

the Water Tap

Issue 25

July 1996

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Winter Storms Challenge Washington Water Systems

Flooding in Washington is not an unusual story, but the 'Flood of 96' will be remembered a long time. Public water systems in Washington State successfully 'weathered the storm' in February and learned valuable lessons in system management. Some highlights:

City of Lacey: As the heavy rains beat down on the small Lacey-Nisqually Water System, the soil and infiltration ponds became saturated, and rising water levels on the Nisqually River were expected to crest on February 8. As rain and snow melt continued, an unprecedented release from an upstream dam was necessary. Without notice to the water system and many of the nearby residents, the valley became inundated from the water release.

The well houses and most of the distribution system were several feet under water. The system's team developed a method to isolate and maintain the distribution system. Protecting the system from further contamination was the paramount concern. A major break on the main leading to the reservoir had occurred. Clearly a boil water order was needed but would also present its own set of unique problems.

By the next afternoon, the system had lost the wells and much of the distribution system. Water covered the entire Nisqually Valley floor, and the full extent of damage was unknown. Given unique hazards carried in flood waters, returning the operation of the water system safely was the foremost concern. System pressure was lost and infiltration of the wells and distribution lines was anticipated because line breaks were probable.

Finding the leaks required pressurizing the system and putting non-potable water into the system. The residents welcomed restoration of water service but for the purveyor it represented a challenge, as communication with each service was mandatory. Initially, customers were warned not to drink the water, which was only suitable for washing down flood debris.

Once all lines were repaired, a systematic flushing of the lines was performed. At this point a boil water order was issued, letting consumers know the water was fit to drink only after boiling.

With lines repaired and the water system under a boil water order, testing of the water in the distribution system proceeded. On Monday, February 19th, coliform analyses came back negative and the boil water order was lifted. Ten days after having lost the entire system, it was back in service producing and distributing safe water to its customers.

Town of Colfax: Eastern Washington communities were also affected. While residents of Colfax were nervously watching the Palouse River (normally a muddy trickle) rise to the top of twenty-foot-high concrete channel walls, the water system operators shut off the transmission main that runs along the river. The transmission main held, but the springs that provided the source of supply were inundated. Test results showed the presence of fecal coliform. During the flood the system operated from the wells in town and the contaminated water never entered the distribution system.

Town of Palouse: The only well serving the Palouse system was also threatened by the rising waters of the Palouse River. Residents decided that saving the downtown area was hopeless, but the water system had to be protected. Nine hundred volunteers worked in shifts building levees. It took 2,100 tons of sand and gravel and 15,000 sand bags to construct a 12-foot-high wall.

Town of Dayton: System operators watched debris being rapidly carried down the North Touchet River. As water levels began to rise up to meet the bridge on Highway 12, a critical decision was made to valve off the main. A competent operator saved the town from a serious contamination problem. Less obvious was the good design work done by the engineer who had the forethought to install valves on each side of the bridge.

For the most part, community water systems weathered the 'Flood of '96' pretty well. Most systems experienced only minimal damage. The efforts of dedicated water system operators protected the infrastructure and, more importantly, the public health of their consumers. It re-enforced the necessity for each system to develop an engineering response plan as part of good water system planning and operation.

WAC Revisions

The Drinking Water Program has begun revising portions of the regulation governing design, construction, and operation of Group A water systems (WAC 246-290).

The proposed revisions fall into three general categories. The first clarify and simplify the water system design standards. The changes will allow approval of projects by Program staff with less scrutiny of the details of the plans, provided the submittals are made by licensed engineers or other certified professionals and meet other criteria. Statewide workshops on these revisions were held in May.

The second set of revisions focus on various planning requirements imposed on water systems. The revisions will be to provide additional explanation and detail on planning requirements and bring them up-to-date with changes in the law enacted by the Legislature.

The third category of revisions are essentially "housecleaning" changes. They correct errors in

the current rules and make minor changes to the water quality standards to bring them into conformance with federal standards.

The current schedule envisions development of a draft rule this summer. Before and after the rule is published, there will be workshops and other opportunities for public participation. The rule-making process includes analysis of costs and benefits of the proposed changes. Expect adoption of a final rule early in 1997.

For further information, please contact Lisa Raysby at 360.664.3951 or Craig Downs at 360.586.8124 on the design standards, or Richard Sarver at 360.586.8123 on water system planning requirements.

Waterworks Standards

The revised Draft *Waterworks Standards* was made available to interested persons in late April. This version of the *Standards* reflected comments received on the September, 1995 draft. Chapter 6, Water Demand Requirements, and Chapter 12, Water Quality Treatment, were substantially revised. All chapters of the document are now complete. The *Waterworks Standards* provide guidelines to the engineering profession in the design and construction of Group A public water systems.

