Applying knowledge to improve water quality

Pacific Northwest

Regional Water Program

A Partnership of USDA NIFA
& Land Grant Colleges and Universities

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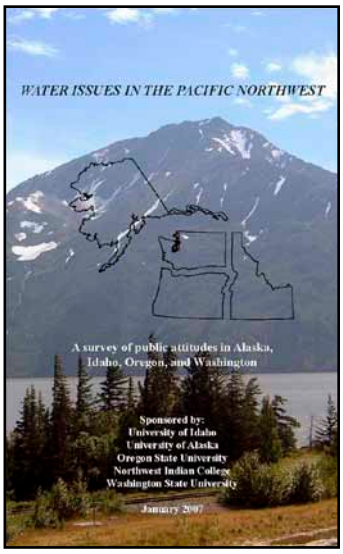
In the Pacific Northwest:

The State of Drinking Water



Drinking water is defined as water that is delivered to the consumer that can be safely used for: (1) drinking, (2) cooking, and (3) washing. In humans, water is essential for: (1) most metabolic functions, (2) assimilation of nutrients and vitamins, (3) regulation of body temperature, and (4) nourishment of body tissues. An average human adult needs to consume 64 ounces of water each day; however, that is only part of the story because we require water to grow our food, for sanitation, and for transport of many of our products to market. Only a small percentage of the water on our planet is pure enough to meet our drinking water needs.

The Pacific Northwest Regional Water Resources Team learned a significant amount of information about our drinking water resources through a regional survey we conducted in 2007. This statistically designed survey gave us a snapshot on how people in the region (Alaska, Idaho, Oregon, Washington) view our drinking water resources. Virtually all Pacific Northwest residents (99.6 percent) consider a safe drinking water supply to be personally very important or extremely important.

Based on our regional survey, we found out that 76 percent of the residents get their drinking water from a municipal (includes both community and public) water system. Conversely, 24 percent of the region's residents get their drinking water from a private well or private surface water source. Based on the Safe Drinking Water Act of 1974 enacted by Congress all municipal water supplies are required to meet federal drinking water standards. Thus all citizens served by municipal drinking water systems are assured that their drinking water is safe. To keep this water safe local communities regularly monitor and in many cases treat drinking water prior to its distribution to consumers. Thanks to this law over three quarters of Pacific Northwest citizens have an excellent drinking water supply.

For the 24 percent of PNW citizens that obtain their drinking water from private sources (individual wells, ponds, etc.) the user is solely responsible for the safety and quality of their drinking water. It is recommended that these water sources should be checked at least annually for coliform bacteria (an indication of contamination with raw sewage or animal waste) and nitrates (usually from fertilizers).

The Safe Drinking Water Act of 1974 was passed by Congress to ensure the public had a safe water supply. As a result of this Act the Environmental Protection Agency (EPA) has developed standards for contaminants in water that can adversely affect human health. However, consumers often complain about their water quality even though it is safe to drink. For instance consumers may not like the water's taste, its hardness, or its color. None of these properties adversely affect human health; however, techniques exist to rid drinking water of these undesirable aesthetics. Consequently, the 2007 survey showed that almost 12 percent of Pacific Northwest residents that get their drinking water from municipalities also have an additional water filter in their house (usually attached to the kitchen sink). Another 4 percent of consumers in our region regularly purchase five-gallon containers of drinking water. Bottled water is regulated by the Food and Drug Administration (FDA) and is considered safe; however, based on

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/
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.htm

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 Charlotte Clausing:
360-392-4319
cclausing@nwic.edu or
http://www.nwic.edu/

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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The Project

Land Grant Universities, Water Research Institutes, and EPA Region 10 have formed a partnership to provide research and education to communities about protecting or restoring the quality of water resources. This partnership is being supported in part by the USDA's National Institute of Food and Agriculture (NIFA).

Our Goal and Approach

The goal of this Project is to provide leadership for water resources research, education, and outreach to help people, industry, and governments to prevent and solve current and emerging water quality and quantity problems. The approach to achieving this goal is for the Partners to develop a coordinated water quality effort based on, and strengthening, indivudual state programs.

Our Strengths

The Project promotes regional collaboration by acknowledging existing programs and successful efforts; assisting program gaps; identifying potential issues for cross-agency and private sector collaboration; and developing a clearinghouse of expertise and programs. In addition, the Project establishes or enhances partnerships with federal, state, and local environmental and water resource management agencies, such as by placing a University Liaison within the offices of EPA Region 10.

federal regulations bottled water and tap water provided to consumers by municipalities are EQUALLY safe.

Eighty-six percent of Pacific Northwest residents consider water in their home tap safe to drink and are satisfied with their current drinking water. However, 15.6 percent of residents often use bottled water for drinking. Most of this bottled water is used for convenience while away from the home.

Based on the above snapshot of drinking water in our region most people are satisfied. There is room for improvement—especially for people with private water sources. Based on federal regulations, Pacific Northwest citizen attitudes, and the diligence of municipalities in the region for providing safe drinking water to customers our Pacific Northwest Regional Water Resources Team would give drinking water in our region an A-. This is a superior grade—but there is still room for improvement when it comes to individual drinking water sources.

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 National Institute of Food and Agriculture.

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

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