Minutes from CHPS Meeting Thursday January 20, 2011

Attendees:
ABRFC – Eric Jones, Mike Pierce
CNRFC – Pete Fickenscher, Chris Mayo
NERFC – Rob Shedd, Alison MacNeil
NWRFC – Harold Opitz, Joe Intermill
NOHRSC – [absent]
Deltares – Edwin Welles
OCWWS HSD – Dave Riley
OHD – Pedro Restrepo, Jon Roe, Chris Brunner

Pre-reading:
   o   Support Log sent to chps_ops on January 20 by Dave Riley

1. Support Log health check

   •   NWRFC: investigating a new problem which occurred during the most recent event, involving a large backlog of approved forecasts; sometimes they were delayed by 2-3 minutes, sometimes 5 or 7 minutes. At least one WFO remarked on the delay. When we have a better understanding of the issue and gathered more info we'll log it on chps_ops.
   •   NERFC: still on track for full operations on Feb 1. We are holding a meeting next week to discuss/confirm. All blockers are now cleared. We have an FFG patch from Lee to test. The historical events configuration which caused problems for Unit-HG mods is on hold (original configuration reinstated). The occasional blanking out of Unit-HG mods screens still occurs periodically but is tolerable; Andre has a patch but recently hasn't been able to reproduce the problem and so can't test the fix; NERFC will test it for Deltares. Deltares said the original implementation of Unit-HG mods was flawed; the planned approach for Rating Curve mods at NCRFC will be also applied to Unit-HG mods as the long-term solution.
   •   CNRFC reported at the HIC meeting that they were 50% operational; this is less than a previously reported 65% - is this correct? We expect to be 100% operational next week. CNRFC and Deltares are actively working on ResSim. Mods weren't available when we implemented overrides; Deltares wants to understand the operational scenarios in order to come up with a better solution because overrides aren't working right. CNRFC's concern is that overrides are related to the larger issue of coordinated forecasting operations with the Corps, state agencies, etc.; there can be no deviations from the inter-agency agreements in place.
   •   NWRFC is also keen to start using ResSim; the Corps is interested in seeing how ResSim works in CHPS because their own version is slow. Chris reminded the group that HEC has asked us not to distribute this particular version of ResSim because it's a development version. Once HEC releases an official version containing our changes OHD will be able to distribute ResSim. It's possible we'll be able to persuade HEC to allow NWRFC to run the development version if necessary.

   Action: None

2. What to do with budget line item for RFC backup

   Last year Billy requested that we put $ into the FY11 budget for RFC backup prototyping; Chris is trying to execute the (still imaginary) budget and wants to know what is expected. Hardware can be purchased if needed, but is there any need to pay for contract support? No one is assigned to lead this effort; hence several discussions have occurred but nothing has been done.

If this group does not develop a plan to spend the funds, Chris will have to relinquish funds to PPC.

- Backup is one of the major issues associated with RFCs divorcing themselves from NWSRFS.
- ABRFC noted that Slidell has been forced to evacuate 3 times in the past 5 years. They will need a solution that will involve ABRFC and possibly a third RFC as well. For many RFCs backup is more than just CHPS – it has to include (e.g.) grids ingest/processing and the IHFS_DB.
- RFCs have different backup arrangements. Something that meets everyone's goals will be complicated. The (IWRSS) National Water Center will play a role but that could be years down the road; the building project has already slipped by 6 months. Chris suggests we take a phased approach: define an initial/basic/minimal solution to start; then ramp up to a longer-term solution as we learn more about the NWC. NWRFC suggested remote connections (e.g. VNC) might also form part of a comprehensive solution.
- NWRFC and CNRFC had previously agreed to test synchronization across the AWIPS network. Now that the recent flooding is over they can move ahead.
- The CAT agreed to the following:
  - NWRFC and CNRFC will conduct remote MC-to-MC synchronization tests as soon as possible; this is where CNRFC will host a 3rd Online version of NWRFC's CHPS, and/or vice-versa. The RFCs will run some exercises to test the concept. During the exercise NWRFC and/or CNRFC will gather performance statistics (timing, network load, etc.) and will report their findings to the CAT.
  - The CAT will then discuss whether the FEWS-based architecture is a viable component of a larger RFC backup solution. If not, the CAT must open a new discussion.
  - Otherwise the CAT will come up with a strategy to deploy and prototype a backup solution at some to-be-determined RFCs. Chris noted that this plan must be in place in time for her to get the necessary hardware RFQ out, vendor selected, and funds obligated by August FY11 – this implies an action plan must be in place by FY11 Q3.
  - The CAT will present their findings, progress, and plans at the CHPS workshop in Boulder (June 2011).

Action: NWRFC and CNRFC to set up and conduct remote MC-to-MC synchronization tests, gather performance data, and report back to the CAT

3. Buddy Support

Chris wants to remind the CAT that we included funds in the FY11 budget for the CATs to travel to CAT-II offices and provide coaching support.

- Alison and Jeane have provided buddy support to MARFC twice so far, and expect to go again in the late Spring/early Summer. Edwin commended Alison and Jeane for their excellent support at MARFC last week in preparation for User Training. They set up the system ahead of time, which proved to be a huge help; furthermore they instilled great confidence in the MARFC staff that they can completely control their system and make it do whatever they want.
- NERFC will be at OHRFC next week for the User Training class; we will have a better sense of their progress after then. At the HIC meeting OHRFC reported that they won't go operational until next Fall – this is a change from their original plan.
- NWRFC/Bruce will spend an extra day at MBRFC in February. MBRFC has made good headway and has finished migrating; they have an outstanding issue concerning Tatum (reported to chps_ops). They still don't have esp running, and need help setting up some configurations. Bruce will have a chance to review MBRFC's status while there.

