



U.S. Army Corps of Engineers Institute for Water Resources

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Advances in Hydrologic Engineering – Looking to the Future

ALEXANDRIA, VIRGINIA. The Institute for Water Resources (IWR) Hydrologic Engineering Center (HEC) recently published its Fall 2013 issue of “Advances in Hydrologic Engineering,” a quarterly e-newsletter. HEC’s primary goal is to support the nation in its water resources management responsibilities by increasing the U.S. Army Corps of Engineers (USACE) technical capability in hydrologic engineering and water resources planning and management.

One way HEC accomplishes this goal is by bringing state-of-the-art research and development into state-of-the-practice, which advances hydrologic engineering and water resources planning. “I see us doing this in so many ways: distributed and cloud computing; two-dimensional hydraulic modeling; parameter sampling for risk and uncertainty analysis; and constantly improving the ability to view, edit and evaluate data and results to improve the understanding of the material,” HEC Director Christopher Dunn said in his editorial.

The fall newsletter’s lead article examined the Corps Water Management System (CWMS) National Implementation Plan. CWMS is an automated information system that supports the USACE water management mission. USACE is responsible for managing nearly 700 of the nation's water control projects—a mission that affects the lives and property of millions of Americans. With the best available technology, USACE can expand and enhance its capabilities to manage flood risk, navigation conditions, water supply, electric power production, water quality, and the environment.

“From a Civil Works perspective it is not difficult to imagine how these fully developed, calibrated models...built for water management could be used for other purposes. As the Federal government looks for ways to reduce costs, it only makes sense to reuse these models as much as possible,” Dunn explained in his editorial about the National Implementation Plan.

The newsletter also covered the following topics:

- Water quality modeling of the Alabama-Coosa-Tallapoosa (ACT) and Apalachicola-Chattahoochee-Flint (ACF) watersheds
- National reservoir survey for water supply, water management, and sediment management activities
- HEC software updates, including tunnel modeling with HEC-RAS and the U.S. Department of Agriculture Agricultural Research Service Bank Stability and Toe Erosion Model in HEC-RAS
- The arrival of new Water Resource System Division Chief, Ms. Lea Adams
- PROSPECT training course changes

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