

Northern Flows

Alaska's Drinking Water Program Newsletter

Issue 40 • Fall/Winter 2010-11

Fall

Winter

Message from the Manager

By James Weise

This summer seemed to end in early June, our fall seemed to end in mid October, and now winter is upon us. Fresh snow is now covering most of Alaska and the holiday season is in full swing. Whatever we might think, or hope for, the end of calendar year 2010 is here, and hopefully Alaska public water system (PWS) owners and operators have prepared their systems for winter.

The Drinking Water Program American Recovery and Reinvestment Act (ARRA) funded projects (Economic Stimulus projects totaling \$814,600) are proceeding mostly on track.

The clean-up, scanning, digitizing, and indexing of PWS files in the Wasilla and Soldotna offices are



complete. At this time, we are evaluating the results of this project to determine the best course of action for the PWS files in the Anchorage and Fairbanks offices. *Applied Microsystems, Inc.* was the contractor for the PWS scanning/digitizing project. The regulatory engineering Long Term 2 (LT2) Enhanced Surface Water Rule project, being completed by the *Boutet Company, Inc.*, is progressing ahead of schedule. The Engineering Technical Services contract awarded initially to *Katmai Engineering* who changed their company's name to *Woodson Technical Services*, is focused on the statewide review of PWS files to document water system approvals (Construction and Operation) and record drawings. This project is building momentum and contractors are currently working on PWS files in the Soldotna office. Lastly, the Environmental Health (EH) Laboratory's Laboratory Information Management System (LIMS) database project was awarded to the

contractor *Lab Answer*, who is working with *Alpha Engineering*. They continue to slowly, but progressively, move forward with the development, management, and statewide accessibility of DEC-certified laboratories PWS data. As previously noted in the Spring 2010 newsletter, the overall focus for use of the ARRA "Economic Stimulus" funds by the Drinking Water Program and EH Laboratory is to better assist the State in the management of PWS information and data. This should allow the State to better inform Alaska PWS owners, operators, consultants, technical assistance providers, DEC-certified laboratories, and the general public on the quality of drinking water being provided by Alaska's PWS and the overall status of Alaska PWS with Safe Drinking Water Act requirements.

Our onsite status component assessment project, being completed by Drinking Water Program engineering staff, is progressing well and is focused on Alaska PWS treatment status for those systems using a surface water or ground water under the direct influence of surface water source. Approximately, 50 systems have been visited over the past 12 months, and letters detailing treatment status (filtration credits and disinfection credits) have been completed and sent to about half of the PWS owners of those systems at this time. This is a significant public health protection project as well as a

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WaterISAC – Get Subscribed! Stay Informed! Be Prepared!

Natural Disasters, Security Threats, and Emergencies

By Leslie Shurtleff

There are certain tools and technologies, that upon discovering, we can't imagine how we lived without them. While WaterISAC (Information Sharing and Analysis Center) may not boast the life altering affects of let's say, the cell phone, it certainly is a tool that will make your job easier, more interesting, and dare I say it—fun!

WaterISAC is a community of water sector professionals and analysts who act as a clearing house for classified intelligence and open source information from both the government and private sectors. Using the medium of a secure website, WaterISAC serves as a comprehensive resource for understanding system vulnerabilities, the likely threats faced by systems, and associated preparedness measures.



WaterISAC states that its mission is to secure the nation's critical water infrastructure by helping water systems identify risks and prepare for emergencies. The center accomplishes this by providing the following valuable resources:

1. Colleague Network

Let's face it, the most direct way to figure out which preparedness measures are the most effective, is to consult your peers. WaterISAC facilitates such collaboration by allowing users to develop an online profile and initiate and/or participate in discussions. This online network

has been loosely tagged the "Facebook of the Water Sector," and provides an excellent avenue with which to explore various approaches of how to increase system resiliency. So the next time you find yourself wondering if other systems *utilize Twitter for support system announcements*, or perhaps *maintain a specific position to oversee security and safety concerns*, check out the existing discussion threads on WaterISAC.



2. Vulnerability Assessment Tools

The first step in enhancing system preparedness is to perform a Vulnerability Assessment (VA). VAs enable systems to characterize system vulnerability, identify likely risks, and then evaluate the suitability of existing countermeasures. Once a comprehensive understanding of the system's vulnerability is gained, existing security measures can be updated or new security procedures can be created. WaterISAC provides a portfolio of vulnerability assessment tools to aid in this crucial process.

