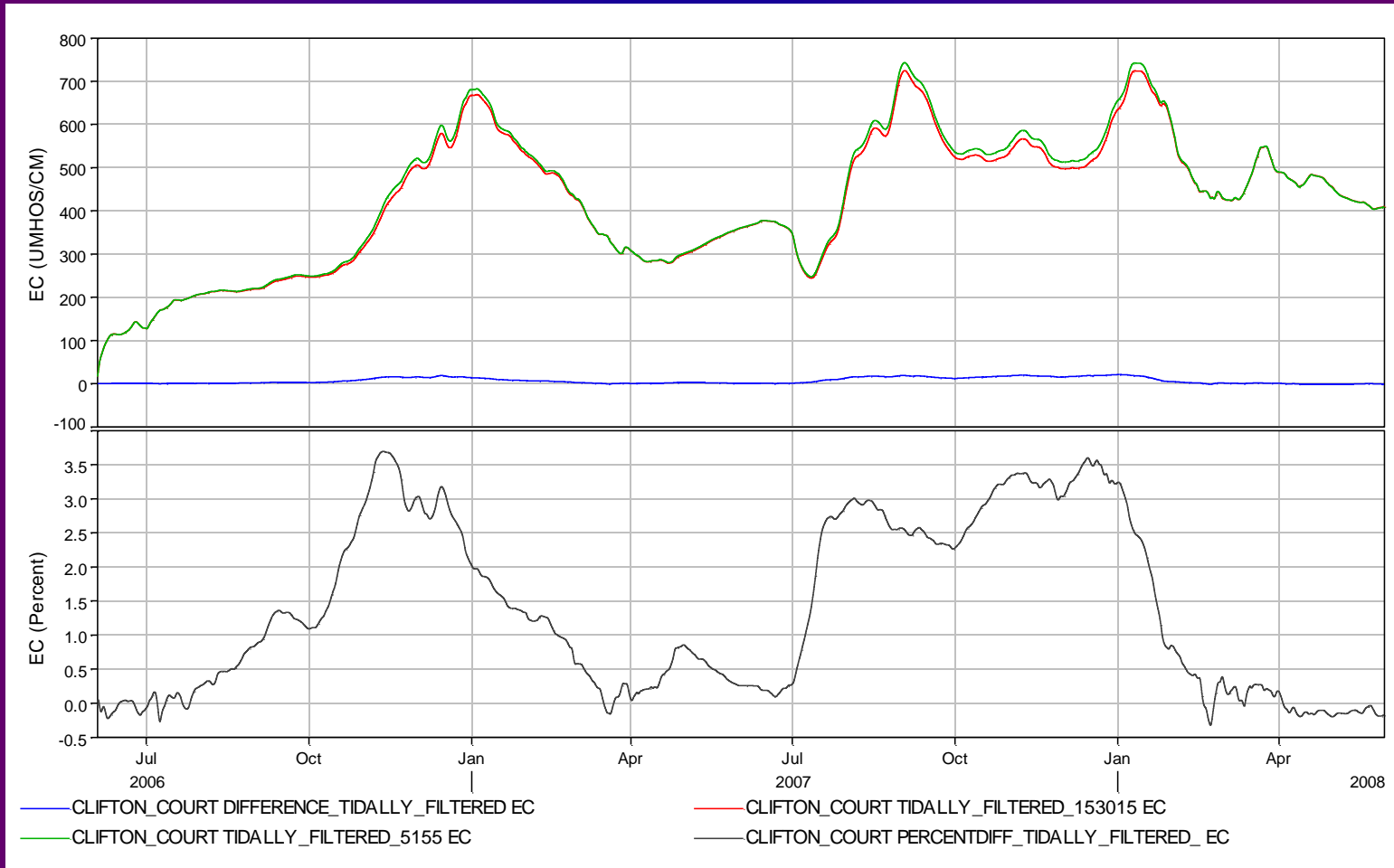


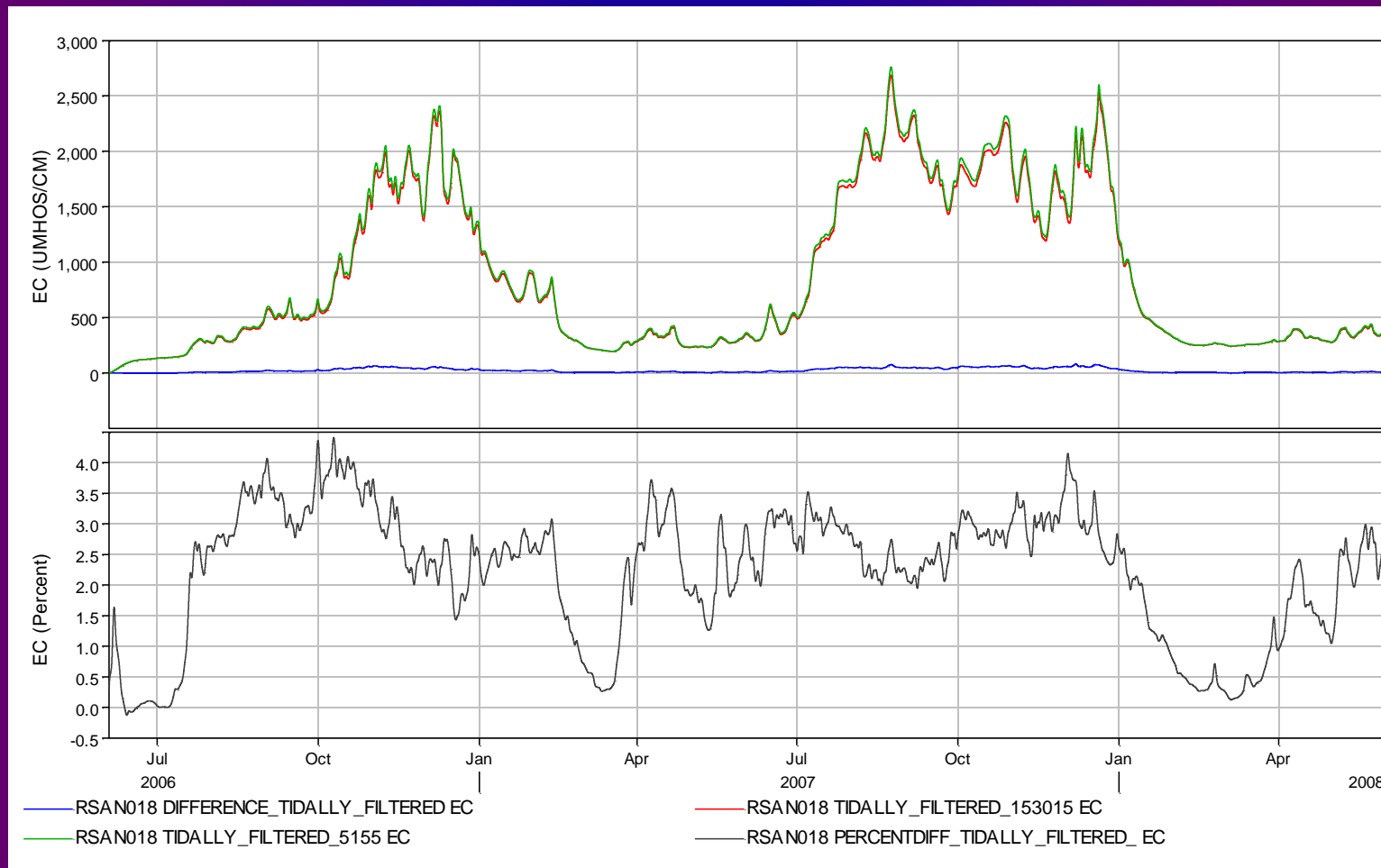
What's New in 8.1?

- NAVD88 datum.
- Recommended time step 15/30/15 for Hydro/Tidefile/Qual.
- Martinez EC boundary using 15min value.
- Hydro faster than Qual!

Time Step Sensitivity Test

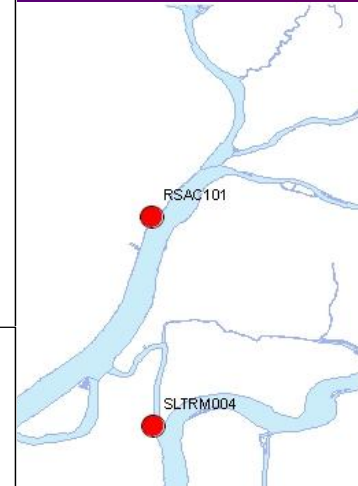
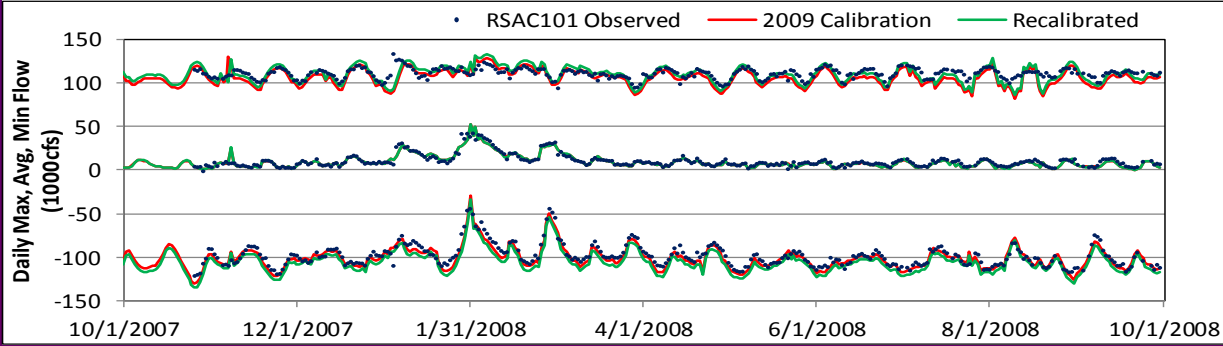
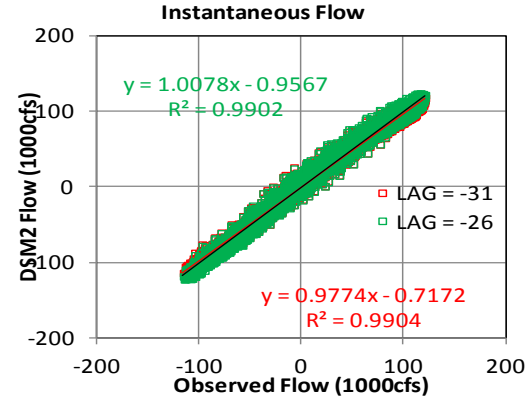
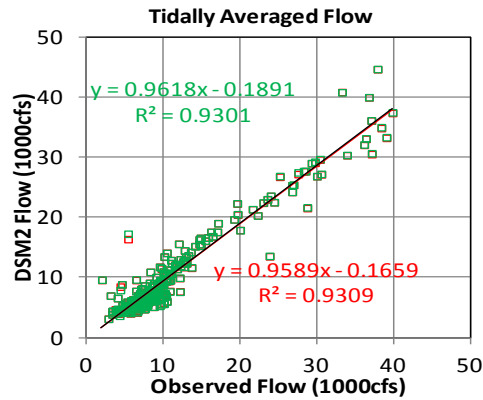
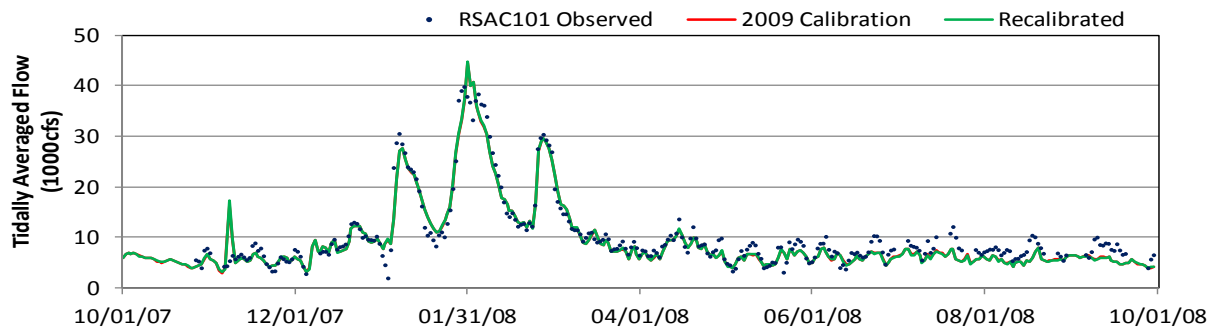
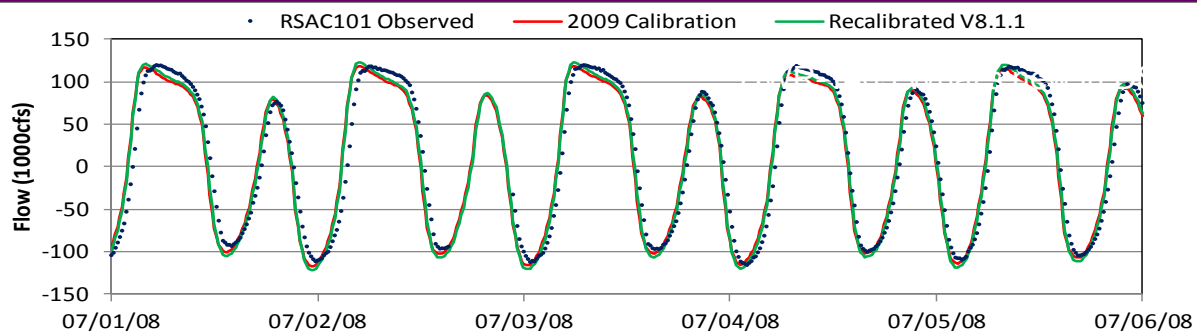
- We tested Hydro 15, 5, 3 min; Tidefile 1hr, 30, 15, 5 min; Qual 15, 5, 3, 1 min.
- The model shows good convergence overall.
- For best accuracy, Hydro/Tidefile/Qual could use 5/15/5 min.
- Recommend using 15/30/15 considering running speed, file size, and accuracy.