- NCRFC plans to go live with CHPS in January 2012. Of concern is that flooding on the Red River is expected to be worse this year than last. Gary would like us to wrap up CHPS BOC by the end of 2011; there's increasing risk that NCRFC won't be able to meet that milestone. NWRFC will do whatever they can to help; CNRFC will evaluate whether they will have spare capacity to provide assistance; Pete will also ask BrianC what help he needs. HSMB/Alfonso is already providing help with HEC-RAS. Edwin pointed out that remote support is an option; the NHOR has OCs from all RFCs so it's possible to monitor some things without traveling. Perhaps the CAT RFCs could load their buddy office OCs on their own systems? NCRFC appears to have some errors which could easily be addressed this way. It might be best to wait until after the Spring flooding is over to help NCRFC; otherwise they may forget everything they learn while they revert back to using NWSRFS for operations.

   Action: none.

4. Progress on RFC forcings studies (Dave Kitzmiller)

- In general Dave's understanding is that any remaining issues with meteorological forcings are not show stoppers. A summary report to present to the CAT-IIs (action from last year) is still outstanding.
- NWRFC pointed out that the problem is some RFCs are still relying on OFS pre-processors and they can't switch off NWSRFS until they have alternatives.
- NWRFC continues to work the precip issues but has lingering issues with temperature.
- APRFC is all gridded now – they have abandoned the RFS pre-processors.
- CNRFC uses a new/alternative pre-processing method.
- NERFC is finding that sometimes CHPS generates better results than did RFS; some of this might be attributed to their improvements in data QC work. It's cumbersome and time consuming. We continue to work with HSEB on improvements to DailyQC.
- ABRFC is okay with gridded precip but has problems (biases) with temp higher in the mountains: the snow water equivalent is different between RFS and CHPS. DailyQC uses PRISM data to adjust the precip but it can over-adjust; eventually they'll need another adjustment. The mountains represent only a small part of their area.
- Dave would like to know if any written documents exist describing RFC's analyses. He's interested in seeing reports comparing streamflow simulations from the legacy system with results using new forcings.
- Are RFCs still sending their grids to NOHRSC? Yes we think so – NERFC confirmed they are.
- Regarding a calibration AOR: A new HSMB contractor starts next week who will be dedicated to this. Wanru Wu is the project leader. They need to put requirements together. JulieD has provided some information on ensembles conditioning. Wanru's team will coordinate with other groups (e.g. OS&T) but this is different from the Brad Coleman/Michelle Schmidt work. Also last week Don Cline said he was standing up a new IWRSS NWC forcings team, for which NWRFC volunteered to provide a rep. No other details are available.

   Action: None

5. Other

- NWRFC would like to know the status of instructions to set up a zip files/archive. DaveR will find out.
- NWRFC hasn't finalized their entries for the dev registry. Experience during the recent event has revealed some changes, deletions, and new requests. They are still gathering feedback. They will

submit their requests to Edwin by COB Tues Jan 25. ABRFC and CNRFC can also provide feedback by that deadline. NERFC has already submitted their information. Edwin also needs to review the support log for tasks which need to be assigned to the development team. Meanwhile Deltares can't say anything about the planned release because without a list, the developers can't estimate and can't schedule time.

- ABRFC would like to know the status of their request for editing individual ensemble traces. Edwin and Peter have been discussing. Changing future precip values independently of each other is fairly straightforward and wouldn't require a code change. However changes to other types (e.g., inflows, runoffs, SQINs, etc.) is more difficult and would require code changes. ABRFC agreed that for now they can live with just the precip; the rest can wait for later.

- NWRFC is interested in knowing which versions of RedHat are loaded onto the chps machines at all offices. They have one version on chps 1/2/3 and another on chps 4/5/6. Their net port issue might not be hardware – it could be related to the version of RedHat; so they are wondering if they should upgrade to a more recent version. If so, what? The NHOR has 5.5 on its AWIPS boxes (LX, DX, etc) but (we think) 5.3 on the chps boxes. Deltares-USA runs a different flavor of Linux (CentOS) to test FEWS; Edwin doesn't know which version is used by Deltares-NL. We might want to stay in sync with AWIPS (we don't want to go backwards.) The bigger question is standard configurations in general, a topic which needs to wait for Randy to return. For example, OHD conducts testing of CHPS on the NHDR and also NHOR, so we can only 'guarantee' CHPS to work with those tested versions - should OHD and Deltares software developers test against multiple O/S versions? How many? It all adds to the amount/length of testing. And should HSD provide operational support for multiple versions? (Adds to the support burden.) If we say we should have a single version, who makes that determination and how to we make sure all RFCs upgrade when they should? We'll continue this discussion next week.

Action: DaveR to follow up on the status of instructions for a FEWS zip file/archive.
Action: NWRFC, CNRFC, and ABRFC to submit final requests for the dev registry to Edwin by COB Tuesday 1/25/11

Next meeting: Thursday January 27, 2011.