The Department of Health conducted technical workshops during May seeking technical guidance and feedback on policy direction for proposed revisions to regulatory language in WAC 246-290. The scope of the proposed regulatory changes will be limited to design standards, structure of the engineering project report, and construction document review and approval process.

Because of limited resources and the technical nature of design standards, the initial draft and the revised draft document were not distributed to all Group A public water systems. Public workshops with widespread public water system notification will be held in the early fall with the completion of a final draft and proposed WAC revisions.

For more information on these *Waterworks Standards* or future workshops, contact:

Lisa Raysby
Phone: 360.664.3951
INT: lar0303@hub.doh.wa.gov



A Letter From The Director

There are two items that I want to bring to your attention in this issue of Water Tap.

Water Supply Advisory Committee

Over fifty key stakeholders attended a two-day retreat to help the Division of Drinking Water develop its policy and budget proposals for the 1997 legislative session. Judy Turpin, Chair of the Water Supply Advisory Committee (WSAC), led the group through a series of discussions and work sessions that produced a number of key principles which will shape and influence the Department's policy and budget as well as day-to-day operations for a good many years. WSAC recommendations will become part of the report to the Legislature that is scheduled for publication in November.

You can expect the report to make recommendations regarding how to prioritize time and resources to best protect public health and deliver services in a cost-effective manner; how to best provide Drinking Water Program functions through local health jurisdictions (LHJ's) and third party providers; how to restructure the Drinking Water Program Budget (including revisions to Operating Permit fees); to clarify relationships between the state and LHJ's in a manner that recognizes the Public Health Improvement Plan (PHIP), and to include specific recommendations to improve data management, technical investigations, compliance, planning, and public education and training.

Operations Manager

With the recent reorganization of the Division of Drinking Water, Alan Rowe has been appointed Operations Manager. He will direct, coordinate and oversee field operations by our three regional offices and the activities of the Assurance Section. Besides conducting routine coordination efforts, he will focus on addressing statewide issues relating to how the Program carries out its responsibilities. His past experience in local government and with every aspect of the State Drinking Water Program provides the foundation he will draw upon in his new position. With these changes we can expect a more consistent, smooth-running and efficient program.

Alan states that communication, facilitation and leadership are important skills he plans to exercise as we work together towards accomplishing the goal of the Drinking Water Program --- to provide safe, reliable and affordable drinking water to all consumers.

Sincerely,

B. David Clark
Director

What's on the Web about Water?

The World Wide Web (WWW or "Web" for short) affords access to the Internet, an extraordinary universe of information. It is a world of computer connections unfettered by national borders and boundaries. Everything about the Web is new and largely unregulated -- both a blessing and curse.

Any individual with the knowledge, software, enough Random Access Memory in a computer, and Internet access, can put information on the Web. Some sites provide thousands of links to related information; others are extremely limited.

To connect to specific information through the Web, you must know the address or Uniform Resource Locator (URL). So much information is available on the Web that it's necessary to use a browser to sort through data. With a Web browser, it is possible to type in key words or topics and receive a list of Web sites/URL's. The primary rule is: type the address exactly as it is written. This system will not recognize an address if it contains an extra space or incorrect letter.

Following are a few of the many Web sites that supply environmental and drinking water information:

- Amazing Environmental Organization Web Directory
<http://www.webdirectory.com/>
- U.S. Environmental Protection Agency
<http://www.epa.gov/>
- U.S. Geological Survey (USGS)
<http://h2o.usgs.gov/>
- University Water Information Network
<http://uwin.siu.edu/>
- American Water Works Association
<http://www.awwa.org>
- *U.S. Water News On-line*
<http://www.mother.com/uswaternews/>
- Natural Resources Defense Council
<http://www.igc.org/nrdc>
- The Glossary of Water Resource Terms (This site lists definitions for terms from acre-foot and activated carbon dsorption to wetland.)

<http://www.txdirect.net/users/eckhardt/glossary.html>

Source: *On Tap* Spring 1996

Division Proposes New Policies on ERU and Transfer of Ownership

The Division's Assurance Section has utilized workgroups to draft two policies to evaluate system capacity and transfer system ownership. Both policies are crucial to the administration of a successful program. Capacity relates to whether a system is adequate, and ownership establishes who is responsible for complying with requirements. Following is a brief summary of the policies:

Capacity: Water systems will calculate capacity as part of their project report or water system plan (WSP). Capacity will be expressed in "Equivalent Residential Units" (ERU's) rather than service connections to allow for non-residential water use in a system. For systems with less than 500 services, new ERU's will be tracked against the system's limit identified in their approval letter. Larger systems may add ERU's in accordance with their approved WSP. A system's operating permit will be Green as long as the number of ERU's it serves does not exceed the limit stated in the Department of Health (DOH) approval letter.

