



## PRE-CONFERENCE WORKSHOPS

SUNDAY, MAY 21, 2006 • 9:00 AM-5:00 PM

Register online or use the conference registration form (see page 11) to register for either of these two pre-conference workshops. The course fee is \$250 for either workshop; save \$50 by registering before April 21, 2006. This fee includes lunch, coffee breaks, and all course materials.

### Treatment of Uncertainty in Water Resource Modeling and Analysis

**PRESENTER:** Srikanta Mishra, Ph.D., Senior Engineer and Project Manager, Intera Inc., Austin, TX, and Adjunct Professor at the University of Texas at Austin

Scientists and engineers dealing with water resources are often confronted with uncertainty caused by incomplete knowledge and/or natural randomness. Traditional deterministic modeling of uncertainty in water resource models often involves the use of best-guess or worst-case assumptions about model inputs to quantify their impacts on model predictions. Alternatively, a set of optimistic and pessimistic values is sometimes utilized to provide upside and downside forecasts around a reference scenario.

Recently, there has been greater interest in the use of probabilistic uncertainty analysis methods, which allow a better definition of the range of likely outcomes and the likelihood of each outcome. This workshop will provide an introduction to several such methodologies including Monte Carlo simulation, analytical error propagation techniques, and probability/logic tree analysis method.

### Curve Number Rainfall-Runoff: Professional Application

**PRESENTER:** Richard H. Hawkins, Professor of Watershed Resources, University of Arizona, and Donald E. Woodward, Natural Resources Conservation Service (retired)

The Curve Number Method is widely used in applied hydrology and environmental impact analysis. Because of its authority, unique technological niche, and transparency, it is the premier technique for converting event rainfall into direct runoff. It finds wide application in rainfall response for ungaged watersheds, and as a process component in continuous models. It is, however, incompletely understood, often misused or misapplied, and realizations for applications and developments beyond the original handbook are not generally appreciated.

This short course will provide an open factual background on the Curve Number Method: origins and assumption, limits of applications, and recent findings, leading to more informed professional application of the method. Its role in understanding general rainfall-runoff hydrology will be explored and discussed. The workshop includes active, open discussion with peers and the presenters.

## TECHNICAL TOURS

### Tour 1: From Rare Ecosystems to Urban Renewal and Flood Control... A Look at Salt Valley

TUESDAY, MAY 23 • 8:30 AM - 4:00 PM



Spend the day with experts who will take you to tour Little Salt Fork Marsh saline wetlands complex, north of Lincoln, Nebraska. This complex, the result of a joint public-private wetland restoration, enhancement, and expansion program, is the first saline wetland mitigation bank in Nebraska. Along the trail, guides will point out rare and endangered species, such as the Salt Creek Tiger Beetle and the Saltwort plant.

Lunch will be arranged at the James Arthur Vineyards, where you may also participate in a vineyard tour and wine tasting. Nebraska, a thriving vineyard state before prohibition, has rediscovered its roots.

After lunch, visit the city of Lincoln's Antelope Valley Project, a major flood control, transportation, and community revitalization project. The project involves restoring open channel drainage through a heavily urbanized area and creating new traffic corridors, while sustaining downtown commercial growth. The project director and key project members will provide the inside story.

*Fee: \$45. Includes bus transportation and lunch at James Arthur Vineyards, and entrance fees.*



### Tour 2: Lewis & Clark, Arbor Day, and Modern Environmental Conservation

TUESDAY, MAY 23 • 8:30 AM - 4:00 PM

Travel 200 years back in time at the Lewis & Clark Interpretive Trail and Visitors Center, located in nearby Nebraska City. Volunteers will provide a detailed history of the 1803-1806 Lewis & Clark Expedition, which vastly expanded knowledge of America's north and west. The Visitors Center sits on a 79-acre scenic wooded bluff overlooking the Missouri River. Its unobstructed view will give you a sense of what members of the expedition saw two centuries ago. The Center focuses on the expedition's many discoveries – 178 plants, 122 animals, and scientific findings – and affords the chance to climb aboard a 55-foot replica of the keelboat used during the journey.

A catered lunch at the nearby Lied Lodge and Arbor Day Farms site in Nebraska City will be followed by a guided bus tour of the facilities, which promote the Arbor Day Foundation's message of wise environmental stewardship. Afterward, you may choose to take part in the Tree Adventure Tour or tour the Arbor Lodge State Historical Park on the former estate of J. Sterling Morton, founder of Arbor Day. The Tree Adventure includes climbing to a 50-foot-high tree house and visiting indoor interactive exhibits. The Historical Park offers a collection of antique carriages and wagons, formal rose garden, Italian terraced garden, and arboretum with more than 250 varieties of trees and shrubs.

*Fee: \$45. Includes bus transportation and lunch at Lied Lodge, and entrance fees.*