

FY 2007 Annual Guidance Memorandum

Hydrology Program

(Updated 11 September 2006)

This Annual Guidance Memorandum provides direction for the Advanced Hydrologic Prediction Service (AHPS) Theme Teams as they formulate recommendations for projects to be funded by AHPS during FY 2007. The NOAA Hydrology Program Manager's priorities for each of the 5 themes are listed. Of course, Team recommendations are not restricted to projects that directly support these objectives. Theme Teams should feel free to propose and justify the funding necessary to continue or initiate other critical activities, including those related to developing and providing Water Resource information.

In addition to these 5 theme areas, activities will also be funded in the categories of: New Service Locations; Outreach; Training; Web Page Deployment; and Program Management. FY 2007 work plans in these areas will be developed by headquarters' staff and reviewed by the AHPS Review Committee.

Innovation

- Test distributed hydrologic modeling (both conceptual and physically-based) and automated data assimilation over mountainous terrain
- Develop a unified Mean Areal Temperature process for both calibration and operational use
- Complete the evaluation of precipitation estimation algorithms for dual polarized radars
- Test advanced hydrologic ensemble prediction techniques
- Develop easy-to-implement approach to Streamflow Regulation Accounting

Flash Flood Services

- Deliver multisensor precipitation estimates at appropriate spatial and time resolution to support flash flood warnings
- Deliver improved flash flood and debris flow monitoring tools (site specific, FFMP, statistical distributed modeling, dam break, for example)

Short- to Long-Term Forecast Services

- Deliver short-term ensemble tools and techniques to AWIPS
- Produce water resource information fields from distributed models to support water resource management and environmental stewardship
- Address recommendations of the following teams
 - Hydrologic Verification System Requirements
 - Snow Science Steering Team
 - Hydraulic Model Evaluation

Software Architecture Enhancements

- Deploy enhanced operational distributed hydrologic model based on prioritized requirements list
- Deliver improved calibration tool from requirements
- Complete delivery of streamflow regulation capabilities
- Design operational dual polarization radar precipitation processing function
- Address recommendations of the RFC Operational Backup Team

Dissemination

- Evaluate and expand AHPS web pages to include full spectrum of hydrologic and water resource information