Transfer of Ownership: When a change in system ownership is being considered, both parties should meet with DOH to discuss system status and responsibilities of ownership. Official system transfer will occur when DOH receives and accepts the bill of sale or other documentation of the change, and a new Operating Permit is issued. Other steps in completing the transfer will include submittal of a new Water Facilities Inventory Form (WFI), and the development of a WSP if one is needed. There will be a \$89 processing fee charged the new owner of Group A community systems, and no fee for non-community systems.

The capacity policy is currently in the final stages of review, and the transfer of ownership policy has been approved and is being implemented.

Training Opportunities

<u>Month</u>	<u>Topic</u>	<u>Location</u>	<u>Contact</u>	<u>Phone</u>
July	IHS - Operator Training	Wenatchee	Amy Spencer	503.928.5055
	Customer Services Teleconferences	Everett	Bill Beckman	360.629.9731
	Small System Training	Alderbrook	MHCW	360.753.8730
Sept.	Disinfection Methods	Lacey	Ronni Woolrich	360.586.1096
	Iron/Manganese Treatment	Vancouver	Dennis Ripp	360.225.7800
	Unique Engineering Projects	King County	Duane Huskey	206.631.0565
Oct.	Drinking Water Priorities	Tacoma Richland	WETRC	1.800.562.0858
	O & M Short School	Everett	Marla Carter	206.259.8875
Nov.	Distribution O & M	Steilacoom	Ronni Woolrich	360.586.1096
	Telemetry Troubleshooting	King County	Duane Huskey	206.631.0565

Coliform Training Workshops

Thanks to a grant from the Environmental Protection Agency, the Department of Health (DOH) conducted a series of free coliform workshops this spring. The workshops, "How to Comply with Total Coliform Monitoring Requirements in Washington State," were offered to very small water systems in 12 locations throughout the state.

Our state's small water systems often do not have the resources available to larger systems. To assist these systems, the classes were designed to help owners and operators provide safe drinking water to their customers by explaining coliform monitoring requirements and what to do when a sample is unsatisfactory.

The workshops were taught by the DOH staff who oversee the Coliform Monitoring Program. Topics included:

- Public Health Significance of Monitoring
- Coliform Monitoring Requirements
- How to Select a Good Sample Collection Site
- How to Take a Water Sample
- What to Do if You Get an Unsatisfactory Coliform Sample
- How to Prepare a Coliform Monitoring Plan

If you represent a small water system and would like to borrow a tape and study guide from a workshop, please call the Regional Office nearest you:

Pat McCaffery, Spokane, 509.456.2788
 Jennifer Prodzinski, Seattle, 206.464.6752
 Sandy Brentlinger, Olympia, 360.753.5090

AWWA Offers Scholarships for Cross-Connection Control Related Certification Courses

Information on the Ray Pettie Memorial Scholarship Fund (administered by the Cross-Connection Control Committee Pacific Northwest Section AWWA) is now available. The fund's purpose is to defray expenses incurred for cross-connection control related certification courses (CCS and BAT). Public water systems with less than 2,500 services are eligible.

For additional information and applications, contact Bill Stone of Stone-Drew/Ashe and Jones, Inc. at 206.763.2850.

Source Approvals Reduce Future Problems

Department of Health (DOH) staff are currently working on potentially significant changes to the current DOH source approval process. Proper well placement combined with sufficient protective measures established at the time of source approval serve as a cost-effective, proactive approach to reducing future operational problems, particularly for small systems. Development of new written guidance should decrease the number of problems associated with newly approved PWS' s and be useful to local health jurisdictions (LHJ' s).

A DOH workgroup reviewed the existing source approval process and identified several areas for improvement:

- 1) Clarification of relationships between Washington State DOH, LHJ' s, State Board of Health, and the Department of Ecology in the approval process;
- 2) A compilation of methods for physical protection of wellheads;
- 3) Criteria for evaluating sanitary control area (SCA) size reduction waiver requests;
- 4) Procedures for pumping tests and other hydrogeologic assessments to evaluate a well' s ability to provide "safe and reliable" yields;
- 5) Definition of features or activities which, if located near a proposed PWS well, should either result in the well not being approved or, if approved, requiring either a larger SCA and/or mitigation measures; and
- 6) Refinement of the model SCA covenant to address both confined and unconfined settings and physical protection measures.

DOH consultants are working with DOH Regional Offices and LHJ' s to ensure the final products meet the needs of the people in the field.

If you have questions or would like to be involved, please contact David Jennings at 360.586.9041.

Water System Planning Guidance Document is Being Developed

The Department of Health (DOH) is updating the *Planning Handbook*. This Handbook assists consultants and larger utilities prepare water system plans that must be submitted to DOH for approval. This document should be available later this summer.

