

UMaine scientist to head national water institutes



BANGOR DAILY NEWS PHOTO BY JOHN CLARKE/RS

Steve Kahl, director of the *Senator George J. Mitchell Center for Environmental and Watershed Research* at the University of Maine in Orono, was recently elected as President of the *National Institutes of Water Research*. Kahl is standing behind a volumetric flask filled with water.

BY MISTY EDGEComb
OF THE NEWS STAFF

ORONO — Steve Kahl is about 60 percent water. So are you.

But unlike most Americans, Kahl recognizes the fragility of this critical resource, even in soggy, snowy Maine. Without the clean water in our lakes, rivers, aquifers and, yes, snowbanks, there would be no life on Earth as we know it.

"What is the one thing that's essential for human life, that is absolutely not replaceable?" Kahl asked. "Water!"

Now, as president-elect of the National Institutes for Water Resources, Kahl will have the chance to inform the national debate on everything from acid rain to mercury to dry wells. It's not a duty that the University of Maine geochemist takes lightly.

While serving as director of the *Senator George J. Mitchell Center for Environmental and Watershed Research* at the university - one of 54 such research institutions nationwide that make up the NIWR - Kahl has developed a keen awareness of the links, and sometimes the

gaping chasms, between water science and water policy.

Part of Kahl's new role will be to provide information to Congress and to work with natural resources agencies to ensure that lawmakers are provided with the science they need to make good water policy.

The current administration's focus on oil shortages and energy needs has dwarfed significant problems with the world's water resources, Kahl said.

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In the Pacific Northwest, farmers and fishermen are battling over river water while salmon and crops die. Wildfires have raged through California. Here in New England, mercury and acids from air pollution have polluted even the most remote streams. And most of America has just emerged from one of the worst droughts in recent memory.

"It's incredible to me that a president from Texas, a water-deprived state, isn't paying attention to this," Kahl said. "Water is irreplaceable."

Kahl's plans for a proactive NIWR are no surprise to Dave Courtemanch, a water resources specialist with the Maine Department of Environmental Protection in Augusta. "I always speak of Steve as an entrepreneur," said Courtemanch, who has worked with Kahl in many capacities over the years. "He's a thinker. He brings together new ideas."

Robert Ward, immediate past president of NIWR, agrees.

"Steve doesn't accept things the way they are without asking questions first. I think that's going to be a real strength," said Ward, a professor of civil engineering who directs Colorado's water institute in Fort Collins. Kahl had been asked to run for the office twice before but declined, saying he was too busy conducting research, leading the Mitchell Center and teaching. But this third time, he decided not to pass up his chance to influence the education of new water scientists as well as lawmakers and the public.

As baby boomers retire, state and federal agencies are losing water scientists faster than they can replace them, so there's a real need for training new hydrologists, chemists and geologists, Kahl said. Once he takes over the presidency, he plans to focus on writing a giant grant to create a national graduate education network through the institute's 54 campuses.

More than 700 graduate students - including 21 at UMaine - already are studying through the network of institutes, but coordination of research among various campuses is limited. Students in Maine will be better scientists if they understand not only the eastern part of the country's concerns about the mercury content of lakes, but also the western part's struggles over the economics of scarce water resources, Kahl said.

"The more globally you can view issues, the more effectively you can act locally," Kahl said.

Scientists, too, should understand how to explain their work to a wide audience, said Kahl, who in three years at the Department of Environmental Protection in the 1980s

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has gained an appreciation for the applied research that can lead to the best environmental policy.

"Scientists have too often been content to do their research, then sit back to see if anyone asks them about it," he said. "[They] should be more engaged in the public policy arena." In Maine, the Mitchell Center is the only game in town. Many water research projects in the state are connected with the Center in some way, so the institute has a great deal of local and regional influence.

But Washington, D.C., is a very different place. In the nation's capital, "good science" is too often whatever a lobbyist wants it to be, and testimony from NIWR's researchers may not always be well-received.

"It's not simple to deal with policy, but there is a need provide an unbiased source of information," Kahl said. "Reality is reality, and ethically, you've got to go with what you know is there."

No science is black and white, particularly not the dizzying web of causes and effects that is environmental science, but researchers have a duty to lay out what they do know, and to be honest about the

unanswered and unanswerable questions, he said.

"Sometimes you just have to say, 'This is our best guess, and it's a darned good educated guess,'" Kahl said.

He also expects to spend a substantial amount of time in Washington lobbying for funding and in cooperation with the four members of Maine's congressional delegation, all of whom sit on the Mitchell Center advisory board.

Though NIWR's total national budget is only \$6.5 million, the funds have been cut from, then reinstated in, the federal budget countless times in recent years. When the institutes were created in the 1960s, each center received \$100,000 annually. Today that number, not adjusted for inflation, has fallen to \$14,000.

"Survival for NIWR itself is sometimes a challenge," Kahl said, despite the vital role of water, water research, and water training. Nationwide, the various institutes receive between 5 percent and 50% of their funding from the U.S. Geological Survey. At UMaine, the number is about 10 percent. Yet the institutes manage to thrive by

focusing on important local problems and additional state and federal grants.

"Frankly, the federal government ought to look at NIWR as a model of how to spend taxpayers money," he said. "For every \$10 that USGS gives us, we generate \$90 more in competitive grants".

A Maine native and UMaine graduate, Kahl will be the first NIWR president from New England and just the second to hail from a state in the East in the past decade. Maine's priorities could get more attention on the national stage because of his position.

"This gives us a spot at the table," said Nick Houtman, a University of Maine spokesman who serves on the Mitchell Center's advisory board and once ran the center on an interim basis.

Kahl believes the NIWR centers' state-based autonomy and their ability to apply grant funding to real local problems is at the heart of the group's success.

"That's how things ought to be done—cost-effective science with local leadership," Kahl declared. "That's one of the messages I want to take to Congress."