

Northern Flows



Alaska's Drinking Water Program Newsletter
 Issue 29 • Spring 2007

Important Information



For Water System Operators and Owners

Northern Flows

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Message from the Manager

It is a new year and spring is here. If you have not already done so, this is a perfect time for all public water system owners to put together a written plan for what they would like to accomplish this year for their system. A good place to start would be to review the 2007 compliance monitoring schedule for your system. You should be receiving your 2007 compliance monitoring schedule for your system soon from your local Department of Environmental Conservation (DEC) Drinking Water (DW) Program staff. Your compliance monitoring schedule identifies the required monitoring for your system for the year. Before it gets late in the year and also before the year gets really busy, such as summer time, take note of what needs to be done and when it needs to be completed. A good way to start would be to take your written plan and start your required monitoring early. Also, get your sanitary survey scheduled as soon as possible, follow your written plan, and allow for the unexpected. Remember, your compliance monitoring schedule is like a "menu,"

and this menu helps you provide safe drinking water to your customers and visitors to the State of Alaska.

We have two major Drinking Water Regulations, 18 AAC 80, revision projects planned for this year. The first of these regulations revision projects will be significant and time consuming, and will entail the repeal of Article 3 (Standards, Monitoring, Variances and Exemptions) and Article 6 (Surface Water Treatment) and the adoption by reference of the applicable Title 40 Code of Federal Regulations (CFRs). Additionally, and at the same time, we plan to phase out use of the State of Alaska nomenclature for the classification of Alaska public water systems (PWSs) consisting of Class A and Class B systems and to adopt the federal nomenclature consisting of Community, Non-transient non-community, and Transient non-community water systems. Our primary goal with this major regulations revision project is to have the State's Drinking Water Regulations consistent with the federal drinking water rules contained in 40 CFR Parts 141, 142, and 143. This consistency between State of Alaska regulations and federal drinking water rules will allow for easier regulation revisions and future adoption-by-reference rules projects as the federal drinking water rules are revised and amended over time. Some specific federal drinking water rules the state is planning for over the next three years include the Long Term 2 Enhanced Surface Water Treatment Rule (finalized January 5, 2006), the Stage 2 Disinfectants/

Disinfection Byproducts Rule (finalized January 4, 2006), Ground Water Rule (finalized November 8, 2006), and the proposed Lead and Copper Rule Revisions (EPA plans the final rule for late 2007) and Total Coliform Rule Distribution System (EPA plans the proposed rule for 2008).

The second Drinking Water regulations, 18 AAC 80, revision project planned for 2007 includes the clarification and deletion of much of the Class C PWS regulations. Class C PWSs are those state-regulated water systems that are not private water systems and also do not meet the basic requirements of the federal definition of a PWS. Some specific state-regulated PWSs, such as day-care and elderly care facilities, will continue to be regulated under the revised Class C PWS regulations.

Many Alaska PWS owners will soon be contacted by U.S. EPA staff from Washington, D.C., or their contractor, the Cadmus Group, concerning several significant national drinking water projects and activities in progress for calendar year 2007. All of these projects are important and include the 2007 Needs Survey, the Community Water System Survey, and the Unregulated Contaminant Monitoring Rule (second cycle). If your water system is contacted by U.S. EPA staff, please respond with the requested information in a timely manner. The information collected from these national drinking water projects helps define funding levels for the Drinking Water State Revolving Fund and also what contaminants EPA may, or may

Continued on page 4

<h2>This Issue</h2>	
Sanitary Surveys	Sanitary Survey Forms and Classes
11	13
Regulations Corner	PWS "Honor Roll"
2	5
Homer Receives EPA Award	EPA Staff
4	2
Source Water Protection and Assessment	The WCIT Tool
12	3

Regulations Corner *by Gloria Collins*

Hello! As we emerge from another winter, we can ponder the new things in store for us as we welcome the longer days of spring. And, you might be asking, what new things are planned for Alaska's drinking water regulations this year?

On the horizon are changes that will align our state regulations more closely with the federal regulations. We plan to revise 18 AAC 80.300-375 (Article 3, *Standards, Monitoring, Variances, and Exemptions*) and 18 AAC 80.600-699 (Article 6, *Surface Water Treatment*). These revisions will adopt by reference the relevant provisions from the Code of Federal Regulations (CFRs). So look for references to 40 CFR Part 141 to replace material in our Articles 3 and 6.

At the same time, we plan to change the language used for the different classes of public water systems (PWSs). We will adopt the federal nomenclature of



Community water system (CWS), Non-transient non-community water system (NTNCWS), and Transient non-community water system (TNCWS) to replace the current Alaska classification of *Class A* and *Class B* public water

systems. Also planned is a revision of *Class C* PWS provisions for clarification.