DOH is also preparing separate planning guidance documents for smaller, less complex systems. Guidebooks for new and expanding systems should also be available by this summer. A guidebook for non-expanding systems should be available this fall. These guidebooks will provide an easy-to-complete format that should simplify plan preparation and reduce the cost of developing these plans.

In the future, further cost reductions for systems are anticipated as DOH moves to reduce the requirements for having a licensed professional engineer responsible for preparing all of the elements of a water system plan.

If you have any questions, please contact Richard Sarver at 360.586.8123.

Expedited Repeal of Certification Board WAC

As part of regulatory reform, the Legislature has created a new process for agencies to have expedited repeal of outdated or unnecessary rules. A list of such rules is published in the State Register around July 17. They are automatically repealed if no written objection is received within 30 days. The Department of Health (DOH) has proposed the expedited repeal of the WAC creating the Water/Wastewater Operator Certification Board, because the Legislature abolished the Board in 1995. The Drinking Water Program has replaced the Board with a separate advisory committee.

Anyone wishing to object to the repeal may file written objections with Michelle Davis, DOH Rules Coordinator, P.O. Box 47890, Olympia, WA 98504-7890.

If you have questions, please contact Cheryl Bergener at 360.753.7433.

EPA Reports Water System Needs Survey Results

The Environmental Protection Agency (EPA) has prepared a draft report to Congress with the results of its national survey of water system capital needs through the year 2014. The results will not be publicly released until the report has been approved by the Office of Management and Budget (OMB), which is expected to happen sometime this summer.

Preliminary figures for Washington systems totaled \$2.97 billion. These are figures from the ten largest systems in the state (serving over 50,000 population), and a sample of the remaining 2,312 Group A community water systems in the state subject to the federal Safe Drinking Water Act (SDWA). The figures from the representative sample of smaller systems will be entered by EPA into a mathematical model that will project a statewide total for all Group A community systems. That final total should be somewhere between \$4 and \$5 billion for the entire state. This is significantly higher than the \$2.2 billion in capital needs survey conducted by the Department of Health in Washington in 1992.

EPA anticipates using its report to demonstrate to Congress the need to initiate a federal State Revolving Loan fund program as part of the reauthorization of the SDWA.

The Drinking Water Program would like to thank the 93 systems in the state that took the time to participate in this national effort.

For more information on the Needs Survey, please contact David Monthie at 360.664.9583.

Legislation Establishes Intertie Deadline

All Group A public water systems (PWS's) received a notice in early April informing them of an opportunity to have interties that did not receive all necessary approvals from the state

recognized in some circumstances. "Interties" are interconnections between separate PWS's

permitting the exchange or delivery of water between those systems for other than emergency supply purposes.

RCW 90.03.383 contains provisions which allow interties that were in use, or that received written approval from the Department of Health (DOH), prior to January 1, 1991 to be legally recognized. The water use must be within instantaneous and annual withdrawal rates specified in water right documents. In addition, the area being served must be within a service area identified in a water system plan and/or coordinated water system plan. To qualify for such recognition, the law requires that a notice of the interties be filed with DOH and the Department of Ecology (Ecology) no later than June 30, 1996.

DOH will charge a \$78/hour fee for reviewing such intertie notifications and Ecology will have a nominal recording fee for the updated water right documentation. Systems with emergency use only interties or interties that have all the necessary approvals do not require notification to the state.

If you have any questions or would like to receive a copy of the information required to be filed with such notices, please contact Erik Fairchild (DOH) at 360.586.5207, or Doug McChesney (Ecology) at 360.407.6647.

AWWA Offers Help to Small Water Systems

The American Water Works Association (AWWA) offers a toll-free informational support hotline for any question or problem regarding drinking water or utility operations. The AWWA's *Small System Operational Support Hotline* is a free service for small water systems in the United States and Canada with fewer than 1,000 service connections. The line is staffed Monday through Friday from 8:00 A.M. to 5:00 P.M. Mountain Time. For assistance, please call 1.800.366.0107.

Dear Dr. Drip:

The Drinking Water Program used to regularly send our system updated lists of DOH Approved Backflow Prevention Assemblies. This was one of the few government services we really appreciated since we need the most recent list to comply with the Cross-Connection Control Program requirement to install DOH approved assemblies. Why haven't I gotten a new list recently?

Waiting and Wondering in Washtucna

Dear Waiting and Wondering:

Good thing you asked, or you'd have been waiting a long time! Sorry, but due to resource limitations, the Drinking Water Program has had to cut this service. The Pacific Northwest Section of AWWA is now distributing the list for DOH. To request a list, contact:

Judy Grycko
PNWS-AWWA
P.O. Box 91581
Portland, OR 97280-0581
Phone: 503.246-5845
FAX: 503.246.6034
INT: pnwsawwa@teleport.com

A fee of \$3.00 (made payable to PNWS) covers printing and mailing costs.

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