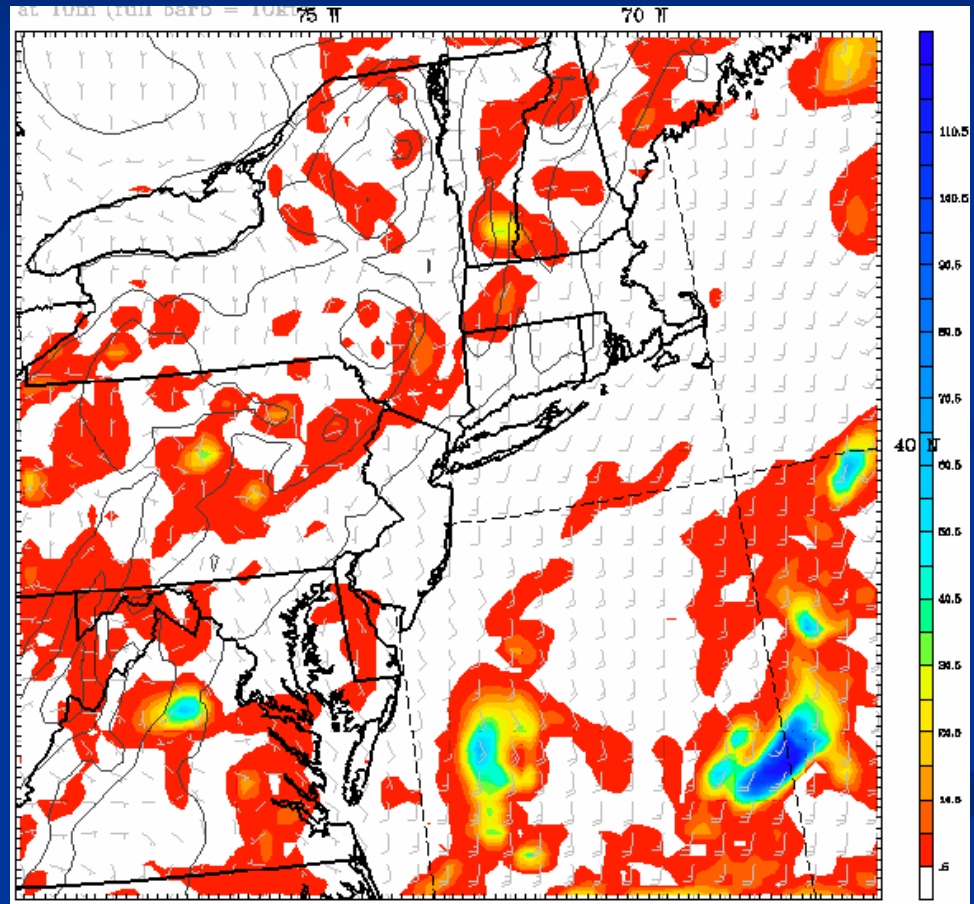




# Use of MM5 Ensembles at NERFC

# 12-km MM5 Information

- 18 ensemble members
  - 1 control run
  - 11 members with varying physics
  - 6 members with varying initial conditions
- Run once per day to 48 hrs
- 00z ensemble runs available 10-12z



