HAUC Meeting
May 18, 2015

(**Attendees: Chad Wagner, Tony Gotvald, Chris Henry, Greg Donley, Andrew Robinson, Geoff Cartano, Jeanne Robbins, David Stillwell, Eric Sadorf, Jamie Marlowe, Phil Habermehl)**

1. Welcome to the new members of the HAUC have been added from Georgia: Chris Henry (Atlanta), Greg Donley (Tifton), Andrew Robinson (Savannah)
2. OSW Policy of Software and Firmware
    a. Per Brian McCallum, HAUC will be the ones to beta test versions of the hydroacoustics software and once the committee gives the OK on a particular version, it will be the Field Computing Group's role to implement the software in coordination with Boyce.

3. Sontek M-9
    a. Noticing that Internal SMBA program in RiverSurveyor Live is not always showing moving bed in field, but then indicating moving bed when processed in the office. Need to be conservative and make multiple moving-bed if in question.
    b. Ramp up comparison measurements in RFO and CFO using latest version of software/firmware. – OSW memo 2013.04 indicates comparison measurements do not need to be made any longer to validate M9; however, need to evaluate M9 measurements, primarily for BT issues. Should try to get a couple more high-stage comparison measurements, when possible.
    c. Compass upgrades for M-9's are ready. RFO has scheduled the return to Sontek; CFO is done, one of AFO's is back and one more now. CFO comparison measurement complete and acceptable, RFO comparison measurements need to be redone. All 3 in SC are returned and have had comparison mmts. All M9's in GA, except 1 in Tifton have been returned (1 M9 comparison measurement made, 2 other M9's still have comparisons to be made).
    d. Raleigh is having communication issues with Parani's after the compass upgrade and update to RS Live 3.8. SC is not having comm issues. Mark will be updating laptops in NC to Windows 7.0.
    e. Intermittent problems when initializing compass calibration, computer will lock up and reboot is required.
    f. Atlanta is having a communication issues with U1000 where water and boat velocity data are not being transmitted to computer, although connection is made. Firmware upgrades have been made and those issues have been resolved.
    g. Atlanta also having GPS problems in 3.8 where dynamic mode is not selectable, Sontek indicates that it is bug in software but not a big push to get this resolved.
    h. Need to make OSW aware of these RSLive 3.8 com issues.
    i. Transformation matrix are different, last row is double the row of the matrix previous to compass upgrade and vertical beam is different.
        i. Upload two transformation matrix files (before/after upgrade) and comparison measurement to Sharepoint.

j. Bad GPS cables causing communication problems need to contact OceanScience about getting cables from their manufacturer. – 6 new cables purchased from Pasternak electronics company have arrived.

4. Measurement Archive
    a. Flowtracker folders are setup, ADCP folders needed for CFO and AFO, Jamie will include this link in email about instrument firmware log to CFO and AFO. – Jeanne will check to see if any additional updates need to be made in the Hydroacoustics section of QA plan. – Put this on hold with the plan to develop a single QA plan for the SA WSC.
    b. Jym will move CFO Flowtracker directories over to RFO_EA server. – Permissions issue and will require Jeanne to move this to RFO_EA server. – Ongoing.

5. Acoustics training for SA WSC staff in FY2015. –
    a. Consider Basic ADCP training for new hires in CFO.
    b. 8+ people from GA, Ben in SC attending Index velocity class in Atlanta in March.
    c. Tony to check on ADCP training needs in GA.
    d. Duke and John to discuss having a OSW Refresher course in SC; Ben, in Conway took basic ADCP in Houston in Jan.

6. Flowtrackers
    a. Measurement review and field notes – John sent examples of AFO note sheets to HAUC to see if we can develop consistent technique and format. – Jeanne will update SW QA Plan to include guidance on reviewing Flowtracker measurements (cross check electronic files with field notes, check temperature data for all sections (.dis file in notepad or use DatView software) and print .wad file output on inside of note sheets). QA Plan will specify that responses to QA warnings are included in acoustic channel notes (SWAMI) and in general measurement comments in SiteVisit. - *Put this on hold with the plan to develop a single QA plan for the SA WSC.*

7. Asheville StreamPros are having communication issues midway through measurements, could be moisture getting into connector, John will continue to debug the issue and report back.- Seem to have resolved itself for now, but keep an eye on it, may have been related to low-battery and water getting into communication housing. John will try to keep notes on what sites this issue is occurring and see if related to radio interference.