3. Security & Emergency Preparedness Materials

The Environmental Protection Agency, American Water Works Association, Water Environment Federation, and National Rural Water Association, are just a *few* of the organizations which produce a myriad of water system security and emergency

preparedness materials. As wonderful as it is to have a multitude of guidance documents to choose from, it can be overwhelming to find the most appropriate and effective tool for your system. WaterISAC resolves this issue by organizing available documents within an intuitive framework, and provides a remarkable library which is easily searchable. Maneuver through this wealth of information with ease to find guidance on how to plan for and respond to natural disasters, accidents, cyber contamination, and insider threats. Additionally, find detection and treatment information on dozens of chemical and biological agents. In short, WaterISAC is a one-stop source for preparedness guidance documents.

Alright, hopefully by now you are wondering how you can take advantage of this outstanding resource. WaterISAC has been around since 2002, and traditionally charged \$500 for use of the above described services. However, for a limited time a 12-month subscription is **FREE**. As cliché as it might sound, this offer will not last forever—don't miss out and subscribe today by visiting <https://portal.waterisac.org/web/>; be sure to sign up for the "Pro" subscription in order to have access to the library tool.

For further information regarding WaterISAC, contact Jeanine Oakland, Drinking Water Program Specialist at: jeanine.oakland@alaska.gov





As summer transitions into fall, and fall into winter, Drinking Water regulations are also changing. Three different regulations change projects are taking center stage during the last half of this year.

On July 25, 2010, regulations went into effect that changed Drinking Water Program fees, amended the Laboratory Certification procedures, and revised Laboratory Certification fees.



On November 11, 2010, another set of regulation changes went into effect. These changes include the adoption by reference of the Environmental Protection Agency's (EPA's) Long Term 2 Enhanced Surface Water Treatment Rule (LT2) and the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2). This project also updates, in 18

AAC 80.010(a), the adoptions by reference of the Code of Federal Regulations (CFR) provisions from the 2005 to the 2009 CFR edition.

While these two federal rules have been in effect since 2008, enforcement has been done by EPA (with assistance by Alaska Drinking Water Program staff). Alaska will assume enforcement duties for these two rules from EPA on January 1, 2011.



Another federal rule is on the horizon. We have completed the public comment period for the adoption by reference of the EPA's Ground Water Rule. Because of some specific federal requirements of the Ground Water Rule, we are also proposing some revisions to other

parts of 18 AAC 80, mostly centered around Sanitary Surveys.

The Ground Water Rule has been in effect and enforced by EPA, with assistance from Alaska's Drinking Water Program staff, since November 2008. Alaska will assume enforcement duties for the Ground Water Rule after the state regulations become effective and Alaska receives interim primacy (enforcement responsibility) for the rule, which will most likely occur in March 2011.

In summary, late 2010 and early 2011 are introducing three new federal rules into the state regulations. However, because these rules are already being enforced (by EPA), public water systems should not notice many, if any, changes when Alaska assumes primacy for these rules from EPA.

AWWMA CONFERENCE



**52nd ANNUAL STATEWIDE CONFERENCE & TRADESHOW, APRIL 26-29, 2011
Hilton Hotel, Anchorage, Alaska**

About the AWWMA



AWWMA works to provide opportunities that bring knowledge, expertise, and technology to water and wastewater industry professionals in Alaska. Our [conferences and workshops](#) are attended by a diverse group of professionals from large and small utilities and the professionals that operate, educate, and regulate them. Our organization is governed by a [Board of Directors](#) and driven by [Committees](#) - a team of volunteers dedicated to the water and wastewater profession in an effort to provide Clean, Safe Water for Alaska.

To learn more about the Alaska Water Wastewater Management Association, or to register for this conference or future conferences, please visit the AWWMA website at: <http://awwma.org/>



The First Barrier (Drinking Water Protection)

By Charley Palmer

The Drinking Water Protection group welcomes Anne Gleason! Anne is a new Environmental Program Specialist within the Drinking Water Protection group, working from the Wasilla office. She has provided a much needed boost in our ability to complete Source Water Assessment reports, and much more. Please take an opportunity to meet with her at upcoming training events, and contact her for Drinking Water Protection assistance.

Source Water Assessments

Drinking Water Protection (DWP) staff continues to work on completing Source Water Assessment (SWA) reports for new community water systems, new non-community water systems, and new sources for existing systems. A letter from DWP staff asking for review of the data used for the SWA reports is sent to the water system owners and the operator, on record.

This is your opportunity to ensure that the information in the SWA reports is an accurate representation of your system's source of drinking water and drinking water source areas. The more accurate the SWA reports are, the better equipped your system and stakeholders will be in developing a Drinking Water Protection Plan (DWPP) and implementing protection measures identified in the plan.

DWP staff are also continuing to strive towards verifying the information included in existing SWA reports through field visits whenever possible, usually in conjunction with

workshops and other travel opportunities. **If your community feels that your SWA report needs corrections, please contact us.**

Protecting your source of drinking water from potential contamination is the first step in a multi-barrier approach to maintaining clean and safe drinking water.