Those changes are expected to occur by the end of 2007. We are excited about these changes, as they will eliminate a source of possible inconsistency between the two sets of regulations (federal and state).

As always, if you see inconsistencies in Alaska's drinking water regulations, please let us know. You can contact Gloria Collins, Regulations Specialist, by phone at (907) 269-3075 or by email at gloria_collins@dec.state.ak.us.

Thanks! And Happy Spring! ~

Do You Know EPA Region 10 *by Kathy Kastens*

Here are some of the Region 10 staff in Seattle that you may occasionally work with. (Left to right) Bill Chamberlain: Bill is the Capacity Development and Operator Certification Coordinator for Region 10, and frequently assists DEC's engineers with drinking water system optimization efforts. Jennifer Parker: Jennifer is the Project Officer for Alaska's Public Water System Supervision grant, which provides about \$2 million annually for Alaska's Drinking Water Primacy Program activities; Jennifer is also the Project Officer for the Drinking Water Protection group. Jean Iriarte: Jean works with a number of Alaska's drinking water systems, helping them return to, or maintain, compliance with drinking water regulations. Rick Green: Rick is the Coordinator of the Region 10 Drinking Water State Revolving Fund, which provides approximately \$8 million annually to Alaska for drinking water infrastructure loans and technical assistance to water systems.



The EPA Alaska Operations Office is in Anchorage. On the left is Dennis Wagner, who coordinates the Safe Drinking Water Act Tribal Set-aside, the Clean Water Act Indian Set-aside, and the Alaska Native Village Infrastructure grant programs for Region 10. On the right is Joe Sarcone, who assists tribes and rural communities with various sanitation issues and coordinates with other Federal and State Programs. Both Joe and Dennis are located in the EPA Alaska Operations Office. ~

Enhanced Sanitary Survey Forms and Refresher Courses *by Kathy Kastens*



to

that we need to make will be done before the next field season. We will be having in-house training for the DW Program staff and the third-party inspectors who want to participate in the beta testing, sometime in April 2007. For those third-party inspectors who are interested, please contact the program office in your area and let them know.

For all DEC-approved sanitary survey inspectors needing an advanced refresher course to stay current, you will receive an extension until the new Advanced Refresher Course is available, which will be in September 2007. Further information will be mailed out when the course and dates are finalized. For more information, you can contact Leticia Tadina at (907) 269-7517. ~

Dear Doctor Drip: How will I know if my water isn't safe to drink?

A public water system is responsible for notifying its customers by newspaper, mail, radio, TV, or hand-delivery if the water does not meet state or EPA standards or if there is a waterborne disease emergency. The type of notification consumers receive will depend on the severity of the emergency. The notification should describe any precautions that need to be taken, such as boiling your water. The most common drinking water emergency is contamination by disease-causing micro-organisms (pathogens). Boiling the water for two minutes will kill most pathogens. You can also use common household bleach or iodine to disinfect your drinking water at home in an emergency, such as flooding. Each year, communities all over Alaska experience contamination of drinking water wells (private and public) due to flooding. It is important to protect the drinking water source as much as possible from potential flooding and other contamination. If you or your community experiences a flooding event or other drinking water contamination emergency, please follow the directions below to make sure your drinking water is safe.

Emergency Disinfection of Drinking Water:
Use only water that has been properly disinfected for drinking, cooking, making prepared drinks or ice cubes, and for brushing teeth.

1. Use bottled water that has not been exposed to flood waters if it is available.
2. If you don't have bottled water, you should boil water to make it safe. Boiling water will kill most types of disease-causing organisms that may be present. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for boiling. Boil the water for two minutes, let it cool, and store it in clean containers with covers.
3. If you can't boil the water, you can disinfect it using household bleach. Bleach will kill some, but not all, types of disease-causing micro-organisms.

Doctor Drip encourages you to send in any questions to: The Drinking Water Program, 555 Cordova Street, Anchorage, Alaska 99501; or email them to the editor of Northern Flows: kathaleen_kastens@dec.state.ak.us, or call in at (907) 269-7639. We look forward to hearing from you.

Answer: Check valves are used to prevent water from reversing flow direction in a line.