8. Losing power on another StreamPro in AFO and might be related to corrosion in battery compartment, Bill working to clean things, but might need to send in for repair.

9. Registered for Hydroacoustics webinars on May 27 - Hydroacoustics Open Forum– Tony to submit M9 issues from GA and Jamie will submit a summary of NC issues to Mike Rehmel before the Forum.

10. Wading measurements with ADCPs - we need to include guidance in QA plan the specifies the need to have some well thought-out and valid reasons for wading with an ADCP at a specific site, and need to document the specifics for that site. If it is safety related for a specific site, it seems it should also be documented in the site hazard analysis in SIMS.

    a. Geoff will follow up with Steve to see if he checked and corrected, as needed, any miscoded wading measurements. Geoff will also check on those from Patrick and Sean. – Ongoing.

11. Brad has noticed the last section is being applied to next to last section and last section is dropped and next to last section width is increased accordingly when using TRDI SxS Pro software.
12. 1-min velocity data will be loaded as EDL and average used for the Primary record. Tony will confirm this procedure is ok during IV training in Atlanta. – Tony and Geoff confirmed from Kevin Oberg that the policy is to load the 1-min data and have 1-min Qs computed. Geoff will email Kevin a screen capture of the 1-min variability from Tar River at Greenville as an example of why we think we need to load averaged data into ADAPS at times. – DONE, no response from Kevin. Geoff will forward this email to Mike Rehmel for discussion during the Forum Webinar.

<u>Index Velocity Sites</u>

13. Check with Doug Walters on inventory of IV equipment in NC and check budgets to see if we can purchase two 1500kHz Sontek SLs and potentially trade-in a 500kHz unit.
14. Little TN at Franklin – to evaluate the cause of diurnal variation in discharge, consider doing a long-duration series of measurements to confirm if discharge is really changing or function of noisy SL instrument. Try to use RioGrande in Mode 5 or 11 for low-flow measurements. – DONE. John will discretize measurements into smaller time periods and compare to 1-min velocity data to see if velocity fluctuations match discharge variations. – DONE.
    a. Continue to use Rio Grande in Mode 11 for measurements and make longer duration measurements when possible to compare to index velocity variability.
    b. Measure cross section and check stage-area rating. - DONE, cross-section did not change; however, determined that initial stage-area computation was done incorrectly. After redoing, the rating does not need to be multi-linear.

15. Tar River Greenville
    a. Still a long-term plan for installation of 3-beam unit at this site.

16. Neuse River @ Ft. Barnwell
    a. This site is priority for installing a functioning 3-beam ADVM.
    b. Need to check new stage-area rating and see if notes can be found on where/when it was measured.

17. New River @ Gum Branch

18. Pasquotank River at South Mills

19. Haw River below Jordan and near Moncure
    a. Geoff will check on status of levels at new gage location to compare with original gage. – Levels have been run at new gage, need to compare to original gage to check slope. – Checked lower gage and datum is 0.4ft higher than the upstream gage (155 vs. 155.4). Need to run elevation to the upstream gage.
    b. Review Jordan Production spreadsheet at low flow periods and associated Deep River flow record to determine if there are operational differences between noisy velocity periods (late Jan - mid-Feb)and more constant periods (late Feb, early Mar). - Curtis as done this analysis, it has not been reviewed by Jeanne or Geoff yet.
    c. Continue to evaluate shift in cell average. – Cells 5, 6, and 7 are being used now after further review. Need some additional low-flow measurements asap to evaluate a compound linear rating break at the lower end (around 0.7ft).

20. Cape Fear Lock 3
    a. Need to evaluate bridge status at Tar Heel and make measurements near that location. – Done. Chad following up with NCDOT about status of new bridge construction. – DONE, bridge will be complete in early 2016.
    b. We will continue to use existing gaging station location until new bridge at Tar Heel is complete.

NEW BUSINESS

1. SAWSC Standardized Index Velocity worksheet.
2. Loop rating sites, Index Velocity?
3. "Reward if found" stickers and GPS beacon on tethered boats.

Next Meeting - Monday, June 15th @ 9am