



Applying knowledge to improve water quality

Pacific Northwest

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

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EPA – Region 10:

Agriculture Sector Lead to Retire

Members of the PNW Water Regional Team and the Ecosystems and Children’s Health Unit (ECHU) at Region 10 will miss Dr. Karl Arne when he retires at the end of March 2008. Karl Arne joined the Environmental Protection Agency after finishing postdoctoral work at Duke University in 1980 where he synthesized novel pyrethroid insecticides. At EPA, as residue chemist, he initially reviewed studies submitted by industry in support of tolerances for pesticides on food and later was responsible for conducting risk assessments for pesticides in food. Being a Pacific Northwest native, Dr. Arne took the opportunity to move back to Region 10 in 1998 as a liaison from Headquarters. The idea at the time was to more closely align the understanding and vision of the Regions and Headquarters.

During his first years in Region 10, off target movement of sulfonylureas (a new class of herbicides) were suspected of causing damage to crops in eastern Washington and to other areas in the region. To address this concern, Karl led a collaborative effort between EPA Region 10 and EPA scientists from the Corvallis lab. These scientists hypothesized that these herbicides have a significant effect on reproduction in plants and conducted experiments that verified this hypothesis. This research led to recommendations for changing the testing requirements of herbicides to include the effects of these chemicals on reproduction in plants.

When the Food Quality Protection Act of 1996 was passed, the EPA was required to ensure with “reasonable certainty” that “no harm” will come to infants, children, or other sensitive individuals exposed to pesticides. Karl helped devise an EPA effort that placed an agricultural specialist at a Washington State University (WSU) experiment station in eastern Washington. This led to a successful effort to promote environmentally sensible pest management through the work of Sandy Halstead in Prosser, and also helped to strengthen ties between EPA and the agricultural community.

In the late 1990s Karl was asked to serve as Agricultural Sector Lead for the Region. As Ag Sector Lead, Karl has seen several changes through the years. This arose from an earlier effort, the Columbia River Plateau Agriculture Initiative, in which EPA staff representing several programs worked together with farmers and others in five eastern Washington counties. This effort, which promoted collaboration and cooperation as a means to attain environmental improvements proved successful and encouraged the EPA staff that this approach was an important tool for EPA. This in turn led to the formation of an Ag Sector Team of EPA staff involved in agricultural issues. This effort was started by Dr. Chris Feise, when he served as Extension Liaison to EPA, and later taken over by Karl when Chris took over as director of the Center for Sustaining Agriculture and Natural Resources at WSU.

Karl has also been involved with several EPA grant programs. Early in his tenure at the regional office he was able to fund several proposals that promoted IPM in cities and towns. Later he was responsible for managing the Pesticide



Karl Arne, retiring Agricultural Sector Lead at the Environmental Protection Agency, Region 10.



Pacific Northwest Regional Water Quality Coordination Project Partners

Land Grant Universities

Alaska

Cooperative Extension Service
Contact Fred Sorensen:
907-786-6311

<http://www.uaf.edu/ces/water/index.html>

University Publications:

<http://www.alaska.edu/uaf/ces/publications/>

Idaho

University of Idaho
Cooperative Extension System
Contact Bob Mahler: 208-885-7025

<http://www.uidaho.edu/wq/wqhome.html>

University Publications:

<http://info.ag.uidaho.edu/Catalog/catalog.html>

Oregon

Oregon State University
Extension Service
Contact Mike Gamroth: 541-737-3316

<http://extension.oregonstate.edu/>

University Publications:

<http://extension.oregonstate.edu/catalog/>

Washington

Washington State University
WSU Extension

Contact Bob Simmons:
360-427-9670 ext. 690

<http://wawater.wsu.edu/>

University Publications:

<http://pubs.wsu.edu/>

Northwest Indian College
Contact: Michael Cochrane:
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Water Resource Research Institutes

Water and Environmental Research
Center (Alaska)

<http://www.uaf.edu/water/>

Idaho Water Resources
Research Institute

<http://www.boise.uidaho.edu/>

Institute for Water and
Watersheds (Oregon)

<http://water.oregonstate.edu/>

State of Washington
Water Research Center

<http://www.swwrc.wsu.edu/>

Environmental Protection Agency

EPA, Region 10

The Pacific Northwest

<http://www.epa.gov/r10earth/>

Office of Research and Development,
Corvallis Laboratory

<http://www.epa.gov/wed/>

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Environmental Stewardship Program, which funds proposals that are designed to reduce the risk of managing pests. He has also helped with the Strategic Ag Initiative, an effort to find ecologically sensible means to manage pests in agriculture. Karl also managed the Regional Geographic Initiative grant program, using this opportunity to solicit proposals that dealt with climate change.

The Urban Pesticide Education Strategy Team (UPEST) was started by Region 10 in 1991 as a means for state agencies (Washington State University Extension, and the Departments of Agriculture, Health, and Ecology) to collaborate on promoting Integrated Pest Management (IPM) to manage household and urban landscape pests. Karl was a founding member of this team and has been active in it for most of its existence.

The mission of the Food Alliance is to support farmers who provide sustainably grown food. Karl has been a member of the Food Alliance's stewardship council, which sets standards for sustainably grown food, for the past decade and plans to continue with this association after retirement. The Food Alliance has certification and labeling programs that identify food produced using environmentally and socially responsible practices and has grown significantly over the last several years.

During the summer of 2006, the PNW Water Regional Team and the Agriculture Sector partnered with Natural Resources Conservation Service to offer an Ag 101 educational opportunity for EPA regulators and enforcement personnel. The objective of this project was to familiarize regulatory personnel with the workings of agriculture. A day and a half program of presentations about irrigated, tree fruit, and dry land farming was preceded by an on-line course in which all attendees participated. Two tours were offered to give the personnel a chance to talk to farmers. The Western Washington one-day tour visited a small-acreage farm that grows produce and meats for local restaurants, a dairy operation, and a potato farm. The Eastern Washington tour took the bus load of EPA people to a cattle operation, a wind-farm, an organic and experimental orchard, a wheat ranch, a wine-grape vineyard, and a dry land potato farm to see and appreciate the differences in the state's agriculture communities. This proved to be a unique experience for many on the tour and helped to foster important relationships between growers and regulators.

The PNW Water Regional Team has been meeting at EPA Region 10's office up to six times a year, scheduling those meetings to coincide with the Ag Sector meetings. The partnership between the Water Program and EPA has been strengthened through the interaction of the Team's Liaison and Dr. Arne. In the words of Karl Arne, "...the two organizations' missions, though different, complement each other and a partnership strengthens both."



National Water Quality Program Areas

The four land grant universities in the Pacific Northwest have aligned our water resource extension and research efforts with eight themes of the USDA's Cooperative State Research, Education, and Extension System.

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| 1. Animal Waste Management | 5. Pollution Assessment and Prevention |
| 2. Drinking Water and Human Health | 6. Watershed Management |
| 3. Environmental Restoration | 7. Water Conservation and Management |
| 4. Nutrient and Pesticide Management | 8. Water Policy and Economics |

CSREES is the Cooperative States Research, Education, and Extension Service, a sub-agency of the United States Department of Agriculture, and is the federal partner in this water quality program.