Wellhead Protection, Source Water Protection Plan, Wellhead Protection Plan, Watershed Protection Plan, Drinking Water Protection Program, Source Water Assessment... What do these terms mean? How do they differ? Simply put, these terms describe the same thing: the first layer in a multi-layered, multi-barrier approach to protecting our drinking water. Here is a quick cheat sheet to help you sort through this nomenclature jargon for a public water system (PWS):

Source Water Assessment: A report completed by DEC for all PWSs. The assessment identifies the location of public wells and intakes, delineates a protection area, and establishes a risk ranking for wellheads, aquifers, and regulated contaminants. The assessment (a 1996 SDWA Amendments requirement) results in a risk ranking for each source of drinking water used by a PWS, and information contained within the assessment is used to help process monitoring waivers. **No specific actions are recommended or required.**

Source Water Protection Plan/Drinking Water Protection Plan: Identifies strategies to be implemented by the PWS and/or community to reduce the contamination risks to the drinking water source. **Specific actions are required.** Creating and implementing a plan is voluntary by the community and/or PWS owner. A PWS implementing a DEC-endorsed Source Water Protection Plan may receive treatment credit under the Long Term 2 Enhanced Surface Water Treatment Rule, increase the possibility of obtaining monitoring waivers, and increase eligibility for a reduced sanitary survey frequency.

Wellhead Protection Plan: A Source Water Protection Plan for a PWS using **groundwater** as the drinking water source.

Watershed Protection Plan: Often refers to a Source Water Protection Plan for a PWS using **surface water** as the drinking water source. **This protection plan is required for all surface water systems avoiding filtration.**

For a CD-ROM to help you develop a Protection Plan for your PWS, whether for wellhead or watershed, contact the Drinking Water Program at (907) 269-7549. We're here to assist you in developing a protection plan for your system and/or community. ~

Dear Alaska Public Water System Owners and Operators,

You and your security staff will want to participate in a **free** upcoming security webcast taking place on Thursday, March 29, 2007, at 9:00 a.m. (Alaska Time).

Entitled "Utilities Helping Utilities: Developing a Mutual Aid Response Network for Water and Wastewater Systems," this webcast is brought to you free of charge by AWWA through a USEPA grant and will provide you with an understanding of WARN, an extremely important concept for emergency response planning and response.

Events such as 9/11 and Hurricane Katrina identified a need for water and wastewater utilities to create intrastate mutual aid and assistance programs. Developing a Water/Wastewater Agency Response Network, or WARN, is a low-cost, highly effective, all-hazards approach to preparing your utility for a local, regional, statewide, or national disaster. This may be especially relevant to Alaskan water systems, which are located so distant from the other states. Specifically, this webcast will cover:

- The fundamentals of WARN, including what it is and why it has recently become a "hot" topic;
- The benefits of having a WARN and the operational mechanics of why having an agreement is important;
- How WARN fits in with the various Federal initiatives;
- Moving from intrastate to interstate mutual aid and how interstate mutual aid works;
- The nexus of WARN with the Emergency Management Assistance Compact; and
- Testimony of Effectiveness of mutual aid networks from someone that's used them.

To register and for more information, please visit AWWA's website at <http://www.awwa.org/education/webcasts/>

If you have any questions, please contact John Whitley of EPA's Water Security Division at (202) 564-1929 or whitley.john@epa.gov.

To address public health concerns arising from contamination of drinking water, EPA has developed the Water Contaminant Information Tool (WCIT). Launched in November 2005, WCIT is a free, secure, web-based database that provides current, reliable information on contaminants of concern to drinking water and wastewater security. The WCIT database currently includes 93 (up from 48 in 2005) contaminants from the major classes of potential drinking water contaminants.

WCIT Audience

Access to this password-protected tool is granted to individuals who are involved in water contamination planning and response, such as an Emergency Response (ER) Lead. Personnel from drinking water and wastewater utilities, state primacy agencies, federal agencies, government laboratories, and water industry associations are included, with password-protected access. State public health organizations that provide support in planning for and responding to water contamination threats and incidents are also granted access to the WCIT database.

WCIT Data

The WCIT database contains information on the contaminants of concern to water security. Although

these contaminants may or may not be regulated, they could pose a significant threat to public health if accidentally or deliberately introduced into drinking water.

The information in the WCIT database is collected from publicly available and peer-reviewed sources. WCIT database users can access information on several types of contaminant information, including synonyms and degradation products, chemical formulas, availability, contaminant characteristics (odor, color, and taste), contaminant properties, early warning information, fate and transport, medical information, toxicity, environmental indicators, analytical methods, and field tests. Data on drinking water and wastewater treatment and infrastructure will be added to the system on an ongoing basis.

WCIT Features

Users can search the WCIT database for a variety of different types of data. They can also create custom reports that provide references for all data, and compare the properties of several contaminants. In addition, users are able to perform simple risk calculations for different exposure scenarios. The WCIT database also provides a glossary, help module, and links to additional resources.