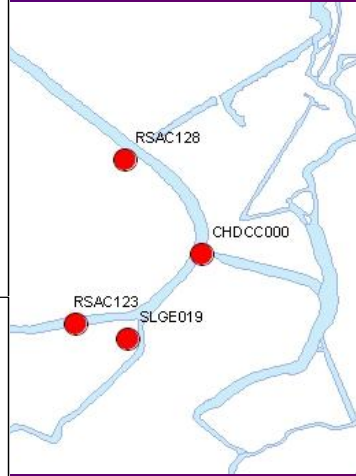
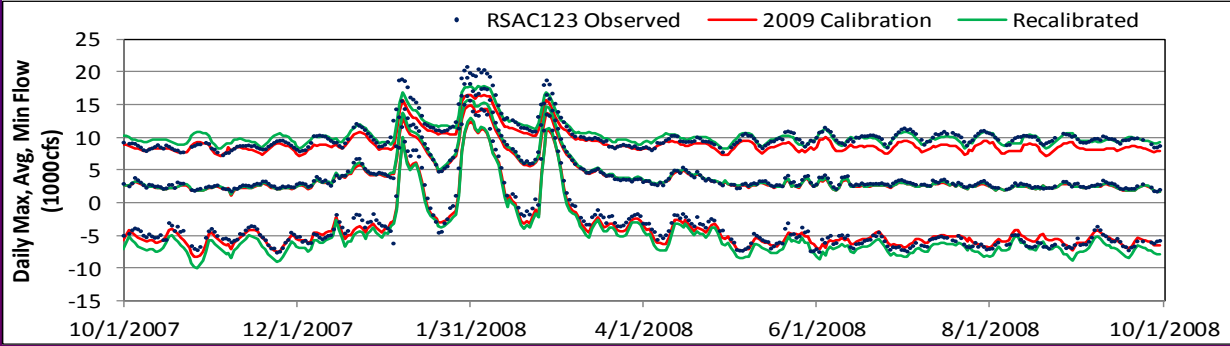
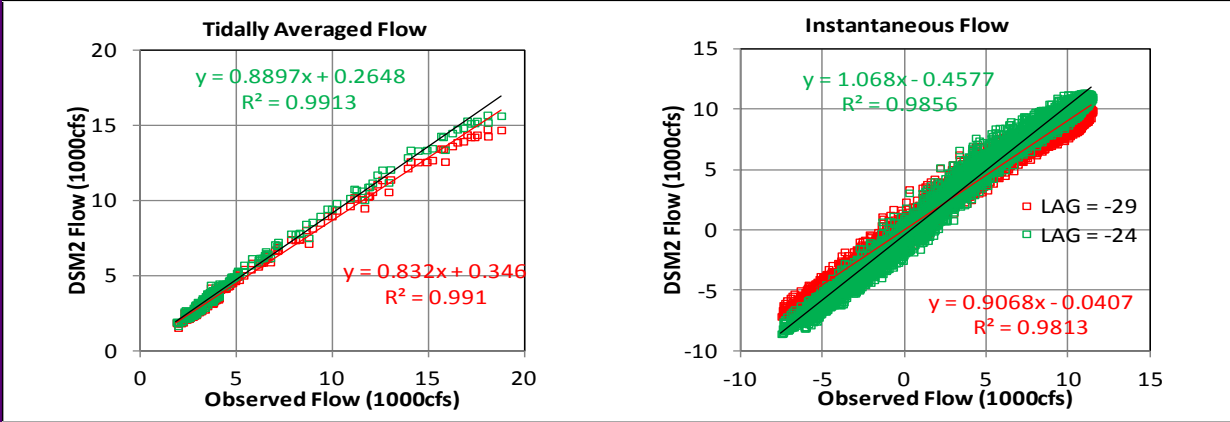
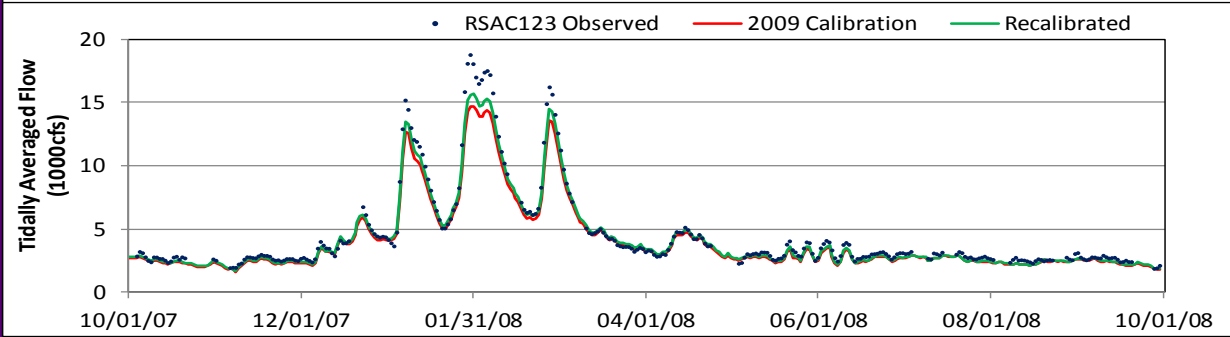
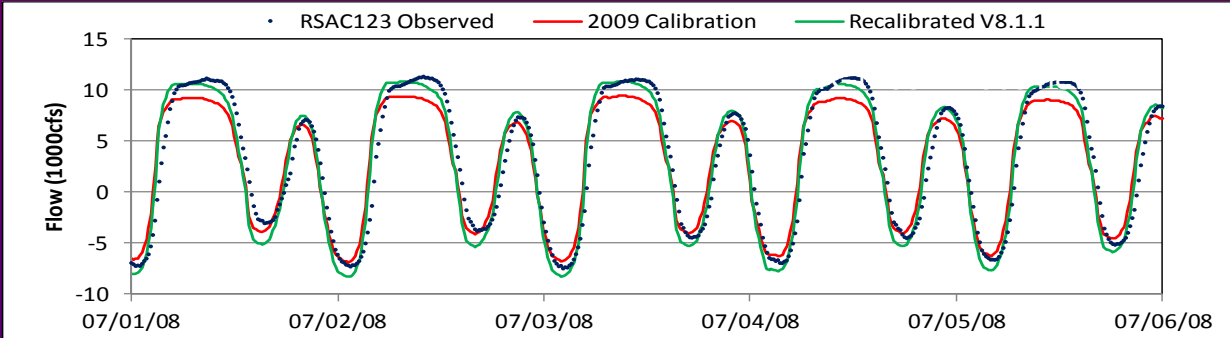


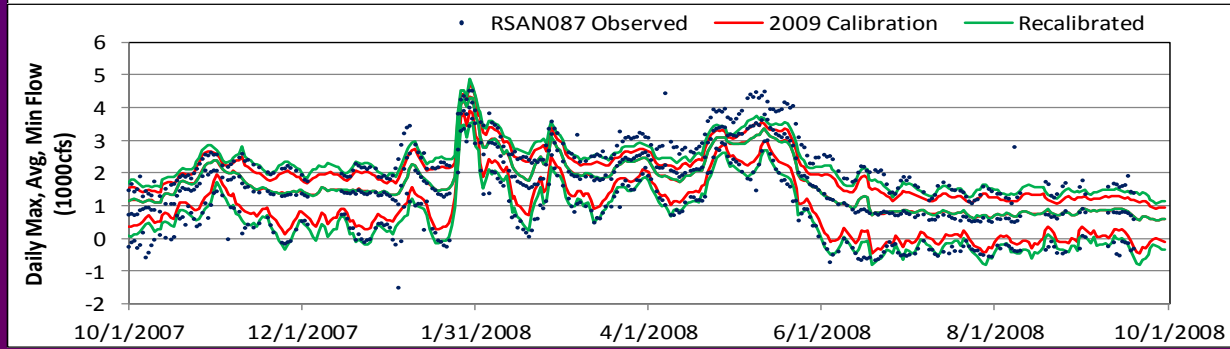
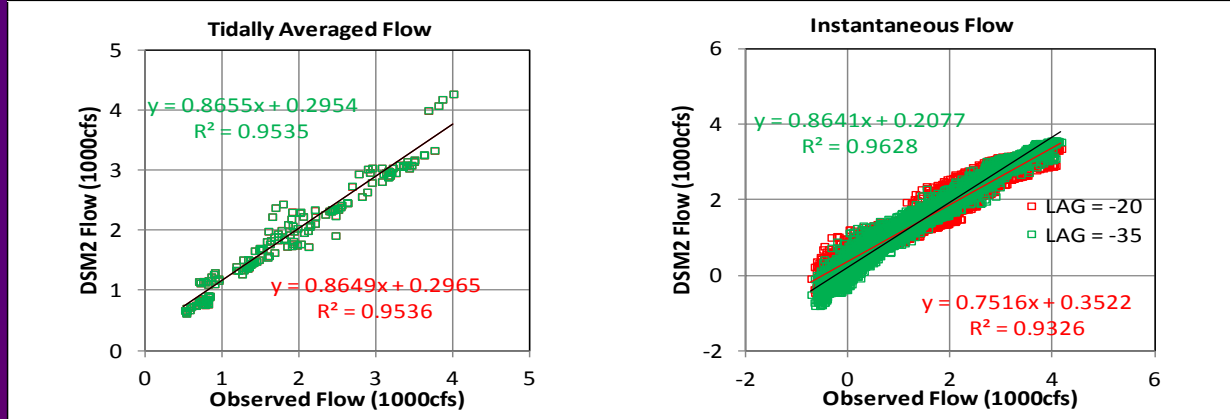
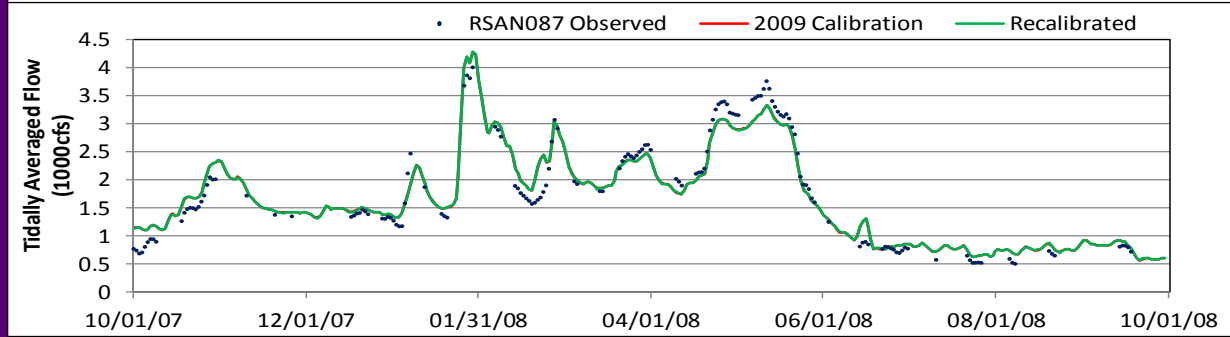
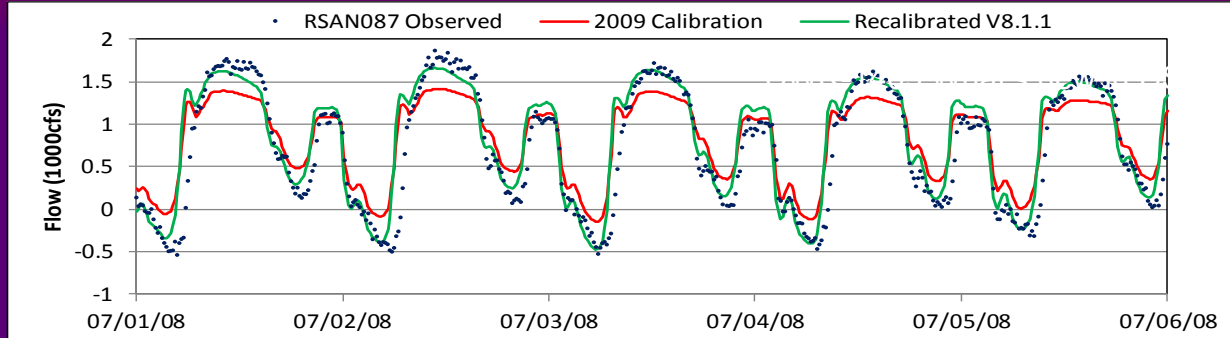


