

Northern Flows



Alaska's Drinking Water Program Newsletter
 Issue 23 • Fall 2005

Important Information



For Water System Operators and Owners

Northern Flows

Drinking Water Program Directory

ANCHORAGE OFFICE STATEWIDE FUNCTIONS

James Weise, DGS	Program Manager	269-7647
Brad Ault	Comp./Tech. Svcs. Manager	269-3068
Vanessa Wike, P.E.	Statewide DW Engineer	269-7696
Kathaleen Kastens	Project Coordinator	269-7639
Margaret Hansen	Administrative Clerk	269-7656
Vivian Terrell	Administrative Clerk	269-7581
Vacant	C/E Coordinator	269-xxxx
Jeanine Oakland	Environmental Spec.	269-2007
Karen Leis	Regulations Specialist	269-3082
Gloria Collins	Regulations Specialist	269-3075
Maria Ridgway	Analyst Programmer	269-7625
Shannon DeWandel	PWS Security Specialist	269-8924

ANCHORAGE DRINKING WATER PROTECTION

Suzan Hill	Program Coordinator	269-7521
Vacant	DW Protection	269-0292
Chris Miller	DW Protection	269-7549

ANCHORAGE FIELD OFFICE

Heather Newman	Program Coordinator	269-7619
Allan Nakanishi, P.E.	Env. Engineer	269-7516
Sarah Rygh	Env. Engineer Assist.	269-3076
David Edmunds	DW Compliance	269-7653
Jamie Stazel	DW Compliance	269-7624
Doug Zellmer	DW Compliance	269-7623
Kathleen Free	Administrative Clerk	269-7618
Leticia Tadina	Environmental Tech.	269-7517
Vacant	Administrative Clerk	269-7594

WASILLA FIELD OFFICE

Lynn Lowman	Program Coordinator	376-1861
Tee Little	DW Compliance	376-1860
Kellie Alvstad	Environmental Tech.	376-1859
Vacant	Env. Engineer	376-1862

JUNEAU FIELD OFFICE

David Khan, P.E.	Env. Engineer	465-5317
Carrie McMullen	DW Compliance	465-5333
Vacant	Environmental Tech.	465-5325

SOLDOTNA FIELD OFFICE

Susan Bulkow	Program Coordinator	262-5210
David Litchfield	DW Compliance	x227
Scott Fogue, P.E.	Env. Engineer	x224
Eric Burg	Environmental Tech.	x243

FAIRBANKS FIELD OFFICE

Cindy Christian	Field Operations Manager	451-2138
Vacant	Program Coordinator	451-xxxx
Lee Johnson, P.E.	Env. Engineer	451-2179
Linda Grantham	DW Compliance	451-2137
Marci Irwin	DW Compliance	451-2168
Johnny Mendez	Env. Engineer Assist.	451-5193
Vacant	Environmental Tech.	451-2170
Lona Locker	Administrative Clerk	451-2108

Message from the Manager

The mixture of cool days and evenings, seasonally heavy rains and early snowfalls, the beautiful change in the color of our birches and alders, and the ever shortening days should remind us daily that summer is over, fall is truly here, and winter is very soon to come. Are we prepared for our changing seasons and the fast approach of winter? The slow transition of the seasons allows us the time to prepare; however, we typically are unprepared for catastrophic natural disasters, such as Hurricanes Katrina and Rita, or the local heavy storms with flooding and massive erosion along the western coast of Alaska. We can however, prepare ourselves somewhat for natural disasters by having a "written response plan", and practicing that plan throughout the year. To "practice" an emergency response plan only during the time of responding to a disaster is a recipe for something less than successful.

To help public water systems (PWS)

better sustain public health protection for their customers and visitors, and achieve or maintain compliance, Drinking Water Program staff annually provide notifications and reminders on what monitoring needs to be done, the sanitary survey status and requirements for the water system, and overall routine reporting requirements. For PWS owners and operators, are you doing your end-of-year compliance requirements, getting your system ready for the long winter, and do you have a written plan on how you would respond to a natural or man-made disaster? Does your written response plan include a communication strategy and a plan on how you, the PWS owner and operator, would contact and respond to your customers in a natural disaster or emergency? Now could be the perfect time when you may not be as "rushed" or under a "crisis mode" to be proactive and write an emergency response and communication plan for your system if you don't already have a plan. For those systems with a written response plan, now could be a practical time to update the plan. Now could also be an opportune time to practice your emergency response and communication plan. Give it a try and let us know how it works and what you think. Good news for Alaska PWS owners and operators, the Drinking Water Program has just hired a new staff member, Shannon DeWandel, to assist PWS owners and operators in developing and implementing their written emergency response and communication plans. Shannon is located in the Alaska Department of Environmental Conservation (ADEC) Anchorage

office on Cordova Street.