WCIT Applications

The WCIT database assists in both planning for and responding to drinking water and wastewater contamination threats and incidents. As a planning tool, the WCIT database supports vulnerability assessments, emergency response plans, and site-specific response guidelines. As a response tool, the WCIT database provides contaminant data to help responders (including utilities) make appropriate response decisions. The WCIT database has recently added information regarding decontamination to assist utilities in planning and implementing decontamination procedures, as well as drinking water treatment options to be used by utilities to evaluate behavior of contaminants in water. WCIT also helps EPA to identify gaps in contaminant data, which will, in turn, help inform future research efforts.

WCIT Access

Access to the WCIT database via the password-protected website will be granted to all of the users described above. To apply for access to WCIT, visit <http://www.epa.gov/wcit>.

For additional information on the WCIT database, please contact the WCIT Hotline at WCIT@csc.com or (703) 461-2100. ~

Does your PWS have a change of personnel, phone number, and/or address? Please let us know! It's easy to download the PWS Contact Update Sheet from the DEC website at <http://www.dec.state.ak.us/eh/docs/dw/Security/PWS%20FACT%20Sheet.pdf> and fax your current information to Shannon DeWandel, PWS Security Specialist, at (907) 269-7655. Or you can email Shannon at shannon_dewandel@dec.state.ak.us or call her at (907) 269-8924. ~

Remember the AWWMA Conference
will be in Fairbanks, AK, May 7-10, 2007

Message from the Manager cont'd *by James Weise*

not, regulate in the future. If your water system is one of the few Alaska systems contacted for the 2007 Needs Survey, the DEC DW Program has a specially trained and energetic engineering staff member, Chris Clark in the Anchorage office, ready to assist you in completing the survey. Chris can be reached at (907) 269-7631 if you need assistance. At the current time, due to limited DW Program resources, EPA Headquarters is completing early implementation of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 Disinfectants/Disinfection Byproducts Rule (Stage 2) in Alaska. Again, if your water system is contacted by U.S. EPA, please provide the information required under these rules in a timely manner.

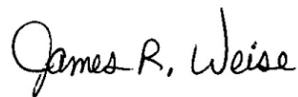
In this issue of the newsletter, you will notice something new--the Alaska 2005 PWS "Honor Roll." We plan to acknowledge on an annual basis those Alaska PWSs that did not

incur a violation of a federal drinking water requirement for monitoring, reporting, or an MCL. Please review the 2005 PWS Honor Roll to see if your local water system has met this mark of excellence.

Trying to keep pace with implementation of the Safe Drinking Water Act Amendments of 1996 requirements, the DW Program continues recruitment for engineering and Environmental Program Specialist staff as we increase staffing levels in the program. Our plan for 2007 through 2008 is to add an additional engineer in the Anchorage office, several Environmental Program Specialists in the Fairbanks, Wasilla, and Anchorage offices, and an Environmental Program Technician in the Juneau office. If you are interested in working in a challenging and dynamic public health regulatory program, check out Workplace Alaska recruitment notices during the year as we post these DEC DW Program positions. All of these

positions provide support and promote the program's focused goal of "Alaska drinking water, good to the last drop." Look for Workplace Alaska recruitment notices at <http://www.jobs.state.ak.us/> and click on "Workplace Alaska."

To keep us "in the know" on both drinking water and wastewater regulatory and public health issues, let's not forget the annual Alaska Water Wastewater Management Association conference in Fairbanks, AK, May 7-10, 2007. Several DEC DW Program staff will be providing presentations on regulatory, PWS Security, and Drinking Water Protection issues. Let's have a great spring as we plan for our very busy, but short, fun-filled summer. ~



James Weise
Manager
Drinking Water Program

City of Homer Receives EPA Award *by Kathy Kastens*

The City of Homer is the Alaska recipient of one of the EPA's 2006 Drinking Water Statewide Revolving Fund (DWSRF) Awards for Sustainable Public Health Protection. The DWSRF Awards recognize the most innovative and effective DWSRF projects during the year. Each State can nominate one DWSRF project for the Awards. To qualify, a project must meet three mandatory criteria:

- ☞ Compliance with the Safe Drinking Water Act;
- ☞ Audits or financial reviews show that there are no financial problems with the project; and
- ☞ For award recipients who are

borrowers, the project was ranked high on the project priority list for public health benefits.

