

# Forecast Improvement Group



Public, private, and academic sectors

## Summary Recommendations

Over a one-year period ending in June, 2013, over one hundred forty members of the public, private, and academic weather communities came together to discuss priorities for significantly improving forecasting capabilities. The community participated in a number of face-to-face meetings, telecoms, and email exchanges focusing on issues at the core of improving weather forecasts: computing—including big data issues, modeling—including data assimilation, and observations. The overarching goal of all discussions was that the end users need to have better products that can support vital decisions.

Specifically, this group focused on changes that would make significant improvements on zero to ten-day forecasts, with the understanding that many of these changes would result in improvements in the ten- to thirty- day forecast as well. Recognizing that many end users receive their final products from private sector efforts, recognizing the critical role of research scientists in improving all aspects of forecasting, and recognizing the critical role of NOAA in research and operation of forecasting, representatives of these communities gathered to critically examine options for significant improvements in forecasting.

Given the complexity of weather forecasting, a variety of views were presented on how to proceed as a community. Consensus, rather than complete agreement was sought and obtained on a number of fundamental issues. The process resulted in a set of recommendations which can most easily be summarized by the need for modeling and observations that can produce forecasts of unprecedented accuracy, with the computing power to support these efforts.

## Key Recommendations:

- Significantly improve the community's computing power for both development of new models and delivering accurate forecasts.
- Increase and focus efforts to both develop and run global models.
- Develop a coordinated national program to develop regional modeling techniques.
- Support active collaboration between public, private, and academic sectors with models particularly in their final stages of development.
- Embrace alternative data sets and alternative business models to acquire key measurements that can improve forecasting research and operations.
- Prioritize observational data and act on these prioritization efforts.
- Strengthen relationships within the public, private, academic, and user communities to assure economic and efficient development and use of forecasting capabilities.

This is a working document created by the AMS Forecast Improvement Group. This document is under review by the AMS community. This should not be considered a formal or approved statement from AMS.