For the past two years, we have been working on a regulation package that just seemed to never end. This regulation package evolved over time and finally included the Radionuclides Rule, Variances and Exemptions Rule, Arsenic Rule, Filter Backwash and Recycling Rule, updated Analytical Methods, sanitary survey inspector requirements, and new fees. This was primarily a regulations by adoption package, but it eluded us in completing a timely adoption for the rules, completion of primacy applications, and statewide implementation. Fortunately, it now appears that this regulation package will become effective sometime in December 2005. At this time, we are completing an internal review of another proposed regulation package to adopt, by reference, the Long Term 1 Enhanced Surface Water Treatment Rule. This rule is commonly known as "LT1". Also included with the proposed LT1 regulation package will be an update of the Laboratory Certification Section, an electronic data reporting system (ERDS) requirement for ADEC-certified laboratories doing drinking water analyses, and a requirement for a master meter. This regulation package should be ready for a 30 day public comment period very soon.

The Drinking Water Program recently installed and implemented U.S. EPA's *Drinking Water Watch*. This "web portal" allows PWS owners and operators, consulting engineers, technical assistance providers, and the

This Issue

<u>Arsenic Rule</u>	2	<u>Drinking Water Watch</u>	5
<u>Community Profile</u>	3	<u>Training</u>	4
<u>What's Wrong with this Picture?</u>	4	<u>Water Hauler Requirements</u>	6
<u>Drinking Water Program Staff</u>	5		

The new MCL for Arsenic goes into effect January 23, 2006 by Susan Bulkow

In January 2001, the Environmental Protection Agency (EPA) finalized the Arsenic Rule which reduced the drinking water maximum contamination level (MCL) for arsenic from 50 ppb to 10 ppb. All community water systems and non-transient non-community water systems are required to meet the new MCL by January 23, 2006. If your public water system (PWS) currently has confirmed arsenic levels above 10 ppb, and you have been unable to install water treatment or develop a new water source *due to financial, technical, or managerial problems*, your system may qualify for an arsenic exemption.

If granted an extension, a water system will have up to three additional years to comply with the MCL (extensions may be granted until January 23, 2009); however, the State is required to issue a compliance schedule that addresses the MCL as *expeditiously as practical*. Small water systems serving less than 3,300 customers that are able to demonstrate extreme circumstances may be granted an exemption beyond the 2009 deadline, provided they are taking all practicable steps to meet their established compliance schedule and there is no unreasonable risk to public health.

If an arsenic exemption is needed, the water system owner must submit an Arsenic Exemption Application, along with the exemption application fee, to their local ADEC Drinking Water Program office for review and approval. The applicant will be required to identify the problems that are currently preventing compliance, as well as, provide a proposed compliance schedule outlining when corrective action will be completed.

The more detailed the applicant's proposed compliance plan, the easier it will be for ADEC to consider the exemption request.

If the reason the MCL cannot be met by January 23, 2006 is because the system does not have the financial capacity to address system deficiencies and/or to install adequate water treatment, the public water system owner will need to provide a financial plan outlining when and where the applicant will be seeking the necessary capital financing to install, operate, and maintain treatment. In addition, ADEC may require that the applicant submit annual financial statements or other documentation to verify the system's current financial shortfall.

If you need an application form, or would like to further discuss the Arsenic Rule and exemption requirements, contact your local Drinking Water Program office staff at the phone numbers provided in this *Northern Flows* newsletter. ~

The Safe Drinking Water Act allows primacy States to issue exemptions when the water system owners can demonstrate that there are compelling reasons that prohibit the system from meeting the MCL by the January 23, 2006 compliance date. An exemption does not exempt a system from meeting the new MCL; instead it provides additional time for a system to comply with the new standard.

Systems may be eligible for an arsenic exemption if:

- The arsenic concentration is less than 35 ppb.
- The system was in operation before February 22, 2002, and/or if no reasonable alternative water source is available prior to January 23, 2006.
- The system cannot make the necessary capital improvements, or is unable to make the necessary financial, technical or managerial changes that would result in MCL compliance prior to January 23, 2006
- The exemption does not pose an unreasonable risk to human health.

