



*A 1-day short course preceding the AMS Annual Meeting in Seattle, WA (Jan 23, 2011)*

A team of experts drawn from NOAA, NRCS, BPA, and USBR will lead a day of interactive lectures and activities focusing on the state of the practice of hydrologic prediction and decision-making for water supply and energy management, and climate change implications for future water supply prediction. These efforts and concerns have substantial socio-economic impact on every segment of national economy and life, particularly in the western United States.

The course will give rare insight into real-world methods and applications from key operational agencies. The course targets decision makers and professionals responsible for managing or understanding resources dependent on water supply, as well as undergraduate and graduate students with interests in hydrologic prediction and water resources management. Significant financial support from NOAA makes this an affordable opportunity to learn more about seasonal water supply prediction and application.

In particular, the short course will describe and demonstrate statistical and simulation ensemble model based approaches for probabilistic hydrologic predictions for water supply purposes. It will also cover concepts of calibration and verification, discuss sources of predictability and uncertainty in hydro-climatic variables, and address risk-based decision-making. It will share the best practices for water supply forecasting currently in use by the National Weather Service (NWS) and the Natural Resources Conservation Service (NRCS), the two Federal agencies responsible for monitoring and forecasting water supply in the western U.S. It will also include approaches for dealing with non-stationary climate trends in hydrologic predictions and water supply management. In addition, the course goals include informing climate researchers, forecasters, and stakeholders from public and private sectors of the recommended methods and tools aiding decision support for water supply and management. The course agenda is attached.

A luncheon will be provided during the short course. Internet access will be available in the classroom. A personal laptop is required to participate in portions of the classroom activities or demonstrations. It is not necessary to register for the full meeting to attend the short course. Attendance is limited to 25 participants. Online registration is available at [http://www.ametsoc.org/OR/reg\\_homepage.cfm](http://www.ametsoc.org/OR/reg_homepage.cfm).

For more information please contact Marina Timofeyeva, NOAA NWS (tel: 301 713 1970 ext. 1311 e-mail: [Marina.Timofeyeva@noaa.gov](mailto:Marina.Timofeyeva@noaa.gov)) and Kevin Werner, NOAA NWS CBRFC (tel: 801-524-5130 x 329; e-mail: [kevin.werner@noaa.gov](mailto:kevin.werner@noaa.gov)).

# AMS SHORT COURSE: HYDROLOGIC PREDICTION AND VERIFICATION TECHNIQUES WITH A FOCUS ON WATER SUPPLY

23 JANUARY 2011

WASHINGTON STATE CONVENTION CENTER

SEATTLE, WA

## ORGANIZERS

Marina M. Timofeyeva, Andy Wood, Kevin Werner, Barbara Brown, Thomas Adams, David Bright

## CO-SPONSORED BY

The AMS Hydrology Committee, Chair: Bart Nijssen  
The AMS Committee on Probability and Statistics, Chair: Richard W. Katz

## FINANCIAL SUPPORT PROVIDED BY

NOAA/NWS Office of Hydrologic Development  
NOAA/NWS Western Region Headquarters

## PROGRAM (ROOM 616)

8:15 A.M.	<b>COURSE INTRODUCTION: OVERVIEW OF HYDROLOGIC FORECASTING PRACTICES AND WATER SUPPLY.</b> Kevin Werner, NOAA/NWS Colorado Basin River Forecast Center (CBRFC), Salt Lake City, UT	12:00 P.M.	<b>SHORT COURSE LUNCHEON (included). (Room 615)</b>
		1:00 P.M.	<b>HANDS ON ESP EXERCISES.</b> Led by CBRFC and NWRFC.
8:45 A.M.	<b>STATISTICAL FORECASTING FOR HYDROLOGIC PREDICTION—I.</b> Gus Goodbody and David Garen, USDA/NRCS National Water and Climate Center, Portland, OR	2:30 P.M.	<b>INTRO TO RISK BASED DECISION-MAKING FOR WATER SUPPLY: BPA CASE STUDIES.</b> Travis Togo, BPA
		3:00 P.M.	<b>COFFEE BREAK</b>
10:00 A.M.	<b>COFFEE BREAK</b>	3:15 P.M.	<b>SCENARIO EXERCISES FOR RISK BASED DECISION MAKING.</b> Kevin Werner, CBRFC and Travis Togo, BPA
10:15 A.M.	<b>STATISTICAL FORECASTING IN HYDROLOGIC PREDICTIONS—II.</b> Gus Goodbody and David Garen, USDA/NRCS National Water and Climate Center, Portland, OR	4:15 P.M.	<b>WESTERN WATER SUPPLY FORECASTING AND CLIMATE CHANGE.</b> Levi Brekke, Bureau of Reclamation Technical Service Center, Denver, CO
11:00 A.M.	<b>ENSEMBLE STREAMFLOW PREDICTION (ESP) INTRODUCTION.</b> NOAA/NWS Northwest River Forecast Center (NWRFC), Portland, OR; and CBRFC	5:00 P.M.	<b>COURSE ADJOURNS</b>
11:00 A.M.	<b>ESP: VERIFICATION AND RECENT ADVANCES.</b> Julie Demargne and James Brown, NOAA/NWS Office of Hydrologic Development, Silver Spring, MD		