The DWSRF Awards annually reward borrowers and their supporters who achieve results that go beyond the typical project, showing exceptional creativity and dedication to public health protection. Each nominee also must demonstrate leadership in at least one of these four additional criteria:

- ☞ Innovation in financing;
- ☞ Innovative approach to planning and/or project implementation;
- ☞ Creative use of partnerships; or
- ☞ Promoting sustainable infrastructure.

The City of Homer used a DWSRF loan to extend its drinking water distribution system into residential areas that had previously been served by private wells or hauled water. The loan also financed a master plan for drinking water infrastructure improvements. Homeowners who were added to the distribution system will repay between fifty and seventy five percent of the cost of the distribution-system extension over 20 years. In addition, revenues from a 0.75% tax on all purchases within the City of Homer will repay the rest of this project's cost. Congratulations, Homer!! ~

Sanitary Survey - Like an Ounce of Prevention *by Raymond O'Neill*

Why do we have Sanitary Surveys?
'Cause Sanitary Surveys keep our systems healthy!

The sanitary survey does more than just meet a regulatory requirement - it keeps our water systems healthy and helps to assure consumers that they are drinking safe water. Sanitary surveys help public water system operators and owners identify and prevent costly complications and potential problems before they become public health concerns. This is why sanitary surveys have been completed on Alaska public water systems over the past 30 years, even before they became a regulatory requirement in 1989.

The sanitary survey identifies causes, conditions, and symptoms that keep a system from operating at 100%. Like the check-up we get with a physician to maintain our personal health...the sanitary survey provides a hands-on examination of a public water system's vital signs and then takes a closer look so that it can diagnose problems and prescribe remedies for any of the water system's ills. This regular "check-up" also provides early detection of unhealthy conditions. If a system becomes unhealthy (for instance, from an MCL exceedance, low water pressure issues, cross-connections, or operation and maintenance concerns), then more critical measures may need to be taken that could have been avoided by early detection. Emergency treatment can be costly and may interrupt a public water

system's ability to provide a safe, reliable water supply to its customers and visitors.

Planning and preparation will make the sanitary survey process easier, faster and more effective, so make an appointment for a painless sanitary survey. An approved sanitary survey inspector will be called in because, like the physician providing a physical exam, the sanitary survey inspector will be able to provide up-to-date expert technical assistance. The sanitary survey inspector will bring an added perspective to help diagnose any problems encountered and will provide a comprehensive examination of the system. You can find the list of Alaska approved sanitary survey inspectors on the internet at: 

Once the appointment has been made for the sanitary survey, the operator or owner should begin preparing the system's records and consider how to help the inspector understand any sensitivities or conditions that may be causing difficulties for the water system. The inspector will need the cooperation and input of the water system's operator(s) and staff. The folks involved with the day-to-day operations of the system will be the best ones to describe any "aches and pains" that the system may be experiencing, and they will help the inspector become familiar with the patient (water system).

The sanitary survey inspector will likely have some of the system's records on file, but there will certainly be new developments since the last visit. Conditions change for a water treatment system as it develops and gets older, just as conditions change for people as they develop and get older, and the sanitary survey will help your water system stay fit so that customers are assured that the system is delivering safe water.

Sanitary surveys keep systems in compliance with regulations so state and federal funding can be provided for improvements, operations, and training. They allow the state to recognize outstanding performance in public water systems which can thereby avoid additional monitoring or inspections. Working with a sanitary survey inspector will provide operators with valuable training and the ability to uncover opportunities to improve performance and reduce the costs of operation and maintenance.

Like the doctor says, "An ounce of prevention is worth a pound of cure." And in this case, a sanitary survey can save tons by avoiding additional monitoring requirements and the expense of a system running ill or developing a preventable deficiency. Sanitary deficiencies can be costly and so can technical training. The sanitary survey can help you avoid or minimize the impact of a sanitary deficiency while providing technical training to the operator and staff of the system. ~

[Http://www.dec.state.ak.us/eh/dw/approved_surveyors.html](http://www.dec.state.ak.us/eh/dw/approved_surveyors.html)

Question: Many types of valves are used in a water treatment plant and distribution system. There are gate valves, butterfly, globe, plug, ball, and air-controlled vacuum breakers and check valve assemblies. Valves are used in a water system to control pressure, flow rate and direction, and reservoir levels; to isolate sections of line; to prevent vacuum in a distribution line; to release air; and to prevent backflow and backsiphonage. The most common type of check valve, the swing check valve, has a simple design with a cast iron body and bonnet, a brass seat ring, and a movable disc. The force of the water flow opens the valve, and if the direction of the flow is reversed, the check valve closes. Backflow and backsiphonage are not adequately controlled by a check valve. What are "Check Valves" used for? (Answer on page 13)