A new on-line map tool displaying public water system Drinking Water Protection Areas and DEC Contaminated Sites is now available! You can view the map by visiting the Drinking Water Program homepage, or the following web site: <http://bit.ly/dt7p2d>. If you have questions about the map, please contact DWP staff.

Drinking Water/Source Water Protection Plans

DWP staff recently increased their efforts towards on-site assistance for developing Drinking Water Source Protection Plans. We are working closely with the Source Water Protection Specialists from the Alaska Rural Water Association (ARWA). The plans generated from these visits, if implemented, will be eligible for endorsement by the state of Alaska. Remember, having an *endorsed* protection plan may help build your grant application portfolio! To understand *endorsed* protection plans, please visit: http://www.dec.state.ak.us/eh/dw/DWP/endorsed_plans.html. **If your community needs assistance in developing a protection plan,**

please contact us.

Drinking Water Protection Grant

The Drinking Water Protection grant, administered through the Alaska Clean Water Actions (ACWA) awarded two grants during the SFY 2010, beginning July 1, 2010 through June 30, 2011. The grants awarded during this fiscal year include:

- Decommissioning several abandoned wells immediately upgradient of a public water system; Village of Gulikana; and
- Website/outreach for homes in a watershed for a public water system; Snowshoe Subdivision Public Water System.

The application period for the 2012 Drinking Water Protection grant begins the first week of January 2011 and ends February 20, 2011. Funding will be available July 1, 2011. If interested, the grant application must be completed on line at the following link:  **Please contact DWP staff if you have questions regarding whether your project could qualify.**

2011-2013 SOC Monitoring Waiver Applications

The new SOC Monitoring Waiver Application for the 2011-2013 Compliance Period will be available after January 1, 2011.



<http://www.dec.state.ak.us/water/acwa/onlineACWAapp.htm>



Message from the Manager (cont.)

By James Weise

long term compliance and capacity assessment project for Alaska's PWS using a surface water source and ground water under the direct influence of surface water source. The information obtained from the onsite status component assessments will be useful for the water system owners and the State in documenting the system's compliance status with the Long Term 1 (LT1) Enhanced Surface Water Treatment Rule and will be used by the State and water system owners in preparing the systems for compliance with the Long Term 2 (LT2) Enhanced Surface Water Treatment Rule.



The new Drinking Water Regulations covering fee increases for the Drinking Water Program and new fees, fee increases, and new lab certification procedures for the EH Lab became effective July 25, 2010. Please check the Department's website to obtain a copy of the most recent version of the Drinking Water Regulations and the new fees. The Drinking Water Program is in the process of finalizing two regulations revisions packages at this time. The first package, named DW 2010-1,

includes the adoption by reference of the Long Term 2 (LT2) Enhanced Surface Water Treatment Rule and Stage 2 Disinfectants and Disinfection Byproducts Rule.

These regulations became effective in Alaska on November 11, 2010, and we are currently working on our primacy application to submit to EPA for these rules. The second regulations revisions package, DW 2010-2, includes the adoption by reference of the Ground Water Rule and modifications to the Sanitary Survey section. The public comment period for this regulations revisions package closed on November 19, 2010. We are currently preparing a responsiveness summary for these regulations revisions and are planning to have primacy for the Ground Water Rule by March 2011. For additional information about the planned regulations revisions packages for SFY 2011, please check out the *Regulations Corner* article in this newsletter written by Gloria Collins.

Unbelievably, all but one vacancy in the Drinking Water Program is filled at this time. We are pleased to announce the following new staff hired over the past several months to the DEC Drinking Water Program. In the Anchorage office: Hannah

Drake, Environmental Program Specialist; Chris Clark, Environmental Engineering Assistant has rejoined the program after a "short duration" detour in Seattle, WA; and Jody Abruzzino, Administrative Assistant. In the Soldotna office, please welcome Jim Blodgett and Jamie Bjorkman, Environmental Program Specialists and Katrina Ladd, Environmental Engineering Assistant. Sadly, David Litchfield, Environmental Program Specialist, retired from the State of Alaska in May 2010, after almost 20 years in the Drinking Water Program. We wish David well and hope he enjoys endless games of golf in a warm and sunny place.



It is time to get out and enjoy our early winter weather. I hope all of us have a wonderful and fulfilling New Year.

James R. Weise

James Weise
Manager
Drinking Water Program

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Northern Flows E-Newsletter Subscription

If you are interested in subscribing at no cost to our quarterly *Northern Flows* e-Newsletter, please go to the Department of Environmental Conservation, Division of Environmental Health, Drinking Water Program's website and click on "subscribe."