# Test Basins

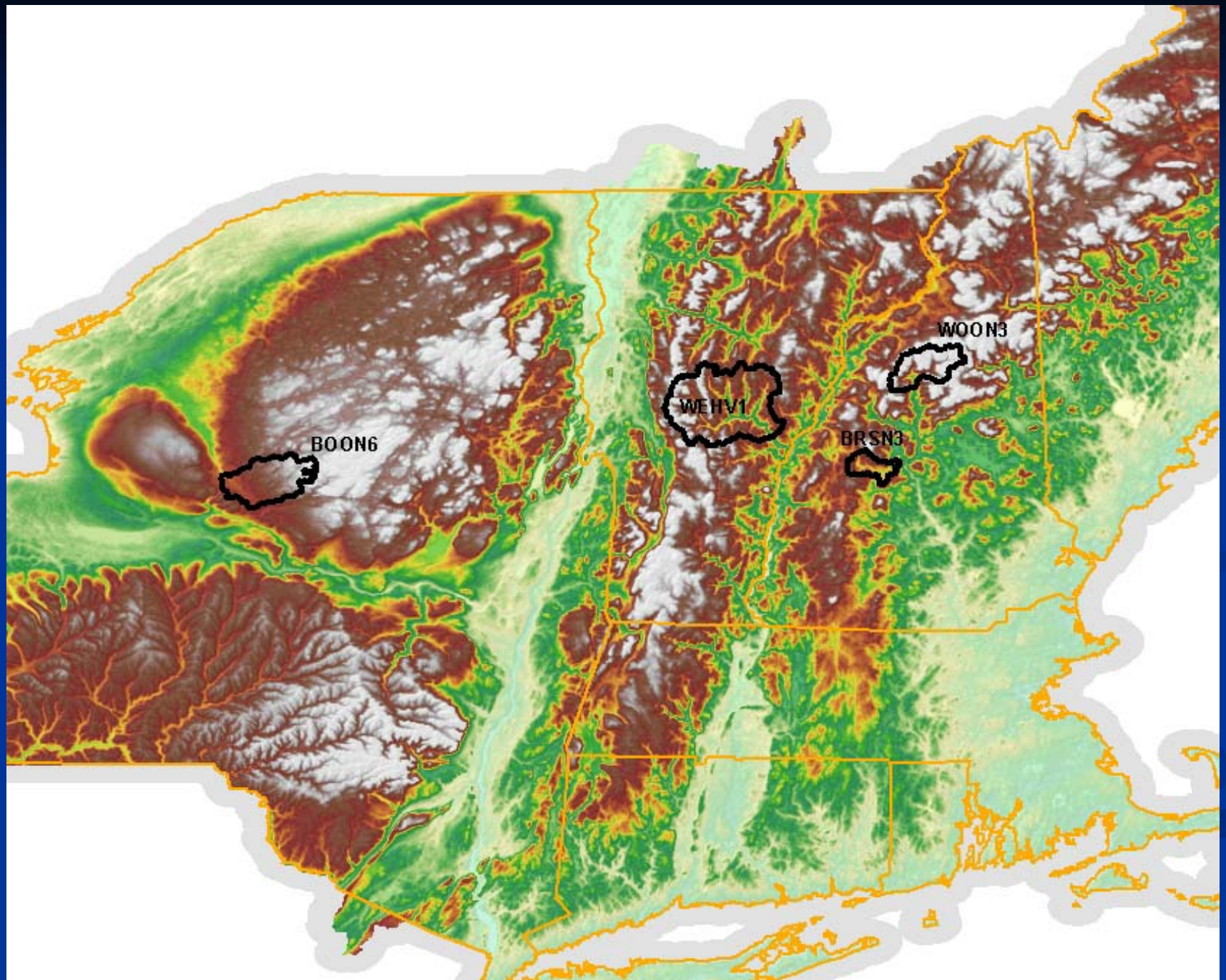
## ■ Criteria

- SAC-SMA basins that are running ESP
- Variety of basin sizes
- Headwaters
- Limited or no regulation
- Multiple River Basins

## ■ Selected Basins

- Smith River at Bristol, NH (86 mi<sup>2</sup>)
- Pemigewasset River at Woodstock, NH (193 mi<sup>2</sup>)
- Black River at Boonville, NY (295 mi<sup>2</sup>)
- White River at West Hartford, VT (690 mi<sup>2</sup>)