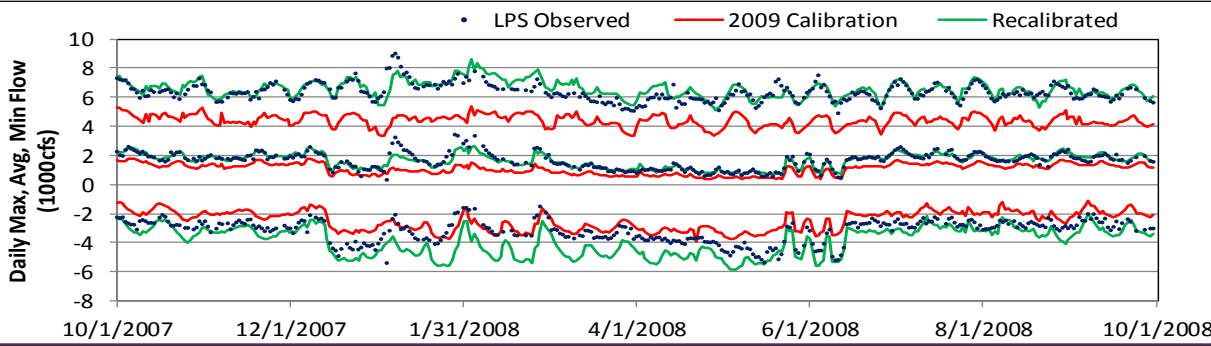
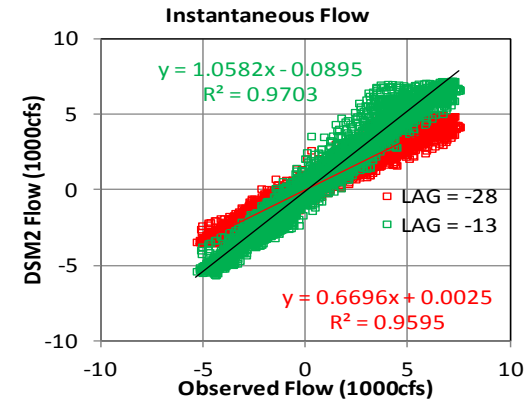
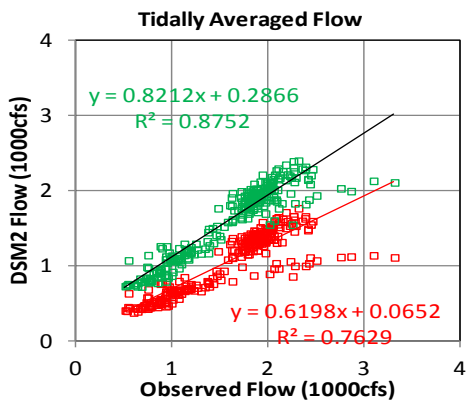
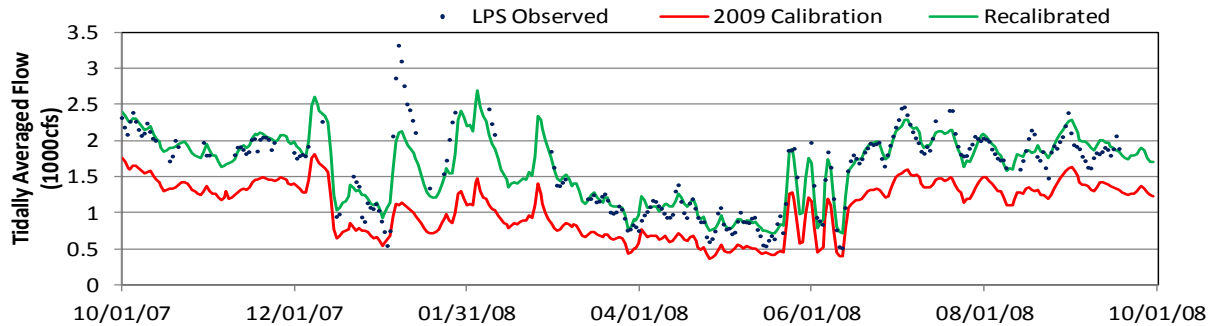
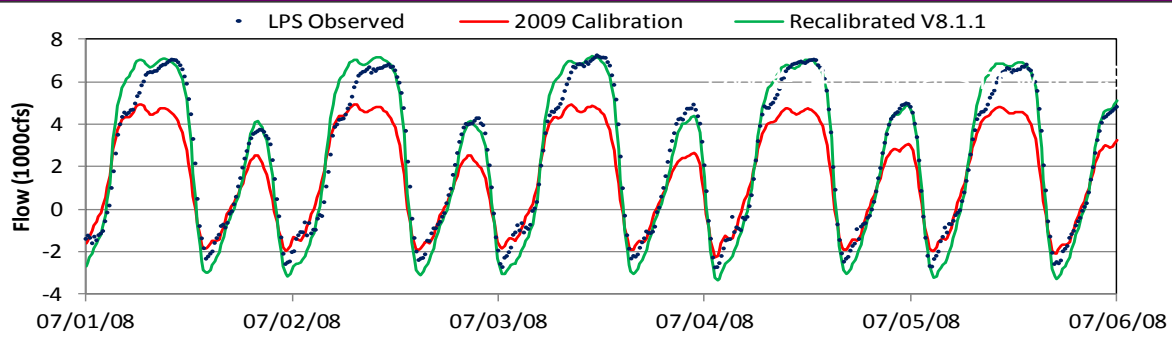
➤ **Hydro Calibration**

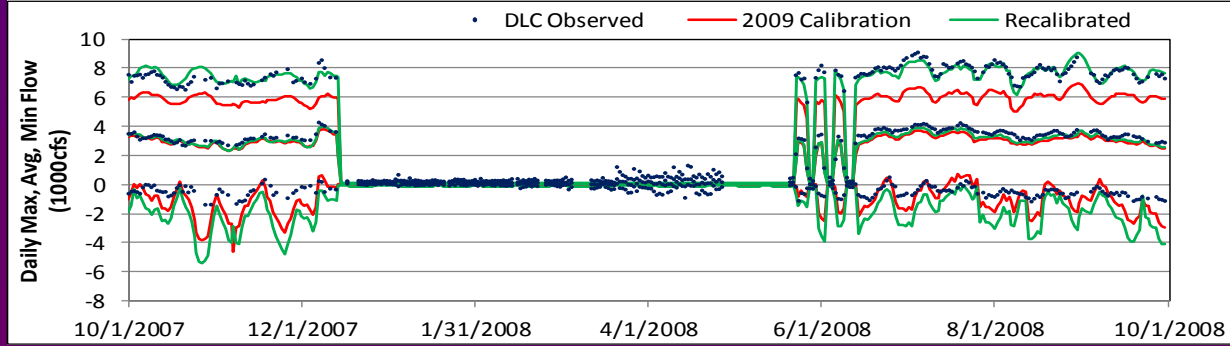
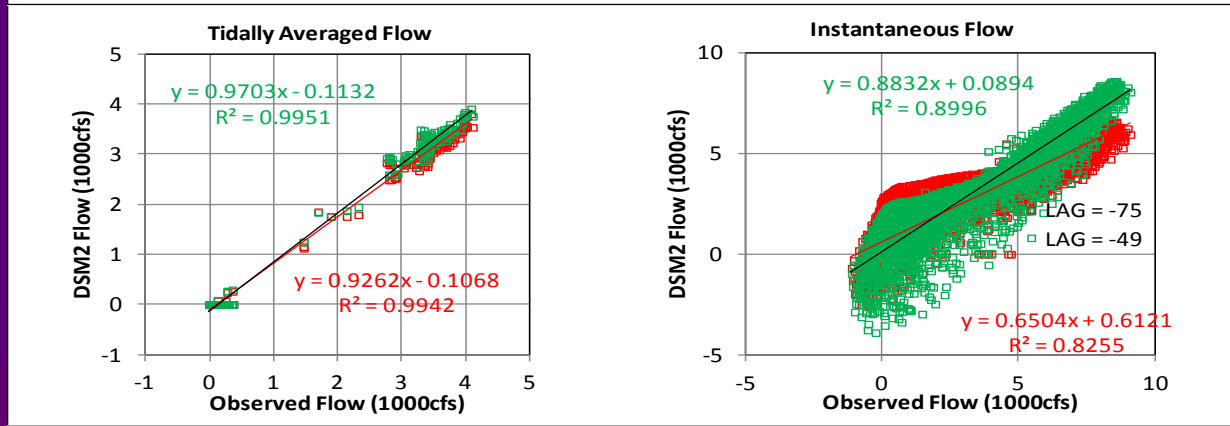
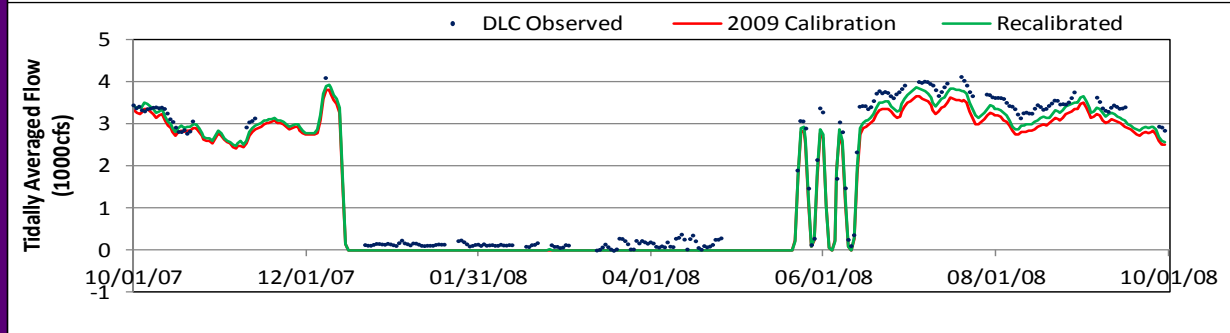
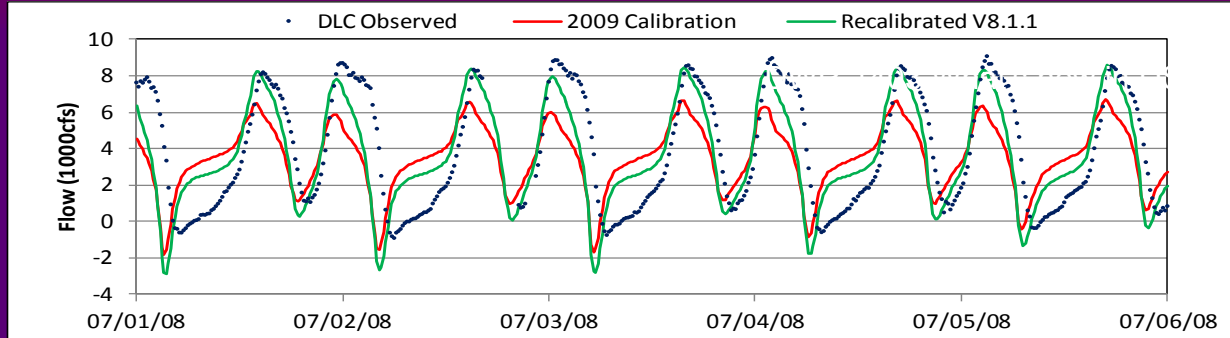
- Based on 2009 Recalibration Grid (CH2M HILL 2009)
 - Hydro calibration period 10/1/2007 to 10/1/2008
 - Validation period 10/1/2001 to 10/1/2002
- Only Manning's n adjusted in this recalibration
 - Adjusted by groups of channels. 26 adjustments/runs were made to reach a satisfactory result.

