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Clean Water Month

October marks the 20th anniversary of the Clean Water Act

On June 22, 1969, the Cuyahoga River in Ohio made national headlines when it literally caught fire. To the public, the incident was a graphic indication of the nation's water quality, one demanding immediate attention.

By 1972, Congress had passed the Clean Water Act. Initially, the focus was on point sources of water pollutants, with a stated goal of "fishable" and "swimmable" water by 1983. By 1985, pollutant discharges were to be totally eliminated.

Today, though not all waterbodies are free of pollutant discharges or "fishable/swimmable," the regulations of the Clean Water Act and its amendments have resulted in a dramatic improvement in water quality. The Cuyahoga River has been restored. Lake Erie, once thought doomed, is healthier. Countless rivers and streams throughout Oregon have been successfully cleaned up. Point source pollution has been reduced, and water quality has improved by controlling these pollutants.

Taking Stock

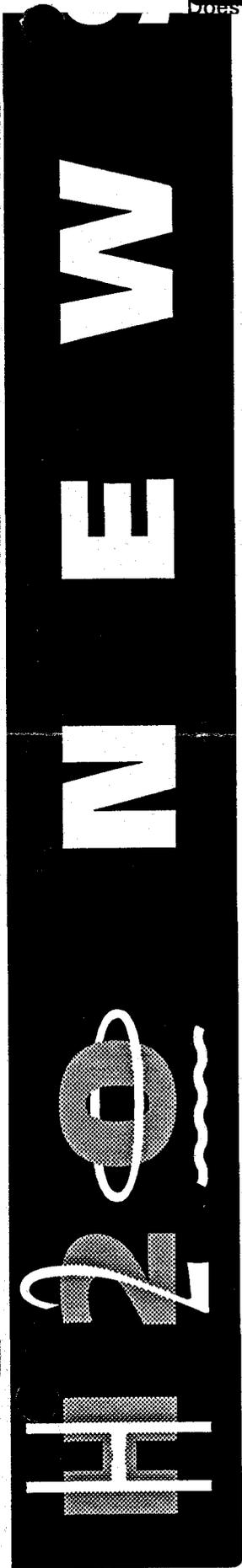
President Bush and Congress have declared 1992 as the Year of Clean Water. October is Clean Water Month, marking the 20th anniversary of the Clean Water Act.

Twenty years. More than a commemoration, Clean Water Month is a time to evaluate the progress made in improving water quality and to assess what still needs to be done to improve our nation's water quality.

Looking Forward

The toughest challenges, nonpoint source pollutants, remain; water quality is still compromised. Toxic chemicals are an increasing concern. Federal, state, and local agencies and institutions are faced with obtaining sufficient funding and achieving coordinated efforts to improve water quality. But controlling nonpoint source pollution is everyone's challenge. Forest and agricultural practices, urban runoff from roads, parking lots, and residential areas all contribute to nonpoint pollution. Progress has been made in improving water quality, but the more water is used, the more polluted it becomes.

Education and conservation are important factors in continuing the goals of the Clean Water Act. To promote these goals, America's Clean Water Foundation, a non-profit organization, has free education and conservation materials available, and co-sponsors water-related activities such as cleanup campaigns, adopt-a-stream programs, clean water exhibits, and children's water awareness activity contests. For more information, contact America's Clean Water Foundation at (202) 898-0902.



Safe Drinking Water Act Amendments

higher quality water, higher costs

By Thomas Penpraze,

Public Works Operations Divisions Manager, Corvallis

Municipal water suppliers are faced with numerous challenges as a result of the Safe Drinking Water Act Amendments. Capital improvements, increased testing and monitoring, and the need for a more highly trained operations staff are some of the outcomes of these Amendments.

Perhaps the biggest challenge is how to finance the required improvements. For example, utilities that rely on surface water sources will have to construct expensive filtration plants. In Oregon alone, it will cost about \$240 million in capital improvements for treatment works needed to comply with state and federal requirements. These costs may increase once the Act is fully implemented.

Testing and monitoring requirements are increasing rapidly. As new rules are implemented, new tests are being required, and the frequency of existing testing and monitoring requirements is also increasing.

- In 1988, 23 parameters were required to be tested.

- In 1993, over 90 will be required.

These added parameters will cost water suppliers more to provide service to customers.

Increasingly sophisticated treatment plants require more highly trained operations, maintenance, and laboratory staff to insure the plants are properly operated and maintained, and that safe, high quality water is delivered to consumers. This, too, will increase the cost of water service.

Implementing the Safe Drinking Water Act Amendments will present new challenges to the water industry and the communities it serves. In many cases, the quality and safety of the water delivered to consumers will improve. These improvements, however, come at a cost. The consumer will be faced with higher rates to pay for the increased capital and operating costs of the new facilities. In turn, the water industry's challenge and responsibility will be to contain costs as much as possible while supplying quality water to the customer.

Drinking water

The cost of clean

Clean water, really clean water is not only impossible to attain, it isn't even desirable—termed “aggressive” by water quality agencies, pure water is corrosive, and like an absorbent sponge, will try to soak up minerals and other substances.