Question: Mud balls are the result of accumulated silt on top of the filter media, over feeding chemicals (especially polymers) and inadequate surface wash. When the filter is back washed, if the upward velocity is not sufficient to remove the silt, it may roll into clumps which move downward in the media during the backwash process. These clumps or mud balls will increase in size and continue to move downward clogging the filter and under drain. What are the two solutions to this problem?

- A) Check the surface wash for proper operation, and if no surface wash exists, consider installing one.
- B) Remove and replace the top 1" of filter media.
- C) Check the backwash rate to make sure it meets the design criteria.

Community Profile - Igiugig cont'd. by David Edmunds

4. When sampling is complete, make sure the samples are sent to the lab right away. Please be sure to keep a copy of the chain of custody for your records in case there is a problem with the samples. Most samples need to be received by the lab in a short amount of time. A good policy to follow is "sample early".

5. Inform your local ADEC Environmental Specialist when you sampled. The lab will send a copy of the results to the ADEC but the Environmental Specialist will be able

to expedite the return to compliance action which will remove the system from the SNC List. Systems that are on the SNC List for Surface Water Treatment Rule and Total Coliform Rule violations have much more stringent requirements and take up to six months of consecutive sampling to return to compliance. You will need to work more closely with your Environmental Specialist if you're on the List for these items.

Igiugig's water system was able to be removed from the SNC List following

these steps and they continue to be very proactive with their sampling. Routine and open communication between the system and the ADEC allowed them to come off of the List and take necessary steps to keep in compliance. The ADEC would like to thank and commend the community for returning to compliance. Their efforts in being in compliance provides safe drinking water for their community and protects public health. ~

Annual Compliance Reports by Jeanine Oakland

Each year the Drinking Water Program prepares an Annual Compliance Report (ACR) as required by the 1996 Amendments to the Safe Drinking Water Act. As a primacy state, Alaska submits PWS monitoring data electronically every quarter to the Environmental Protection Agency's (EPA) federal

database. The data transmitted includes information on Alaska's Public Water System (PWS) inventory, sources, violations, and associated enforcement actions. The ACR is a summary of that data, giving an overview of the number and type of violations that were issued to Alaska's Public Water Systems over the past year. A

summary of the 2004 ACR is available on the Drinking Water Program's website at http://www.dec.state.ak.us/eh/dw/dw_main/violations.html. To obtain a complete copy of the report please contact Jeanine Oakland at jeanine_oakland@dec.state.ak.us or (907) 269-2007. ~

Dear Doctor Drip:

Our small community has several infants, and I have seen some parents using hot water from the tap to make baby formula. Is it safe to use hot water from the tap to prepare baby formula?

Response: Do not use hot water from the tap to make baby formula. Always use cold water from the tap and heat it, if necessary, before making baby formula. Hot water from the tap may contain elevated levels of lead and copper which can leach from plumbing in homes. If the tap has not been used overnight, or for a while, then let the cold water run for about two minutes before using it.

This is a new area of our newsletter, we hope you will use and enjoy it. Doctor Drip encourages you to send in any questions you have and he will try and get the answers back to you in the next newsletter. You can submit your questions in writing 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.

What's Wrong with this Picture *by Scott Forgue*

ANSWER: This picture shows a water system source well with both sanitary risks and safety hazards. The source protection requirements of the Drinking Water Regulations (18 AAC 80.015) require the well casing to have a sanitary seal to prevent the entry of contaminants. The empty roofing tar bucket with flaking residue covering the well casing is no substitute for a properly fitted sanitary seal. Airborne debris, insects, vermin, and pathogens may all enter an improperly sealed well.

Source protection regulations also require that the land surface be sloped to drain away from the well. In this case, the ground actually sloped toward the well! After the water line was buried, the ground settled and created a drainage that directed snowmelt and rainwater to the wellhead. The water pooled around the wellhead can leak down along the casing, contaminating the aquifer providing drinking water for this system.

On close inspection, coming up out of the water along the left hand side of the well casing, you will notice the electrical wires for the well pump. A break in the insulation on these wires would result in the potential for electrical shock. The wires should be in conduit.

If you would like to submit photographs for future articles, contact Scott Forgue at Scott_Forgue@dec.state.ak.us. ~

Requirements for Potable Water Haulers *by Heather Newman*

Potable Water Haulers hauling Water from an Approved Source:

Hauling of potable water is regulated in the State of Alaska by the Drinking Water Regulations, 18 AAC 80. Plans and specifications required in 18 AAC 80.200 and 18 AAC 80.205, for each vehicle to be used for hauling potable water, must be submitted to ADEC for review and approval as outlined in 18 AAC 80.220. An inspection of the vehicle by ADEC staff may be necessary. The owner or operator will be responsible for paying any fees associated with the plan review and inspection. Once ADEC approves the plans and specifications (18 AAC 80.210) and if required, the vehicle passes inspection, final approval to operate will be granted. The vehicle must be marked with signage indicating that the truck is used for "POTABLE WATER ONLY" in an obvious location.