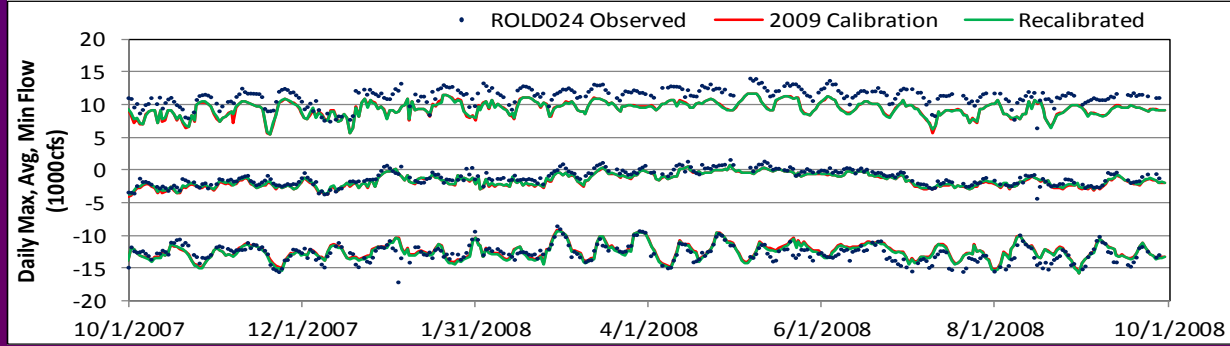
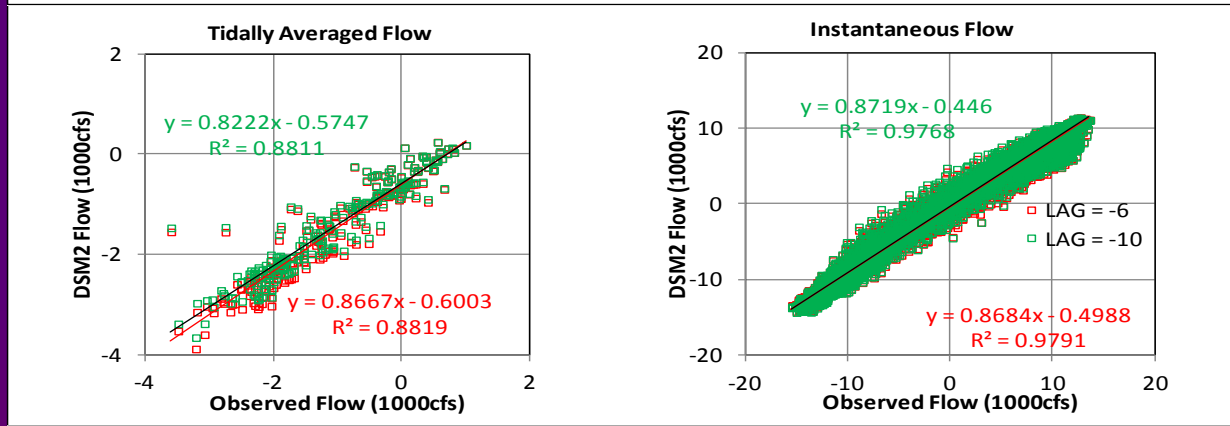
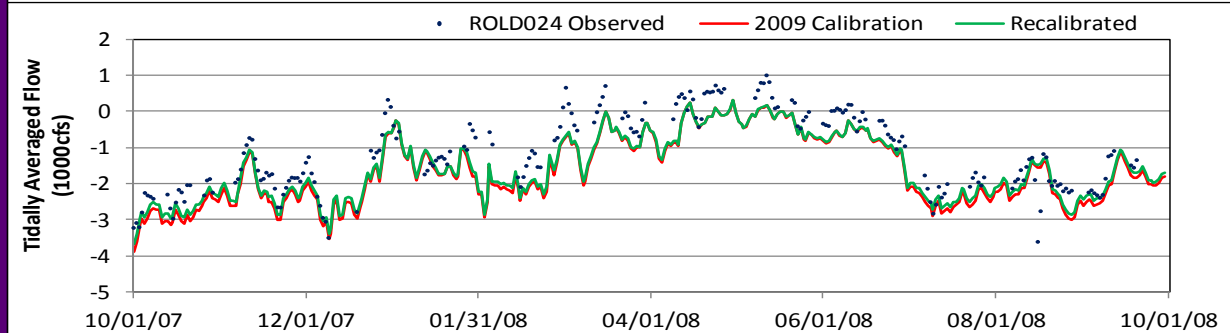
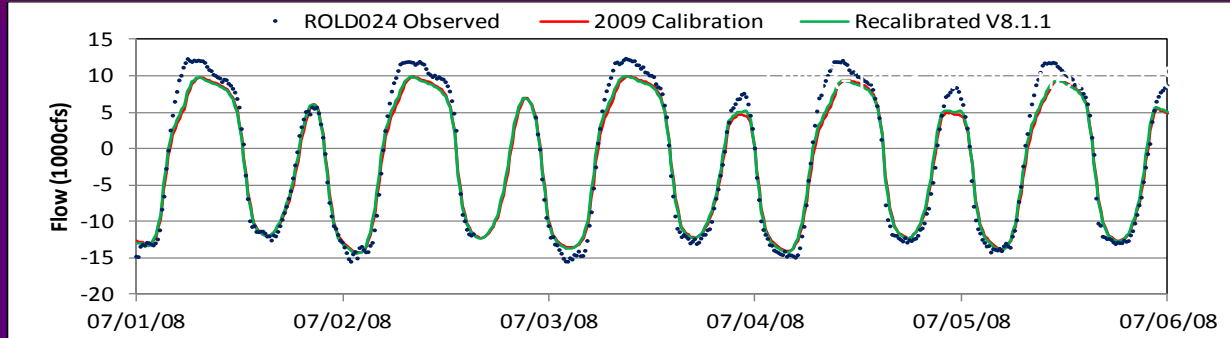


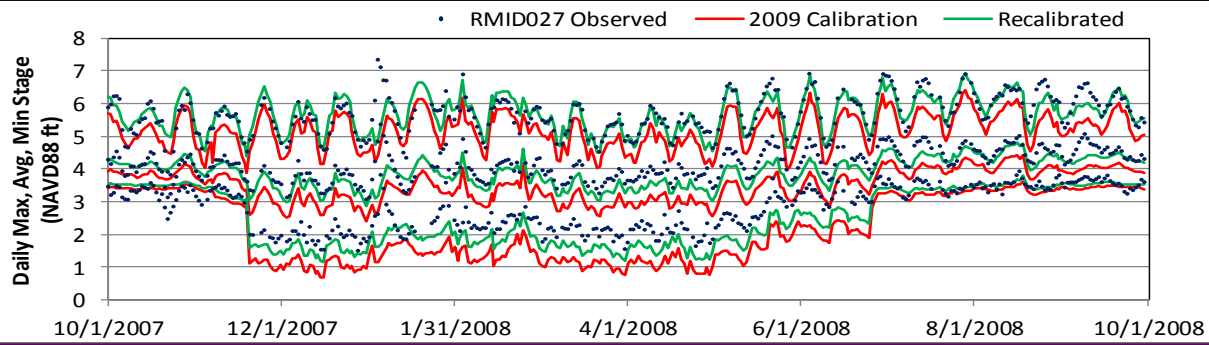
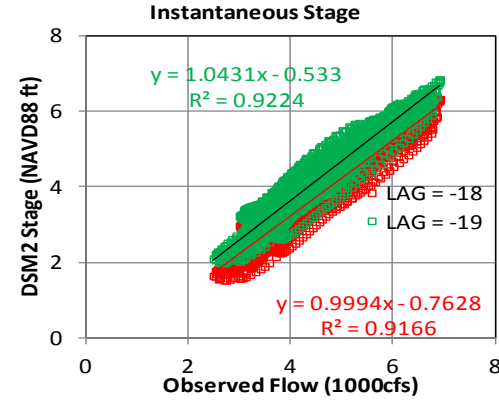
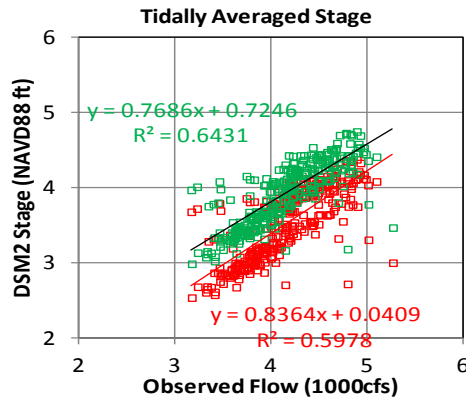
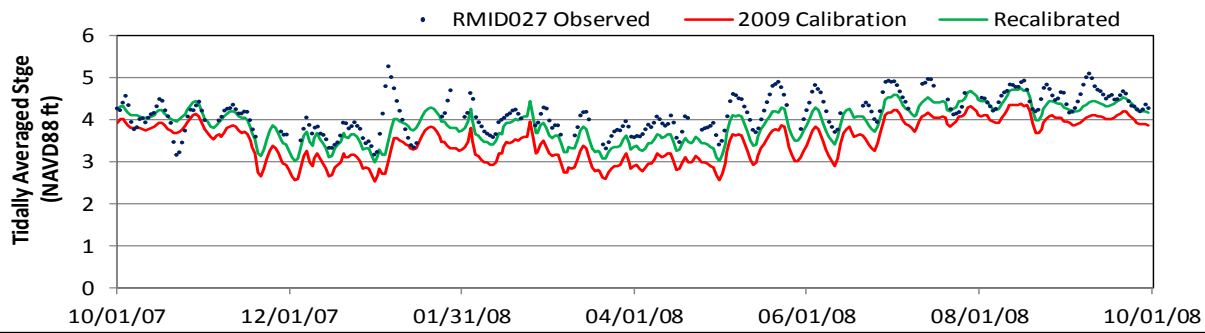
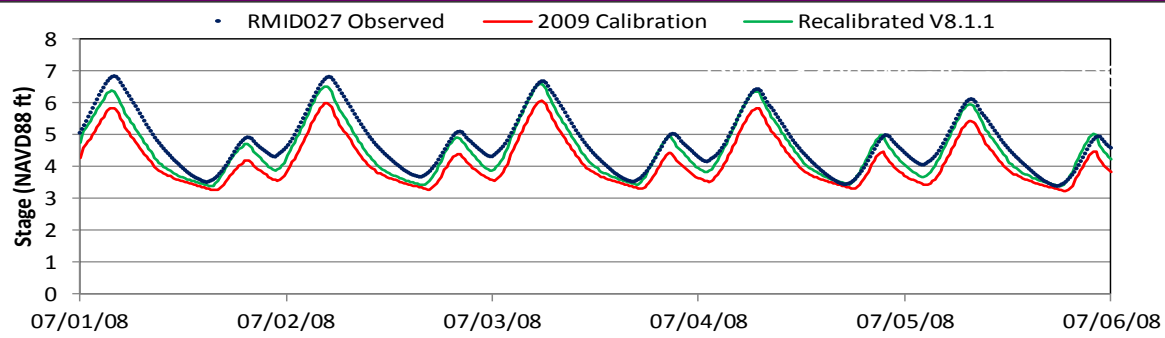


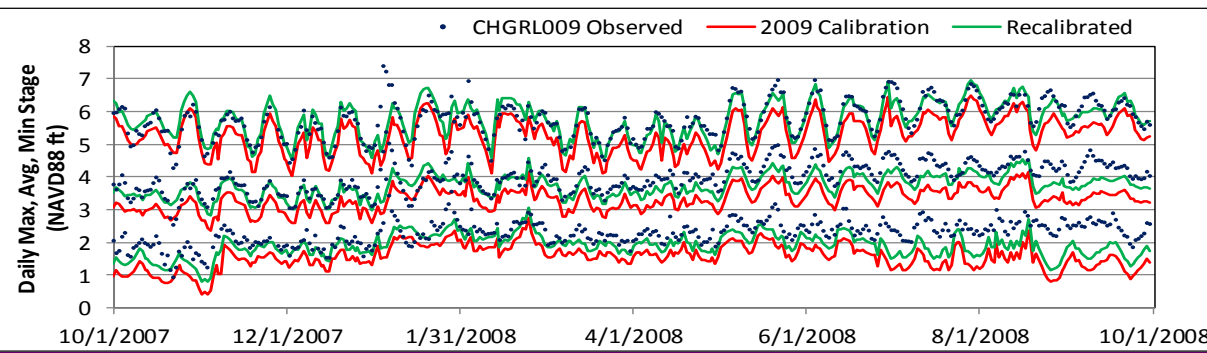
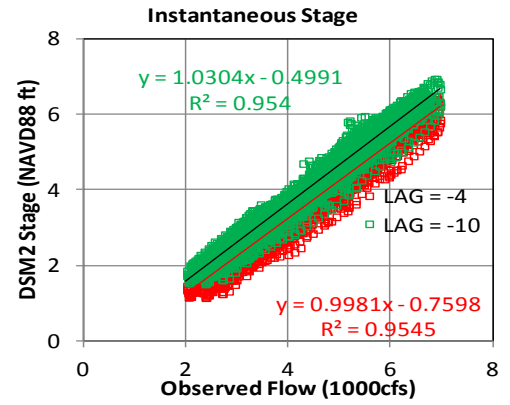
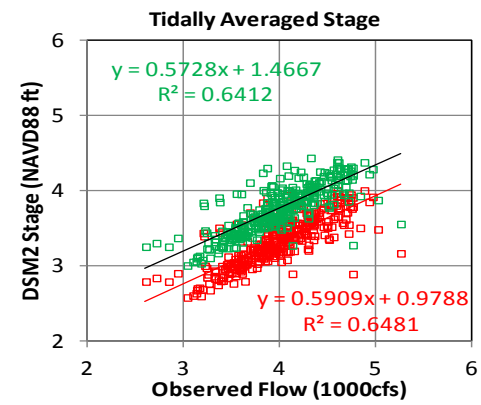
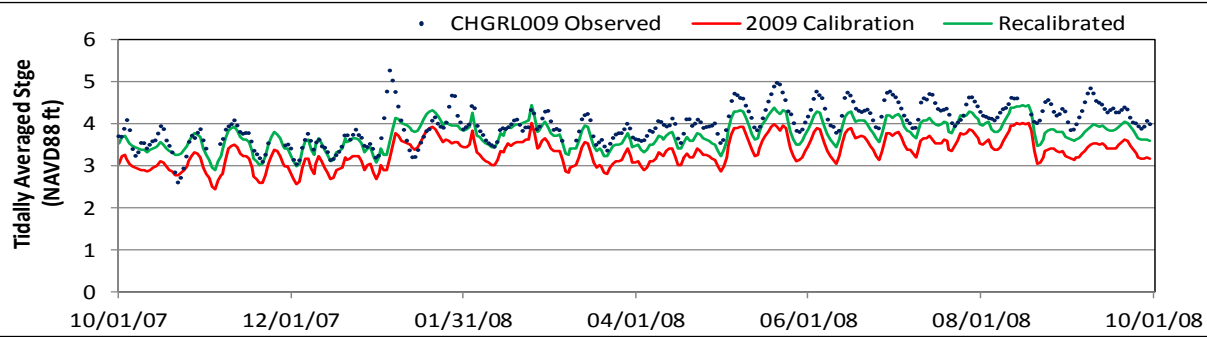
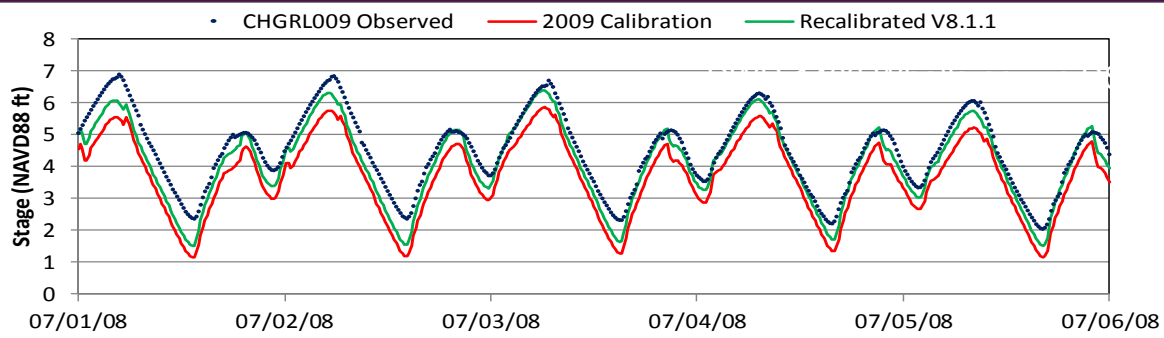






