

## **NW Flow Snow Conf Call Minutes for March 1, 2016**

Participants from AppState, UNC-A, GSP, MRX, ERH, and RNK

### **Hi Res model QPF validation study:**

From the AppState 7-day running archive:

- HiResW-ARW (4km, new cycle every 12 hrs, out to 48 hrs)
- HiResW-NMMb (same as above)
- NAMnest (NMMb) (4km nest, new cycle every 6 hrs, out to 60 hrs)
- HRRR (3km, new cycle every hour, out to 15 hrs)

We have saved off 5 snowfall events so far (including the Feb 25-26 minor NWFS event we just decided on today). One of these events was the Jan 22-23 coastal storm which ended in NWFS. An additional event archived was heavy rainfall with SE upslope flow last Sept.

Steve has created a Google sheet to help document the events we have saved off, and has color-coded events to help keep track (purple is NWFS, blue synoptic scale winter events, and green flooding. May use red for severe if we choose to save any of those. That address for the Google sheet is:

<https://docs.google.com/spreadsheets/d/1VPfixrV9AIA9as3GNFtdrYhkEcxAsutMfStI2YFR7mY/edit#gid=0>

Pat Moore brought up the idea of creating regional snow analysis maps for these events, and then we could link to an internet location for these maps from the spreadsheet. Steve will follow up with Pat and Bill at GSP about generating more regional analysis using their GIS-based method for past events, at least those we've saved off model data for (future events too?).

We will continue adding cases as they occur, and when resources allow for pursuing HiRes model validation study we'll assess if we have enough. More on the original plans for this study are at the bottom of these minutes.

### **Concerns about quality of some snow reports:**

Recent snowfall events have called into question the quality of some snowfall reports, especially from COOP observers, as well as consistency in terms of reporting to nearest tenth of an inch or nearest inch. There was discussion of how this group could help facilitate or push for refresher training for COOPs, CoCoRaHS, or other observers. NWS folks in this group should consider reviewing their training methods and schedules for COOPs, and consider using the available CoCoRaHS material as a refresher before next season or providing

routine one-on-one. Also, Baker Perry suggested the possibility of having Nolan Doesken (ColoState) do a workshop or webinar at some point for refresher for as many regional observers as possible.

### **Creating VLab page for the NWFS collaboration**

David Hotz suggested we create a project page on the NOAA Virtual Lab (VLab) site, which is meant as a science and project sharing portal so that communities (not necessarily solely within NOAA) can not only organize and plan their activities but also share with a wider audience and create a structure to more formally plan and request funding for specific projects that would require NOAA resources. The group agreed this was a good idea and could potentially eliminate the need for the web page hosted by GSP (unless we want to maintain a more publically-accessible page since VLab is open to only those invited in and approved by NOAA). Brian Mireztky agreed to help begin to set this up. The goal will be to have this set up before next winter season.

### **Review of primary projects/focus areas we've had on our list:**

- a) HiRes model validation project (data collection ongoing). The primary emphasis of this project was to perform the model verification at select points, but we could also consider a spatial approach (no details of any objective method have been discussed but certainly there could be a subjective analysis on a case-by-case basis). Tentatively we wanted to consider the 5 locations highlighted in the Sandy journal but there was also discussion of considering BUFR sounding data and there are no standard BUFR stations for these locations. We may be mainly focused on retrieving model grid pt data for each of these locations.
- b) Numerical simulations of Sandy NWFS event to address questions raised in Sandy WAF article (more observational study): moisture sources, importance of upstream vs. G.L. surface fluxes, specific contribution to upward forcing from orography, mountain wave simulation.
- c) Expand wind climatology for snow events to other locations beyond Poga Mtn (wind roses primarily?). We never resolved the issue of whether to use surface winds at strategic locations or ambient ridge top winds from RAP analysis. Could again be same locations from Sandy, or maybe include some others not immediately on western slopes. Need to better define this project and identify a student (last note on this was "keep in back pocket").
- d) Some general discussion of more exploring of critical factors determining SLR, and relation with blowing snow impacts, but nothing specific in terms of a project was determined.
- e) Other topics we've discussed are more NWS-focused, such as exploring various GFE blending methods with HiRes data in AWIPS, Froude# tool,

and the blowing snow component of WFO Burlington's Winter Storm Impact Index (WSII).

**Future calls/communication:**

For the remainder of the Spring/Summer we will only have calls as needed depending on weather events or the discovery of resources for more aggressively pursuing one of the above projects, otherwise we will continue to touch base via email and also VLab once set up. Anyone in the group can request the scheduling of a call if they see a need. More routine calls may begin again late in the Fall.