<http://www.dec.state.ak.us/eh/dw/publications/newsletters.html>

Click on "unsubscribe" to remove yourself from the mailing list.



Boil Water Notices (BWN)

By Cindy Christian



Waterborne diseases are the most important concern about the quality of drinking water. All public water systems can be vulnerable to waterborne disease outbreaks for a variety of reasons. Waterborne diseases are typically caused by disease-causing organisms, or pathogens, that can enter into the water system. These pathogenic organisms can be bacteria, viruses or protozoa. They enter the body through drinking contaminated water or eating food prepared with contaminated water and can cause gastrointestinal symptoms such as vomiting and diarrhea. Some common pathogenic waterborne disease causing organisms found in Alaska are *Giardia*, *Cryptosporidium*, *Escherichia coli* (*E. coli*) and Norovirus.

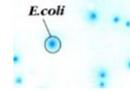


A Boil Water Notice (BWN) (sometimes also called a Public Health Advisory) is issued to protect the public using an affected water source from the possibility of contracting a waterborne disease. A BWN is issued only after careful consideration by the Drinking Water Program of all of the issues affecting the water system. A BWN means that all water used for drinking, food preparation, cooking, and brushing teeth should be boiled for two minutes before using. Boiling is the most effective way to kill or inactivate bacteria, viruses, and protozoa.

A BWN can be issued for several different reasons. The most common reason for issuing a BWN is because

of total or fecal coliform (*E. coli*) detection in a routine water sample. All public water systems are required to submit samples for total coliform bacteria analysis on a regular basis. Coliform bacteria is a group of bacteria used to indicate the possibility of fecal contamination in a water system. *E. coli* is a specific type of fecal coliform bacteria used as indicator bacteria to determine the microbiological safety of the drinking water supply. If at any time, a system has an *E. coli* positive sample, the system will be placed on an immediate BWN. If a sample is positive for the presence of total coliform, the system must collect four repeat samples within 24 hours of being notified of the positive sample. The repeat samples are collected at different points in the distribution system. If any of the four repeat samples are positive for total coliform bacteria, the system may be placed on a BWN until the system is disinfected and subsequent samples are negative. A Drinking Water Program Specialist will always work with the operator and owner of the public water system to determine if a BWN is necessary.

A BWN may also be issued if a water system has a break in any of the distribution lines or if the system does not maintain a pressure of 20 psi or greater. A BWN may also be issued if a water system exceeds specified turbidity limits, since high turbidity can adversely affect the disinfection process in a treatment plant. A precautionary BWN may be recommended by the Drinking Water Program in the event of flooding in order to protect the public's health in affected



communities. A precautionary BWN would remain in place until the system could collect total coliform bacteria samples and receive satisfactory results.

If a PWS is placed on a BWN, everyone receiving water from that system should create a supply of water for drinking, food preparation, cooking, and for brushing teeth, by bringing water to a rolling boil for two minutes. Timing starts when the water starts to bubble. Cool the water then place in clean containers for use or refrigerate. It is important to make sure the containers you use for storage have been thoroughly cleaned. Hot (not boiled) soapy water can be used for dishwashing and kitchen and bathroom surface cleaning. As a precaution, add one tablespoon of bleach per gallon of water for disinfection. Laundry water does not need to be treated. Unless specifically listed on your BWN, water for showering does not need to be treated.



Persons with special medical needs should always contact their primary care provider for information if their public water system is placed on a BWN.

When a BWN is issued, the Drinking Water Program will send a BWN and Public Health Notification language to the public water system and community it serves. It is the responsibility of the public water system to notify its consumers of the BWN. The BWN should be posted in a central location where it will be



Boil Water Notices (BWN) [cont.]

By Cindy Christian

visible to all consumers. If possible, a community wide announcement should be made to make sure that everyone knows what to do. A public service announcement completed by the local radio station should be used in communities that have radio service.

Only the DEC Drinking Water Program can lift the BWN once it has been issued. The public water



system will be given specific instructions on the number of total coliform bacteria samples that must be taken and where the samples should be taken. The BWN will not be lifted until the Drinking Water Program receives satisfactory results from a DEC-certified laboratory. Prior to lifting the BWN, Drinking Water Program staff will also look at other factors that may have lead to the BWN, such as low pressure in the distribution system and will

notify the public water system when it is safe to lift the BWN. The public water system is responsible for notifying its individual consumers.

The BWN is a very important public health tool that is used to protect the public from potentially contaminated drinking water. If your public water system is issued a BWN it is important to follow all instructions for posting the BWN and for notifying all your consumers.

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Mary "Tee" Little	Env. Program Specialist	376-1860
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LeAnn Smith	Env. Program Specialist	376-1844
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Ellen Williams	Env. Program Specialist	451-2231