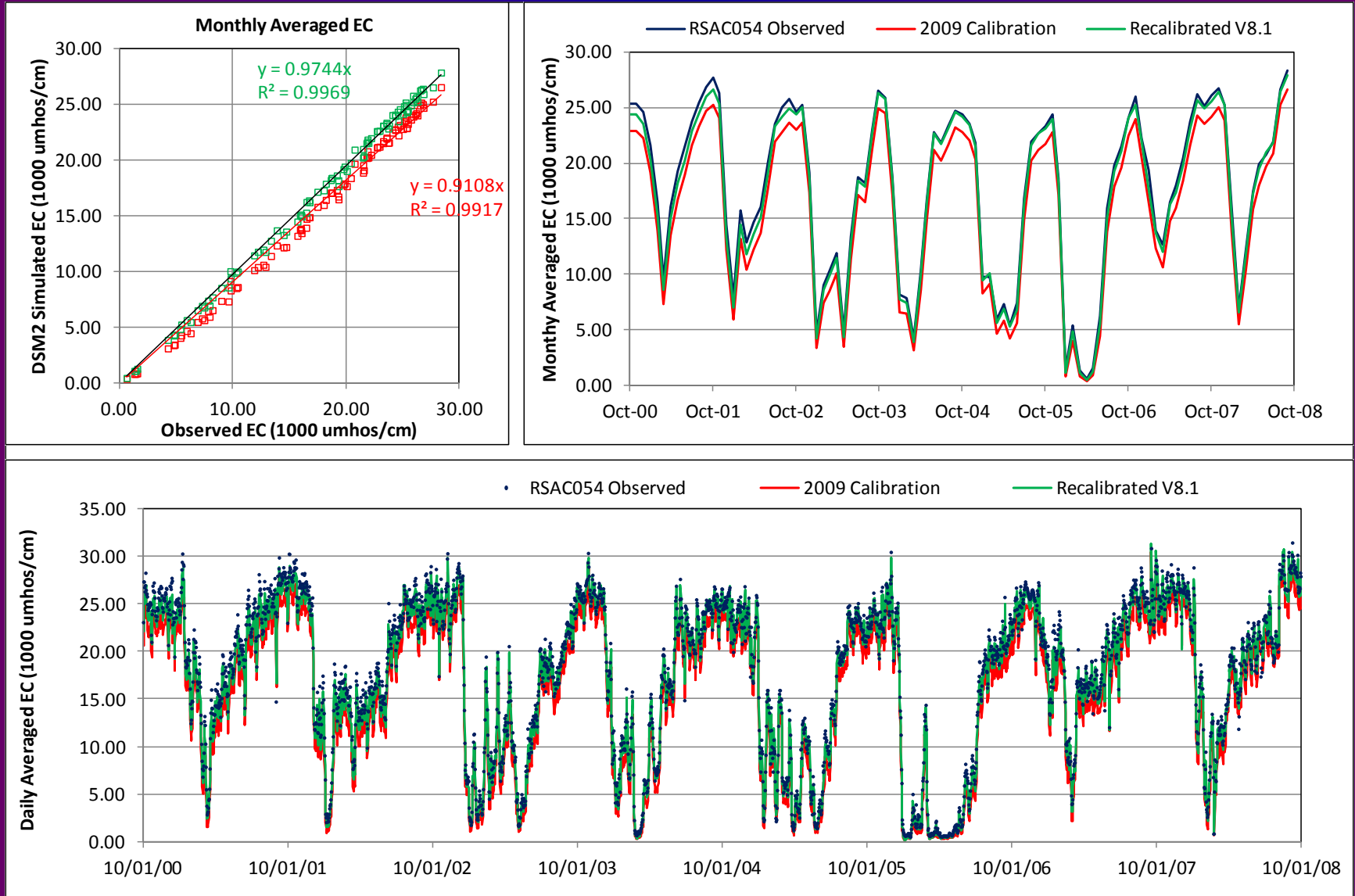


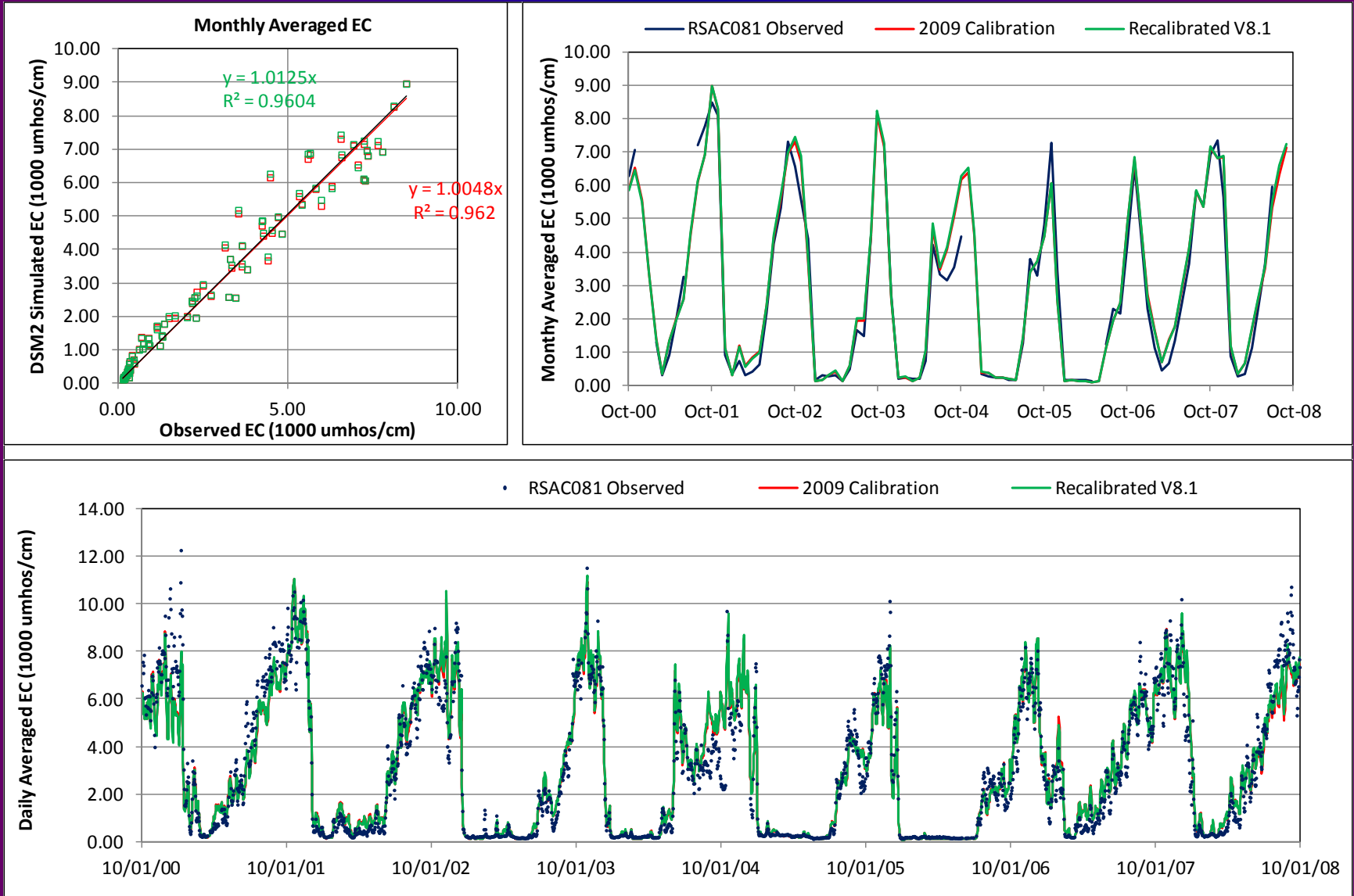




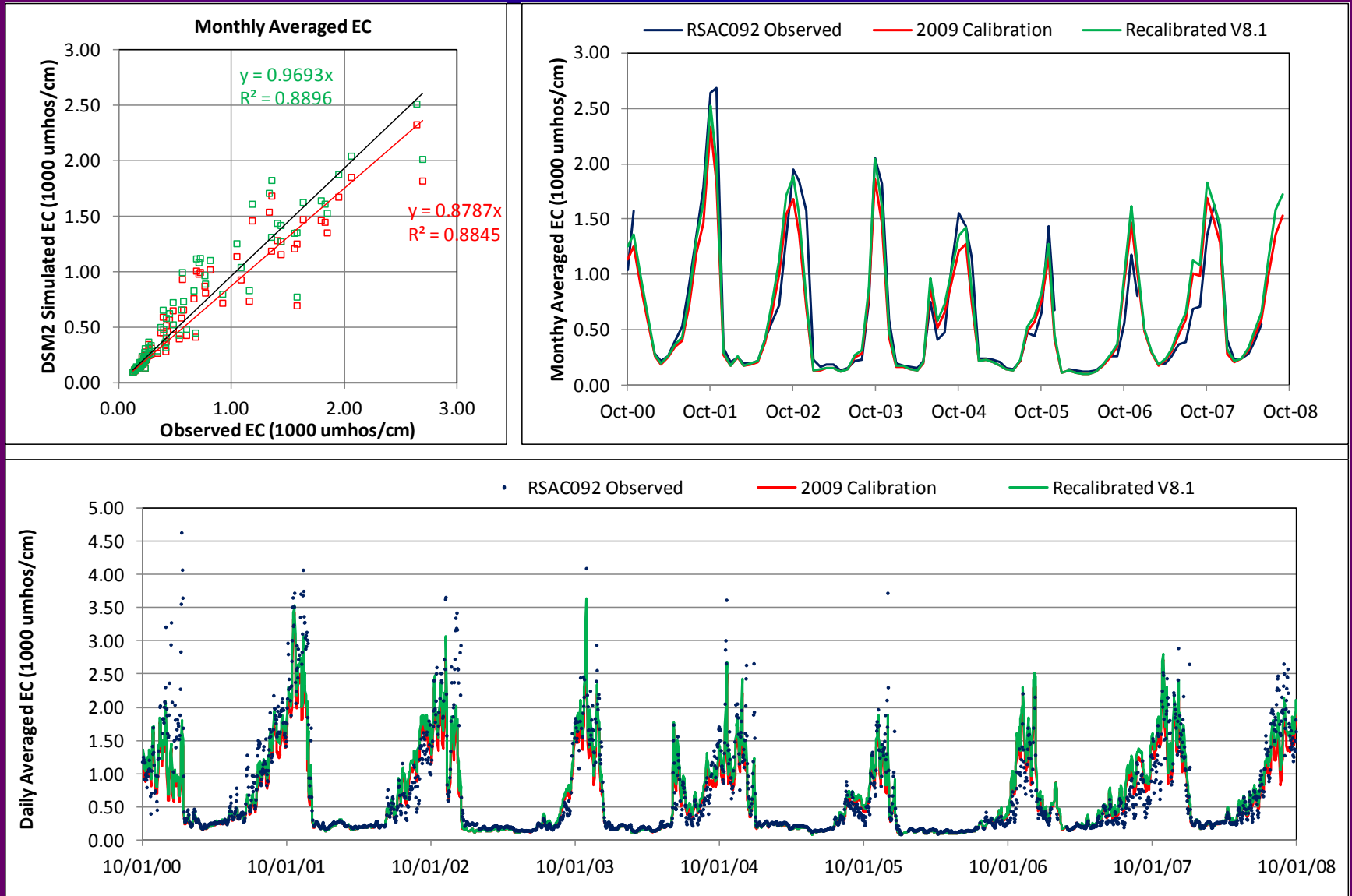
Qual Calibration

- Calibration period 10/1/2000 to 10/1/2008
- Qual time step 15min \ Tidefile 30min
- Martinez Boundary EC using 15min value.
- Based on previous calibration, 7 new adjustments/runs were made.

