

**NATIONAL WEATHER SERVICE POLICY DIRECTIVE 10-9**  
**JANUARY 12, 2010**

**Operations and Services**

**HYDROLOGIC SERVICES PROGRAM**

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**SUMMARY OF REVISIONS:** This directive supersedes NWS Policy Directive 10-9, “Hydrologic Services Program,” dated November 19, 2007. The following changes were made:

- 1) Adds a general description of the Office of Science and Technology’s responsibilities in developing technology used in hydrologic operations.
- 2) Adds a general description of the Office of the Chief Information Officer’s responsibilities in managing, operating, and supporting systems used in the dissemination of hydrologic forecast and warning information.
- 3) Adds a general description of the Office of Operational Systems’ responsibilities in providing system engineering, software management, facilities engineering, communications, maintenance, and logistical services to sustain operational systems supporting the Hydrologic Services Program.

1. As the Nation grows, more segments of society are becoming increasingly vulnerable to an excess or lack of water. Timely and accurate river and flood forecasts and warnings spanning minutes out to months in the future are becoming more critical to decision making processes which affect all citizens. This directive governs the National Oceanic and Atmospheric Administration National Weather Service’s (NWS) provision of hydrologic services to its partners and other users.

2. The objectives of the NWS Hydrologic Services Program are to provide river and flood forecasts and warnings for the protection of life and property and to provide hydrologic information for the Nation’s economic well-being.

3. This directive establishes the following authorities and responsibilities:

3.1 The Office of Climate, Water, and Weather Services (OCWWS) will:

- a. Establish national policies and procedures for the provision of consistent NWS hydrologic forecast and warning services.

- b. Conduct meteorological, climate, training, performance and awareness, and observing service programs which support hydrologic operations and services.
- c. Consolidate, analyze, and oversee national performance and effectiveness indicators of hydrologic services.
- d. Provide outreach to national partners and other users to promote hydrologic services.
- e. Collect operationally significant hydrologic information and prepare public summaries and internal notification reports.
- f. Provide real-time operational support and maintenance for nationally-delivered hydrologic applications.

3.2 The Office of Hydrologic Development (OHD) will:

- a. Plan, develop, demonstrate, and integrate scientific techniques and software capabilities for the Hydrologic Services Program.
- b. Formulate and maintain a research and development plan in response to requirements of the Hydrologic Services Program.
- c. Develop, maintain and provide user support for hydrometeorological data collection systems and disseminate data products for use in NWS operations.
- d. Manage development and maintenance of software applications needed for the web presence of the Hydrologic Services Program.

3.3 The Office of Science and Technology will:

- a. Maintain overall responsibility for plans, programs, and development in NWS science and technology activities
- b. Develop selected applications providing observed and forecast information used in hydrologic operations

3.4 The Office of the Chief Information Officer will administer and support the NWS Web infrastructure, Telecommunications Gateway, and NOAA-NET and ensure security for NWS systems.

3.5 The Office of Operational Systems will provide system engineering, software management, facilities engineering, communications, maintenance, and logistical services to sustain operational systems supporting the Hydrologic Services Program.

3.6 NWS regional headquarters will:

- a. Ensure weather forecast offices (WFO) and river forecast centers (RFC) are organized, trained, and equipped to fulfill the Hydrologic Services Program obligations within their region.

- b. Provide hydrology-related requirements to OCWWS.
- c. Develop supplements to procedural directives for the Hydrologic Services Program.
- d. Provide technical and operational support to WFOs and RFCs.
- e. Oversee hydrologic service outreach efforts.
- f. Evaluate performance and effectiveness of hydrologic services within their region.
- g. Ensure WFOs and RFCs comply with Hydrologic Services Program directives and regional supplements.

3.7 The National Centers for Environmental Prediction (NCEP) will:

- a. Provide meteorological forecast guidance serving as input to the hydrologic forecasting process for all time scales.
- b. Prepare national products which integrate hydrometeorological information produced by WFOs and RFCs.
- c. Support verification of quantitative precipitation forecasts (QPF) produced by the Hydrometeorological Prediction Center (HPC), RFCs, and WFOs.

3.8 RFCs will:

- a. Conduct hydrologic modeling and forecast operations for rivers, reservoirs, and lakes in large, multi-state areas of responsibility.
- b. Produce the forecast and guidance information used in NWS hydrologic products.
- c. Provide products describing observed, current, and future hydrometeorological conditions over their areas of responsibility such as discussions, significant river flood outlooks, quantitative precipitation estimates, and water supply forecasts.
- d. Provide outreach to partners and other users supporting water management in large river basins to promote hydrologic services.

3.9 WFOs will:

- a. Provide hydrologic forecasts, watches, warnings, statements, and related products for local service areas. These products cover events ranging from short-fused flash floods to regional droughts and slow-rising floods on large rivers and lakes.
- b. Provide outreach to state and local partners and other users to promote hydrologic services.
- c. Evaluate performance and effectiveness of hydrologic services within their service area.

4. Performance measures include:
  - a. Stage forecast accuracy.
  - b. Warning products probability of detection, false alarm ratio, and lead time.
5. This policy directive is supported by the glossary of terms in Attachment 1. Procedural directives will be issued to implement this policy as needed and determined by the Director, Office of Climate, Water, and Weather Services

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| (Signed)  | December 28, 2009 |
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| John L. Hayes   | Date              |
| NOAA Assistant Administrator for Weather Services and<br>Director, National Weather Service |                   |

**Attachment 1**

**GLOSSARY OF TERMS**

Hydrologic Services Program - The collective activities undertaken by NWS headquarters, regional headquarters, and field offices (i.e., RFCs, WFOs, and the NCEP) to support and provide water-related services in the form of forecasts, warnings, and associated products for the Nation's river systems.