Water treatment focuses on making water clean, but non-corrosive, containing minerals. The EPA currently requires testing for 58 contaminants, a fraction of the known substances that compromise water quality, but testing can be expensive.

- Testing for organics costs about \$115 per test. Inorganics, about \$145.
- Each test for dioxin, a highly toxic contaminant, costs about \$1,300.
- The City of Keizer, Oregon is required to test each of its 13 wells quarterly for pesticides. Each test costs \$800. Annual testing cost: \$41,600.

Water quality monitoring programs at the DEQ

Oregon's water is cleaner than it was twenty years ago, but cleanup and monitoring continue. The Department of Environmental Quality operates multifaceted programs in response to the Clean Water Act.

Surface Water and Point Source Pollution

To reduce this pollutant loading, the DEQ maintains three types of monitoring programs.

- Ambient monitoring: determines water quality and identifies problem areas needing more study. Such rivers include segments of the Willamette and Grande Ronde.

- Investigative monitoring: characterizes water quality problems and continues monitoring efforts.

- Source-related monitoring: studies effluent/receiving water mixing zones, bioassays, and point source pollutant discharge compliance.

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Conferences and Seminars

The public is invited to attend "**Drinking Water: How Safe and at What Cost?**" the Fall 1992 seminar series sponsored by the Oregon Water Resources Research Institute. Seminars will be held each Thursday from 3:30 to 5:00 p.m. in room 216, Covell Hall, on the Oregon State University campus. (Course number GS507G) For more information, call (503) 737-4022.

October 1 Who Protects Drinking Water?
The Safe Drinking Water Act *David Leland*

October 8 Managing Watersheds to Protect
Drinking Water *Richard Robbins*

October 15 Protection of Groundwater
Sources for Drinking Water *Dennis Nelson*

October 22 Large Rivers: Lots of Water,
Lots of Uses. Are They Compatible?
Stephen Hubbs

October 29 Taking Chances: How the Public
Perceives Safety and Risk *Benno Warkentin*

November 5 Health Risks from By-products
of Drinking Water Disinfection *Richard Bull*

November 12 Coliform and Cryptosporidium—
To Chlorination and Beyond *Robert Noelle*

November 19 Treating Drinking Water—
At the Source, at the Tap, or Bottled Water
Doug Wise, Irene Trippett, Mary Ann Sward

December 3 Drinking Water in International
Refugee Situations *Ronald Hall*

The Fifth Annual OSU Water Quality Conference, **Water Quality and Allocation Policy Issues** will be held November 5 and 6, 1992, at the LaSells Stewart Center on the Oregon State University campus. The conference runs from 8:00 a.m. to 4:30 p.m. Thursday, and from 8:00 a.m. to 12:10 p.m. Fri. For more information, call J. Ronald Miner, 737-6295, or Doris Montgomery, 737-4021.

The ESA Regional Conference, **The Endangered Species Act: On the Road to Recovery?** will be held in Couer d' Alene, Idaho on November 9 and 10, 1992. Presentations include:

The Endangered Species Act 20 years later—On the Road to Recovery?

Two Perspectives on the ESA: Suggestions on the Eve of Reauthorization

The Nuts and Bolts of the ESA/What the Law Says and How it Works

History, Reauthorization, and Amendment of the ESA—HR45

Tribal Rights and the ESA

Governor's Panel: Idaho, Oregon, Washington, Montana, Alaska

A Regional Perspective: The ESA and the Northwest

A Regional Overview of Impacts of ESA: At What Price Biodiversity?

Public Involvement in the ESA Process: When and How to have Meaningful Input

Case Studies and Key Issues: 8 topics

Gap Analyses: Tools for the Larger Perspective

Wrap-up: Two Views for the Future

DEQ Monitoring, *continued from page 2***Groundwater**

Passage of the Groundwater Protection Act of 1989 marked formal recognition that groundwater quality was degraded in many areas of the state. In response, the DEQ performs Reconnaissance Surveys, Intensive Investigations, and Trending Networks on groundwater quality. Much of the agency's work is in the Reconnaissance Survey stage—identifying problem aquifers—but in Malheur, Umatilla, Curry, mid-Multnomah, and Jackson counties, documented groundwater problems are undergoing intensive investigation.

Nonpoint Source Pollution

Total Maximum Daily Load (TMDL) studies continue on sections of the Willamette,

Grande Ronde, and South Umpqua, where dissolved oxygen (DO), biological oxygen demand (BOD), sediment oxygen demand (SOD), pH, nitrogen, and phosphorus are among the water quality-limiting factors. In the Columbia Slough, the TMDL for toxics is being studied.

The DEQ has started to use biological monitoring to evaluate nonpoint source pollution problems. This includes macroinvertebrate assessments, fish health and enzyme studies, periphyton growth studies and toxicity testing. Biological monitoring will continue, and depending on funding, may expand in 1992-93. The DEQ plans to update nonpoint source assessments every 6 years. Monitoring data is updated every 2 years.

Water Resources Research Institute

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