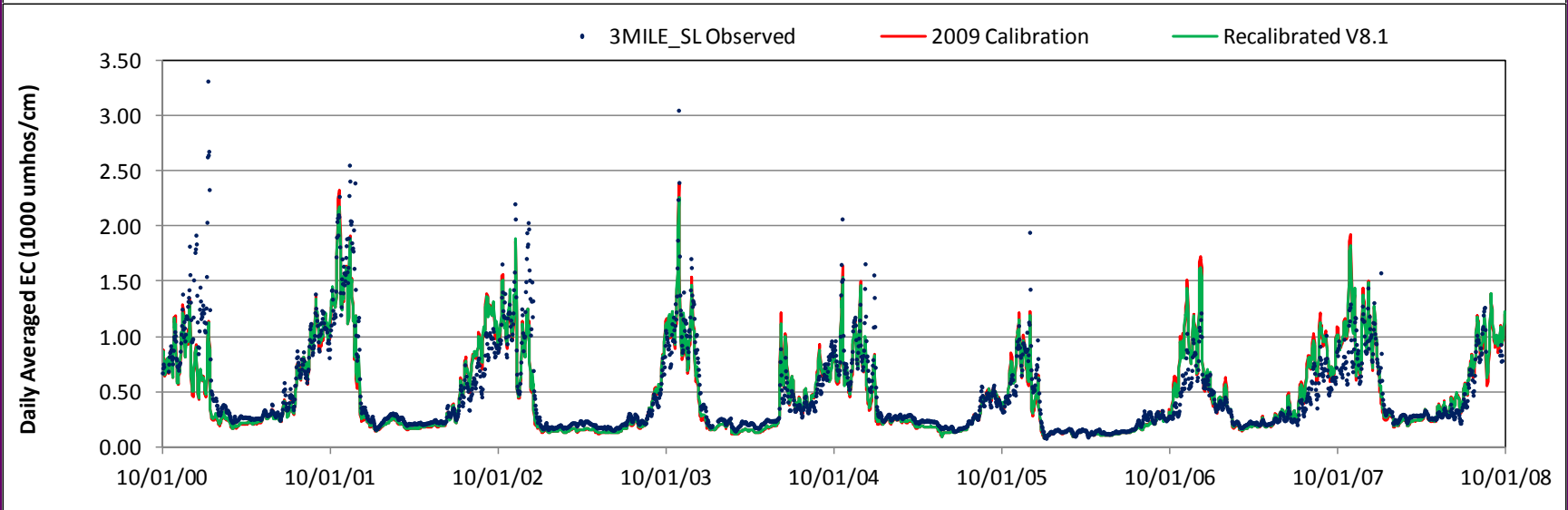
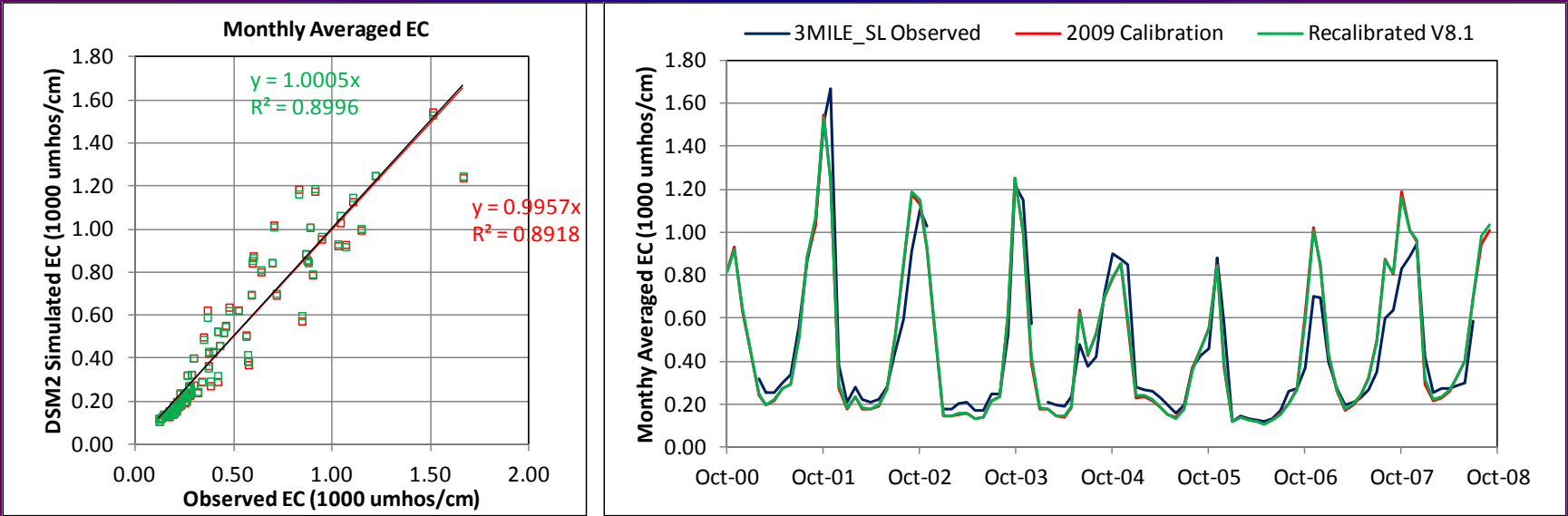


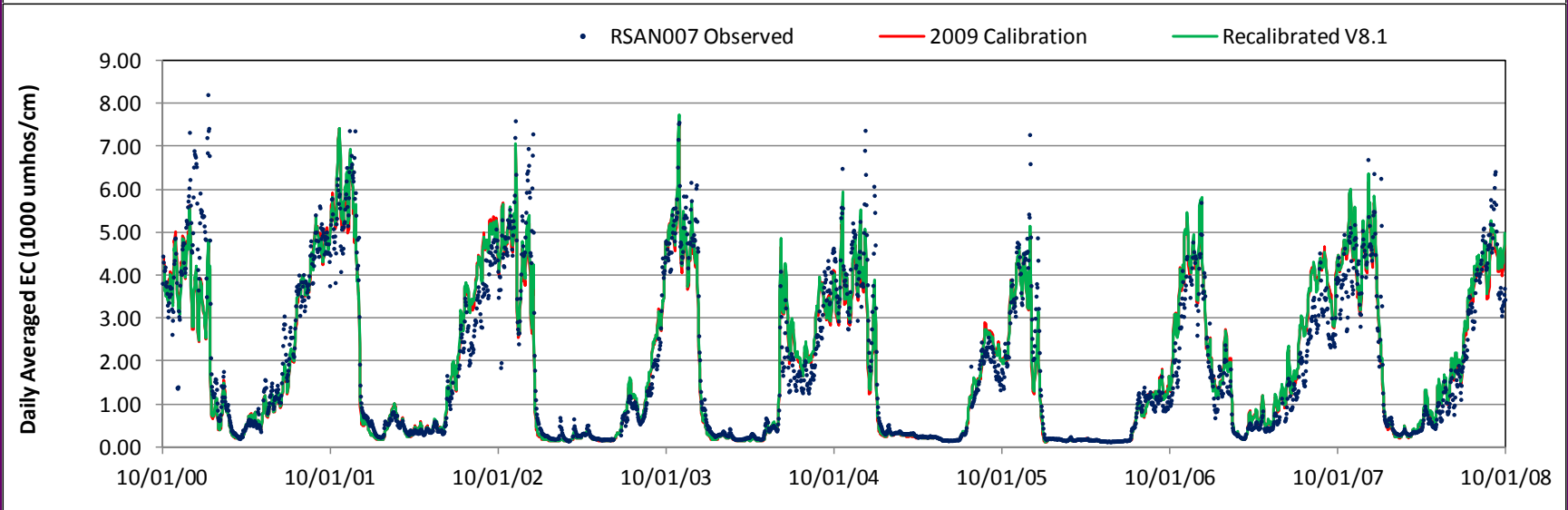
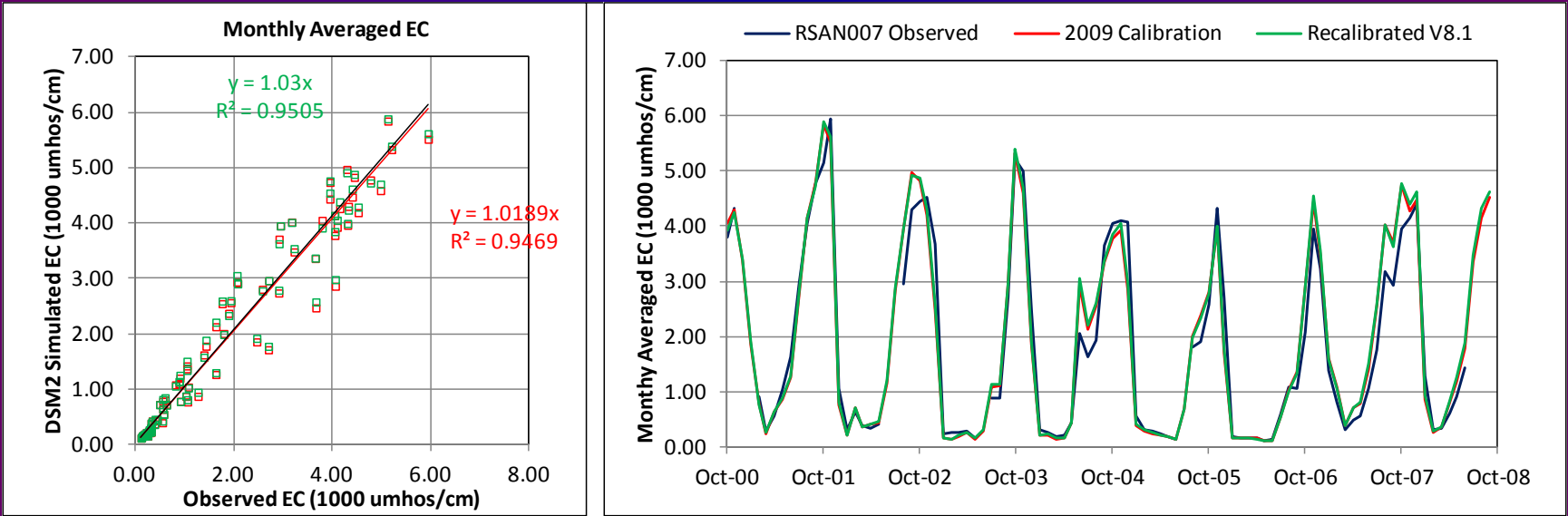


Sacramento River at Collinsville (RSAC081)