Routine sampling requirements for potable water haulers are outlined in 18 AAC 80.310(e). One total coliform bacteria analysis per month per vehicle must be submitted to an

ADEC laboratory, unless ADEC has granted, in writing, a reduced monitoring schedule for the water hauler. A reduced monitoring schedule may be granted if in the last 12 months that the water hauler has provided water to the public, the water hauler did not have a total coliform bacteria monitoring violation. A reduced monitoring schedule will still require at least one sample per quarter per vehicle.

Disinfection of water hauled by trucks is not required by ADEC unless ADEC is aware of a sanitary defect; there is a violation of the maximum contaminant level (MCL) for total coliform bacteria set in 18 AAC 80.300(b)(5); or ADEC determines a significant potential exists for a violation of the total coliform bacteria MCL.

However, a water hauler may voluntarily disinfect their water. If disinfection is done by water haulers, any chemical additives are required to be approved for that use by the NSF International (NSF) as outlined in 18 AAC 80.030. Additionally, for a hauler who voluntarily disinfects or is

required to disinfect, they must meet the requirements for maintaining a residual disinfection concentration of not less than 0.2 mg/L within the truck water tank as outlined in 18 AAC 80.035(c). The residual disinfection concentration must be measured on a daily basis and recorded. The results of the disinfection monitoring reports must be submitted to ADEC on a monthly basis and are due to ADEC 10 days following the end of each month that the hauler supplies water to the public.

Potable Water Haulers hauling Water from Own Well:

If a hauler is hauling water from their own well, the well must have gone through all required plan approval processes for public water systems outlined in 18 AAC 80 and must be approved by ADEC as a public water system. Additionally, all testing requirements for a Class A public water system as outlined in 18 AAC 80, Article 3, will be required for the well.

All other requirements outlined above for the trucks hauling water from their own well will also apply. ~

Community Profile - Igiugig *by David Edmunds*

Igiugig is a small community in the Bristol Bay area located on the southern end of Lake Iliamna. The community is a small village with around forty (40) inhabitants. Commercial and subsistence fishing sustain the community. As is typical for other villages in the region, salmon fishing is the mainstay of Igiugig's economy. Many people travel to Naknek each summer to fish or work in the canneries. Subsistence is an important part of the residents' lifestyle, where salmon, trout, whitefish, moose, caribou and rabbit are utilized and some trapping occurs. Lake Iliamna is the second largest lake in the U.S.

Trophy rainbow trout attract sport fishermen from all over the world to fish the wilderness around Lake Iliamna.

Like most villages in the area, Igiugig has many long standing Native traditions. One important part of life in the village is subsistence living - hunting, fishing, and gathering local plants, as well as cooking unique dishes made from these local foods. Another important facet of village life is passing along the Yupik language that many of the older residents grew up speaking, as well as tribal traditions such as respect for village elders.

The Igiugig community water system uses a groundwater source with treatment. The system had failed to monitor for certain contaminants that resulted in violations. After missing several successive monitoring periods, the system was placed on the Environmental Protection Agency

(EPA) Significant Non Compliance (SNC) List in 2002. The SNC List can affect federal funding and grants for public utilities.

This was the situation waiting for the new city administrator and operator in late calendar year 2004. The City administrator contacted the ADEC to get the latest Monitoring Summary. The **Monitoring Summary** contains the monitoring requirements for the system, last samples taken, and if the system is overdue. The administrator was in contact with the Environmental Specialist for his system and they worked together to complete the monitoring



requirements that they were missing and in a very short time, the system returned to compliance and was removed from the EPA SNC List in April 2005.

Unfortunately, this is not an isolated incident. Alaska has approximately 90 systems on the SNC List. The List is published on the ADEC website, <http://www.dec.state.ak.us/eh/docs/dw/Websnc.pdf>, with the ADEC Environmental Specialist contact name and the reasons for being on the List. The List gives general information for the monitoring that caused the violations (i.e. Nitrate, VOC, Lead and Copper, etc.). The List changes over time and systems can drop off, and come back on for various violations they have received.

