



Integrated Water Resources Science and Services (IWRSS)

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In the news nearly every day, water resources are widely considered to be one of the most significant challenges facing societies and governments in the 21st century. Managers and decision-makers in all sectors of water resources require new and more integrated information and services to adapt to uncertainty, climate and land-use change and increasing demand on limited resources.

To meet this challenge, the National Oceanic and Atmospheric Administration (NOAA) is developing the IWRSS consortium – Integrated Water Resources Science and Services – an innovative partnership of federal agencies with complementary operational missions in water science, observation, prediction and management. Consisting initially of NOAA, the U.S. Army Corps of Engineers, and the U.S. Geological Survey, the IWRSS consortium envisions a highly collaborative and integrative framework for providing a seamless suite of water resources information across scales ranging from small hillslopes to large watersheds, from droughts to floods, and from historical analyses to long-range predictions.

The draft roadmap¹ for the project identifies the human dimensions, technical components, and science needed to achieve operational goals that include integrating service and service delivery, improving river forecasts, and providing new “summit-to-sea” high-resolution water resources information and forecasts. Committed to working together to make this leap forward, the consortium considered a wide array of well-informed guidance to develop the roadmap. Participants in the IWRSS Roadmap development included management and staff of field offices and national centers, regional and national program managers, laboratory directors

and technical directors, all representing a wide range of expertise in hydrology and water resources.

The resulting project design involves making some key technical improvements to facilitate the flow of information across organizational and geographic boundaries and establish a shared comprehensive view of the water resources landscape – a common operating picture for water. The design involves boosting operational collaboration efforts across these same boundaries and working with federal and academic research partners to improve modeling and synthesis, and produce a new, comprehensive and consistent suite of high-resolution water resources analyses and prediction information needed for decision making. And it involves an intensive effort to partner with the private sector and the water resource management community on multiple fronts to ensure that the IWRSS consortium becomes the most useful government organization for stakeholders of our nation’s water resources and an unbiased, trusted broker of water resources information.

The consortium will unify water science, observation, prediction and management missions and uniquely assemble key capabilities necessary to achieve these objectives. Each agency brings to the table intellectual resources, modeling tools, data, integrative systems and research and development capabilities necessary to meet 21st century water resources challenges. The IWRSS consortium is intended to be an evolutionary approach for working towards an *integrative water resources information system* that knits together water resources information, products and services across geographic and organizational scales.

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1