# Current Status

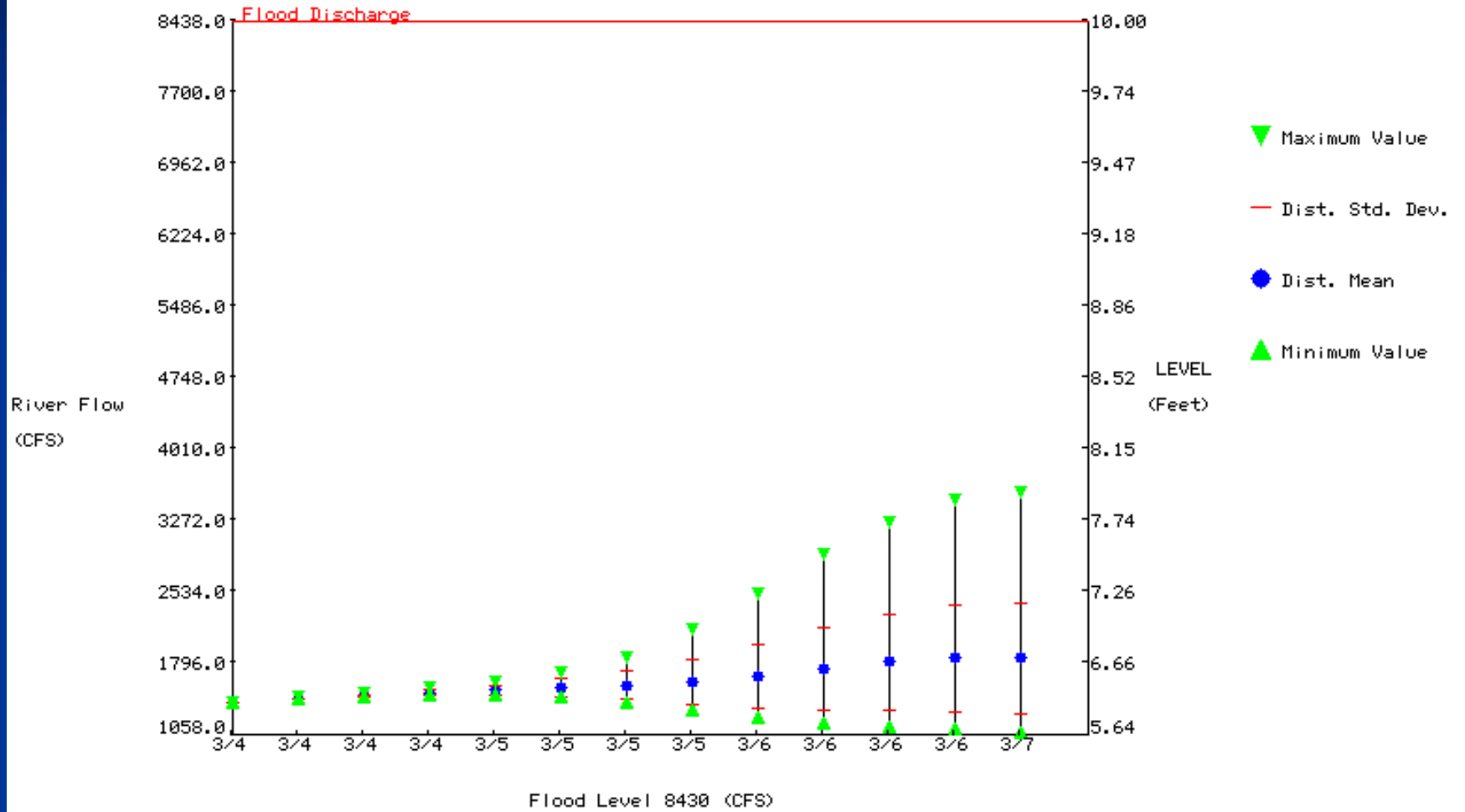
- NERFC has developed script to convert SUNY file format into OH Datacard format for ESP
- Routine conversion of MM5 fields to ESP input and ESP run beginning Feb 2004
- Internal web site created to post output

ESP Expected Value of BLACK at BOONVILLE NY

Latitude: 43.5 Longitude: 75.3

Forecast for the period 3/4/2004 6h - 3/7/2004 6h

This is a conditional simulation based on the current conditions as of 3/4/2004



# Problems Encountered

- Bias in air temperatures over snow cover ( $\sim 5-10$  °F)
- Transmission of Ensemble fields
- Errors in file formats
- Labelling of time axis in ensemble plots does not include the hour

# Issues

- How do you transition with proper statistics from one basis of ensembles (e.g. MM5) to another ( e.g. medium-range )
- Ability for forecaster to adjust ensembles based on real-time conditions