

Advanced Hydrologic Prediction Service

Water Information for a Stronger and Safer America

Each year, floods kill more people than any other form of weather and cause damages in excess of \$5.2 billion. Three-quarters of all presidential declared disasters result from floods. At the same time, demands for water continue to increase, especially under drought conditions. Hydrologic forecasting is critical to public safety and the nation's economic security.

NOAA's Advanced Hydrologic Prediction Service (AHPS) provides new forecast information depicting the magnitude and uncertainty of occurrence for hydrologic events—ranging from droughts to floods.

The following types of AHPS information are available on the web in a timely and user-friendly manner:

- Hydrographs displaying observed river levels for the past two days and forecasted levels out seven days.
- Probability forecasts with river level exceedence information for the next thirty days.
- Flood forecast maps showing locations forecasted to be inundated.

Benefits

AHPS provides water predictions for life decisions. According to the National Hydrologic Warning Council (2002) report, "Use and Benefits of the National Weather Service River and Flood Forecasts," AHPS — once fully implemented throughout the Nation — will provide \$766 million in economic benefits each year.

Flood Reduction (\$243 Million/Year):

AHPS provides better information to emergency managers and local officials, helping them make decisions such as:

- When to reinforce levees and to what level.
- When and where to evacuate people from potential flood areas.

Irrigation/Water Management (\$273

Million/Year): Under drought conditions, AHPS provides water managers with information for water allocation decisions, such as:

- Whether to release water from reservoirs in the spring or hold it for anticipated agricultural and industrial needs.

Navigation (\$169 Million/Year): AHPS provides river information for navigation use such as:

- Establishing cargo weight limits and barge displacement for safe river navigation.
- Scheduling river transportation to take advantage of river flow conditions.

Hydroelectric (\$81 Million/Year): AHPS provides better information to assist energy managers in making decisions such as:

- When to release water to optimize hydroelectric power generation.

Implementation

AHPS has been deployed in critical areas of the Upper Midwest, Northeast and Middle-Atlantic States since it first received funding in FY 2000. The next step is to accelerate implementation for these areas and expand to the South and West. NOAA's goal is to deploy AHPS Nationwide by 2012.