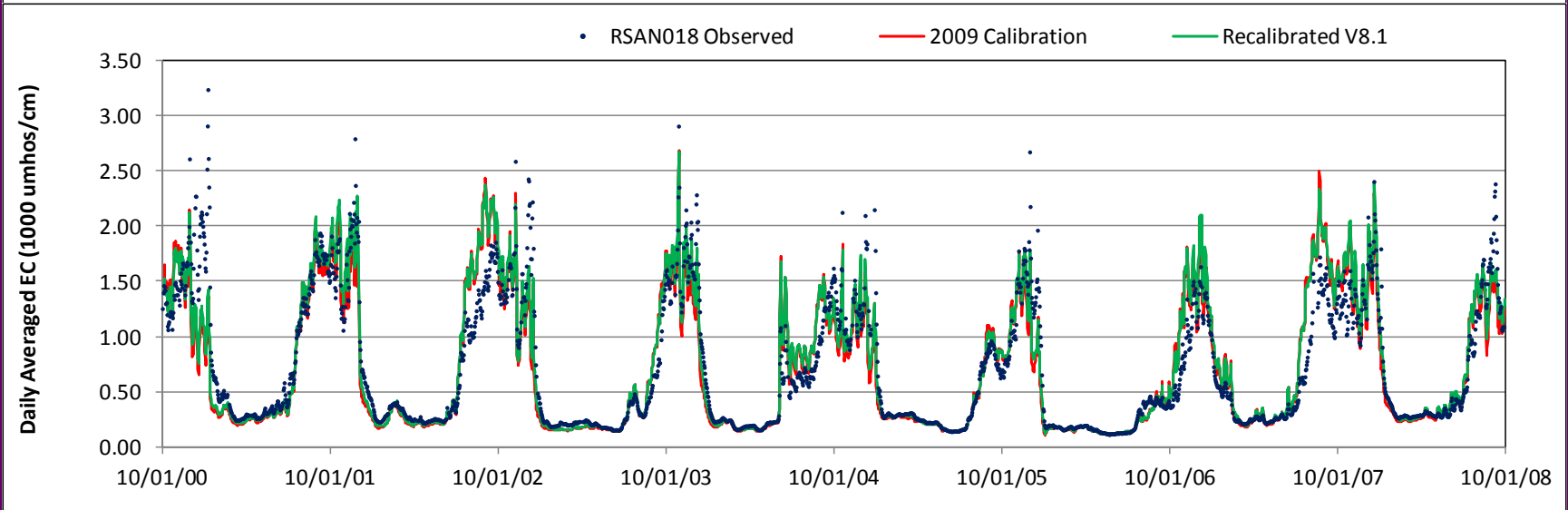
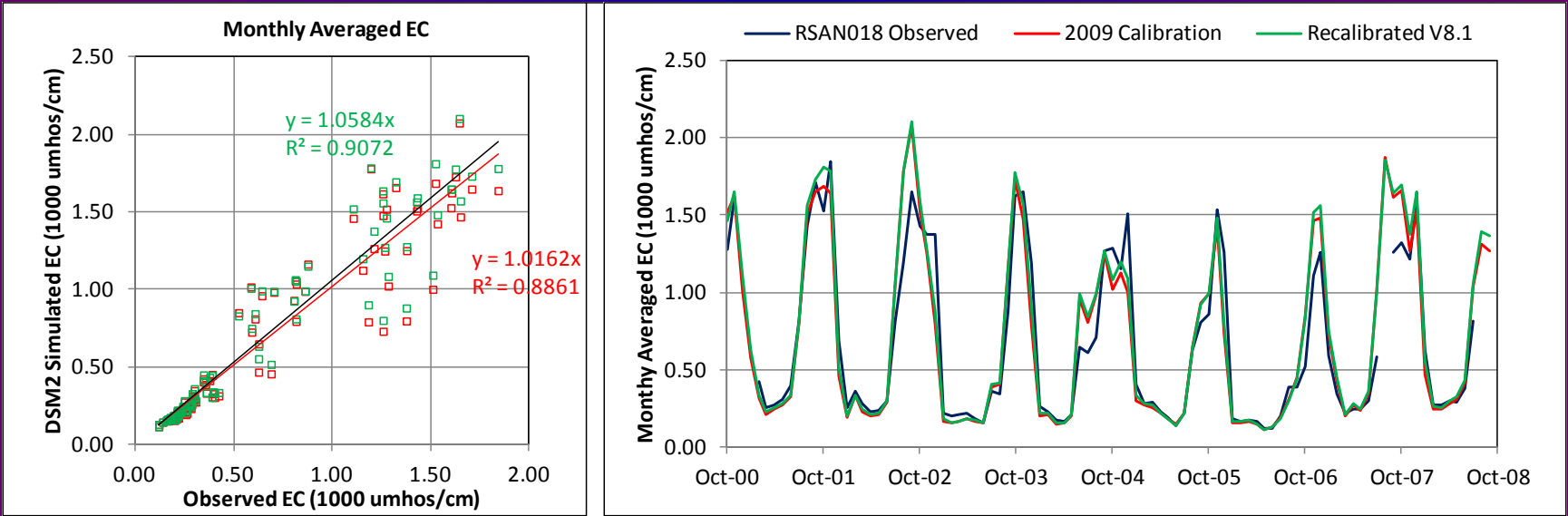


Sacramento River at Emmaton (RSAC092)

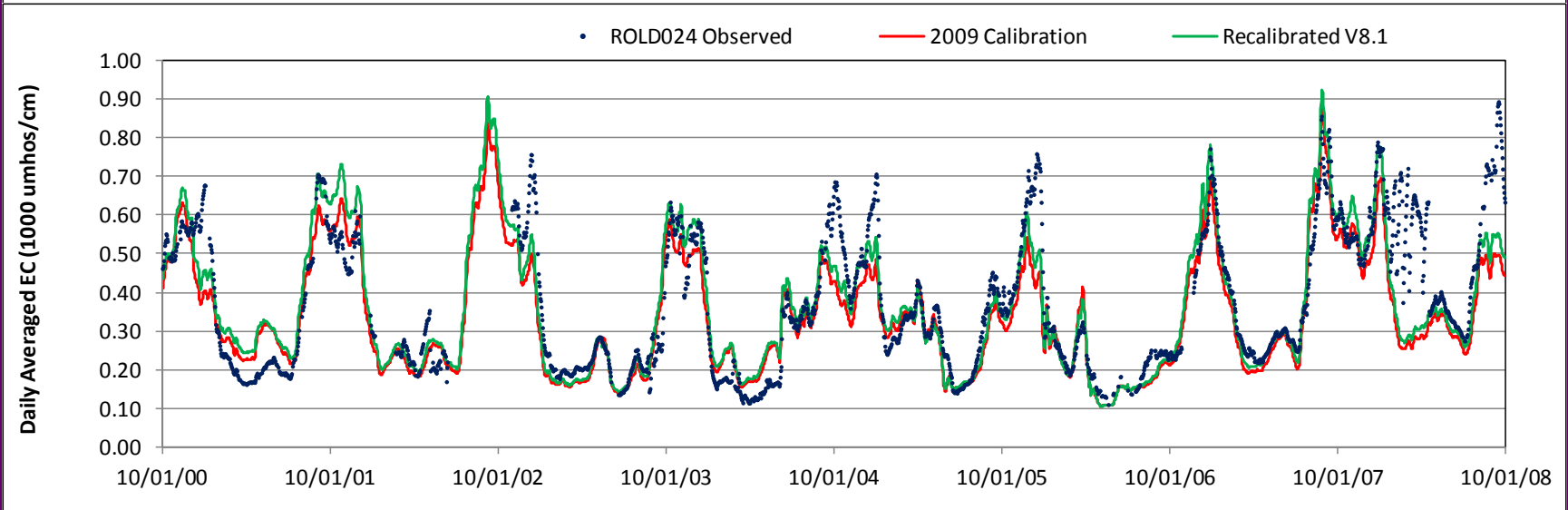
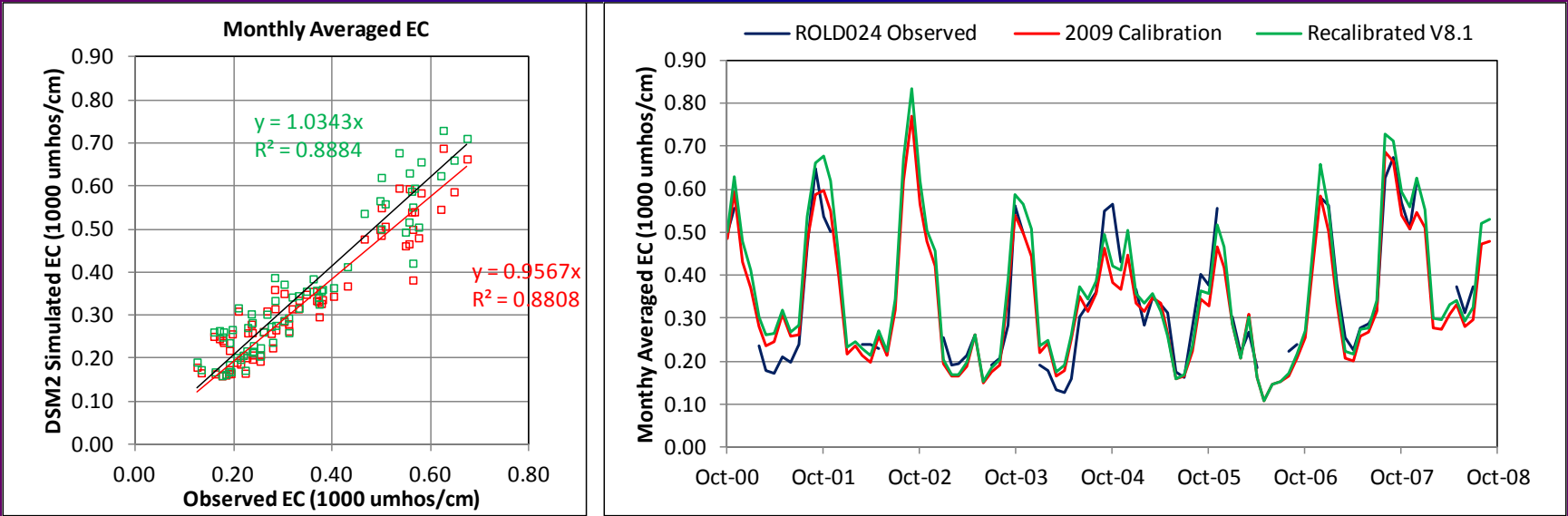




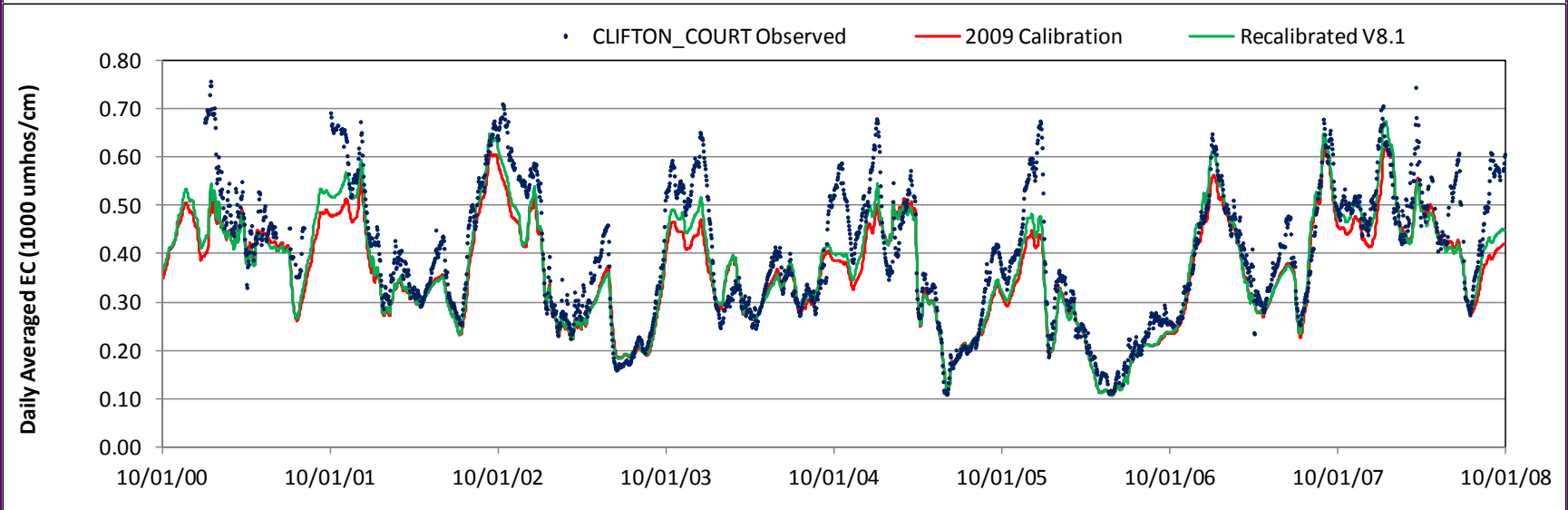
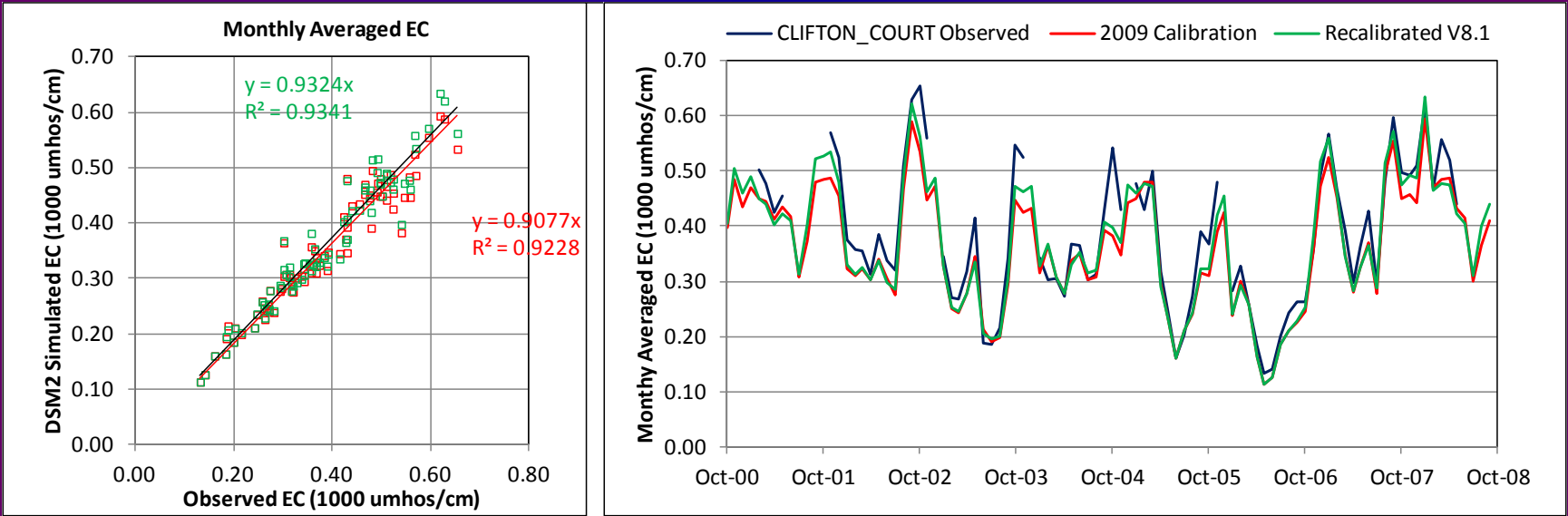
San Joaquin River at Antioch (RSAN007)



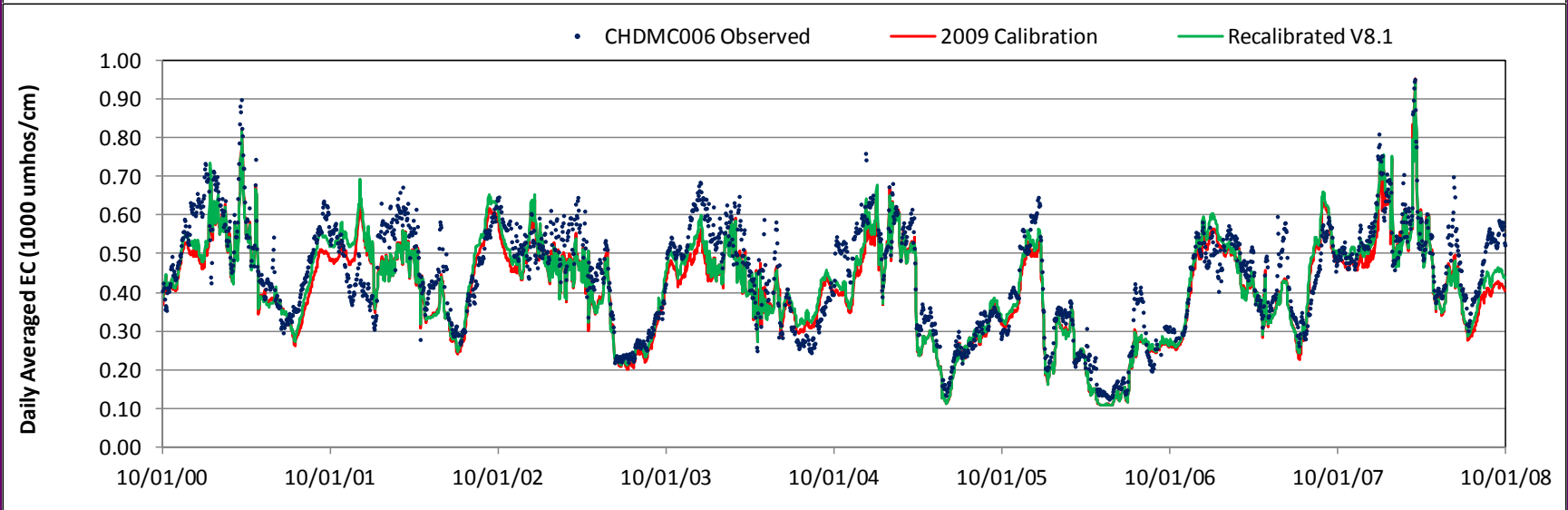
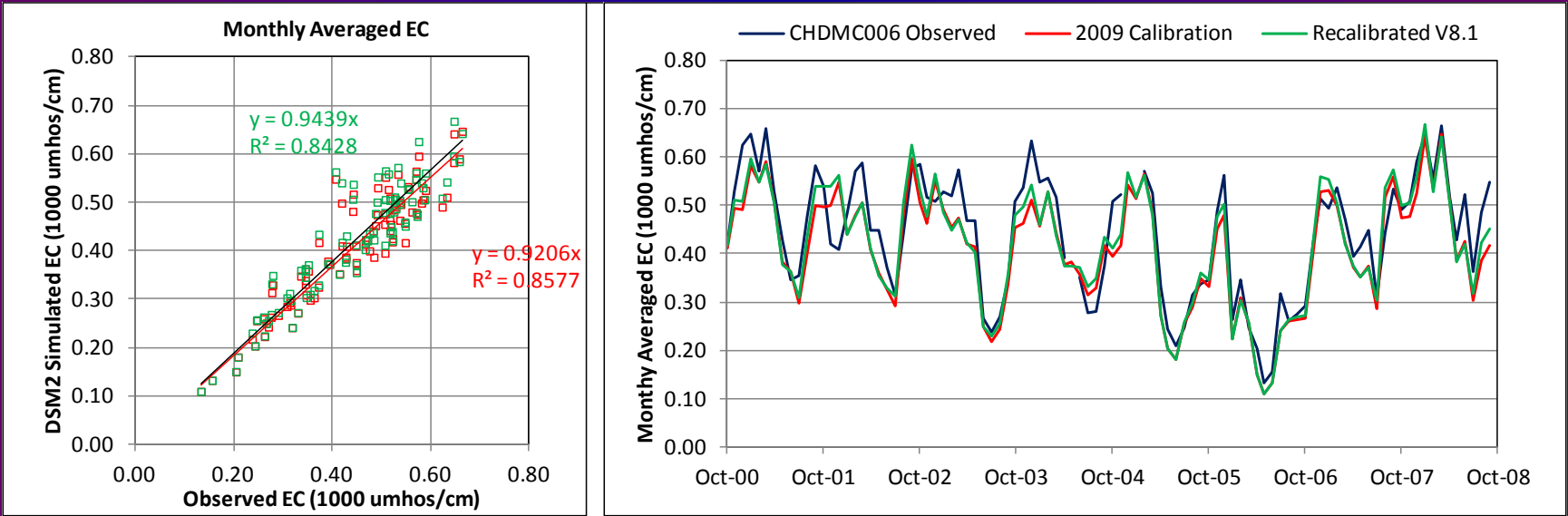
San Joaquin River at Jersey Point (RSAN018)



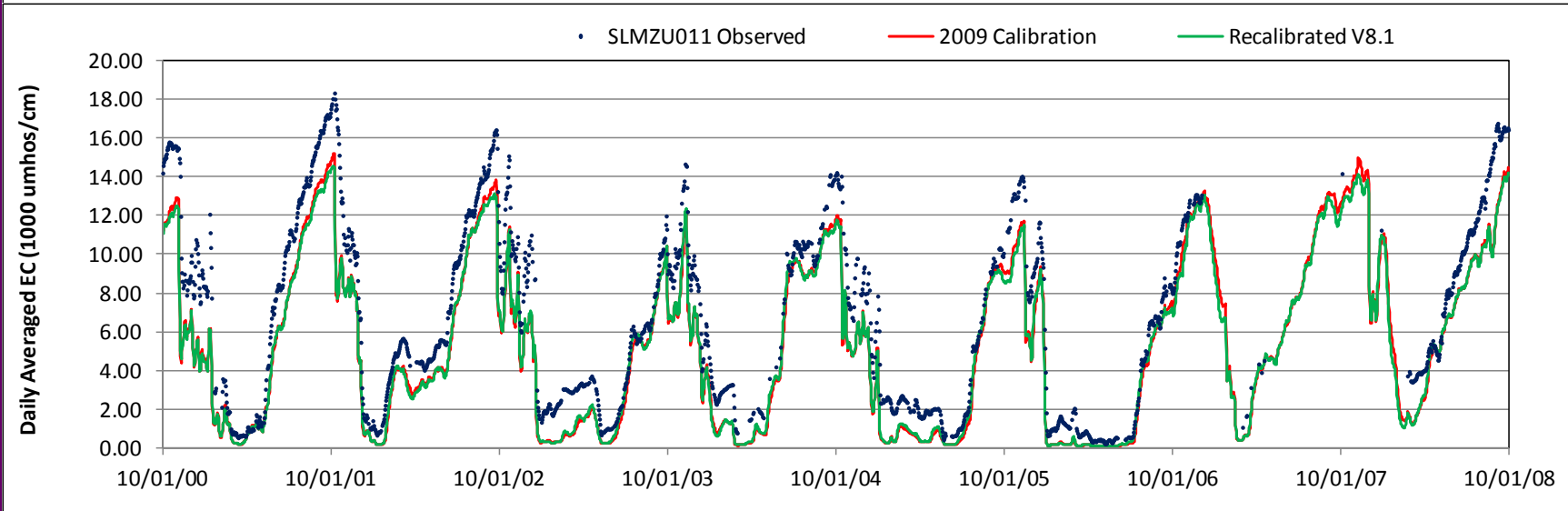
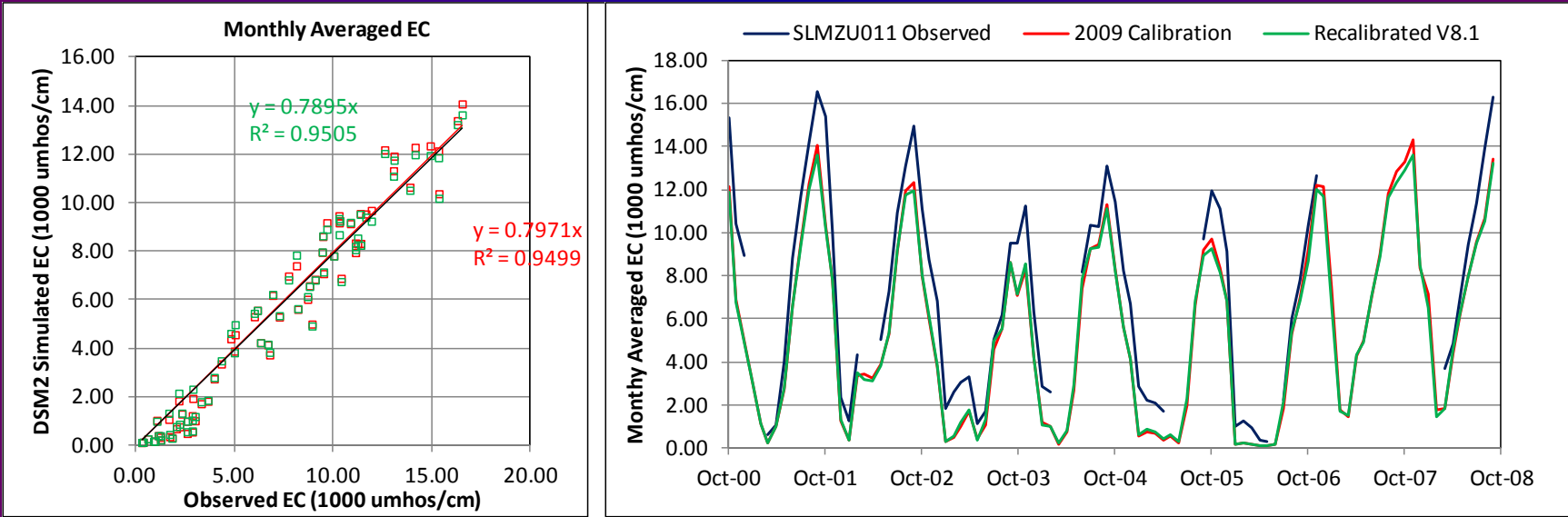
Old River at Bacon Island (ROLD024)



Clifton Court Forebay



Tracy Pumping Plant



Montezuma SL at Beldons (SLMZU011)

Summary

- Modifications in Version 8.1 are tested and working properly.
- Recalibrated Hydro results are very close to 2009 calibration (CH2M), with improvements at a few locations.
- EC results didn't change significantly from 2009 calibration. Some improvements at Emmaton, Clifton Court.

Issues Remaining

- QC Martinez Stage and EC boundary
- Franks Tract area representation / improve flow around Franks Tract and Bacon Island
- Delta Cross Channel flow
- Simulated daily minimum stage tend to be low.
- Simulated South Delta EC tend to be low.

Thank you!

Questions

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