If you see that your system is on the

SNC List you should contact your local ADEC Environmental Specialist for your area for information on how to return to compliance and be removed from the List. They will be able to tell you what you need to do to resolve the issue. Depending on the reason, or reasons, will dictate how long your system will remain on the List and what needs to be done. Water systems should take these steps to ensure that they will be removed from the List. You may also contact your local Environmental Specialist to confirm if your system is on the SNC List or not.

1. Contact your ADEC

Environmental Specialist. They will tell you if you are on the SNC list, explain why, and what needs to be done to return to compliance.

2. Request a current Monitoring Summary for your system. Once you receive the Monitoring Summary, review it to make sure that the last samples taken for the system are correct. The Monitoring Summary will show what samples are overdue.

3. Contact the lab to request sample kits for the overdue samples. Make sure all necessary steps for sampling are taken (sample bottles, trip blanks, flushing lines for lead and copper sampling, etc.). Sampling instructions should be included with the kit, but if you are unsure about how to take the samples contact the lab. You can also contact your remote maintenance worker, or the local ADEC Environmental Specialist for instructions on how to sample.

Training Opportunities *by Kathy Kastens*

The EPA will host four (4) web-cast trainings shortly after the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 ESWTR) and Stage 2 Disinfection By Products Rule (DBPR) are promulgated. These web-casts will be open to ADEC Drinking Water Program staff, PWS owners and operators, and Technical Assistance providers who wish to attend. Two of the trainings will be on the LT2/Stage 2 Data Collection and Tracking System. The remaining two web-casts will present an overview of the entire Stage 2 DBPR and LT2 ESWTR. EPA registration information will be forwarded to all of the states around mid December. EPA will also send

registration information to ASDWA, AMWA, AWWA, Technical Assistance providers such as RCAP and NRW and other national associations.

phone lines that can be used to hear the audio portion of the web-casts. Gathering together for the training will also facilitate discussion between the Drinking Water Program staff, PWS owners and operators, and technical assistance providers.

Special Training

The EPA encourages attendees to gather in designated locations and view the web-casts together because there will be a limited number of

The Drinking Water Program will have facilities available to view the web-cast in their Anchorage, Fairbanks, Wasilla, Soldotna, and Juneau offices. If you are interested in attending call or email Karen Leis at (907) 269-3082 or

karen_leis@dec.state.ak.us and she will keep you on a list to send out information on the web-casts as the information becomes available.

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

general public to view Alaska PWS data, on a system-by-system basis, and can be accessed from a link on the Drinking Water Program's Website. This represents real time information about Alaska's PWS. Another significant Drinking Water Program project that is nearly ready for field testing is the Alaska enhanced sanitary survey (ESS) form. This form is a modified version of U.S. EPA's ESS form. After the hard copy version of the ESS forms are field tested and any technical problems corrected, the plan

is to develop an electronic version of the form. It is planned that the Alaska ESS form will be available for statewide use by ADEC Drinking Water Program staff and ADEC-approved sanitary survey inspectors by the end of the second quarter of 2006. Sanitary survey training workshops for 2006 will focus on the use of the new form and the new regulatory requirements for sanitary survey inspectors. The new sanitary survey inspector requirements should become effective in December 2005.

Let's enjoy the refreshing change of seasons and continue to be proactive in our planning for providing safe drinking water for continued public health protection of Alaska's residents and visitors and long-term PWS compliance.

James R. Weise

James R. Weise
Manager
Drinking Water Program

Drinking Water Watch *by Maria Ridgway*

Drinking Water Watch is now available for directly accessing Alaska public water systems information.



federally regulated public water system in Alaska. It provides online information about a public water system such as administrative contacts, sampling, violations, monitoring requirements, and source

Drinking Water Watch allows the public to directly access information about a public water system, any

water assessment information. The website also provides timely information to consumers about their water system's compliance with Drinking Water Regulations and public health protection.

The link to the website is <http://map.dec.state.ak.us/eh/dww/>

Get to know the Wasilla and Juneau Office Staff



Above is a photo of the Drinking Water Program staff in the Wasilla office. On the far left - Lynn Lowman, Program Coordinator for the Wasilla and Southeast Program offices; middle - Tee Little Environmental Program Specialist, and on the far right - Kellie Alvstad, Environmental Technician.



Above are the Drinking Water Program staff in our Juneau office. On the left is Carrie McMullen an Environmental Program Specialist, on the right is David Khan, an Environmental Engineer.

What's Wrong With This Picture?

by Scott Forgue

Welcome to a new feature of your favorite newsletter!

This is the first installment of an article that will be a regular part of Northern Flows. Included in each article will be a photograph showing sanitary risks, security issues, and other water system concerns. See if you can find "What's wrong with this picture?" (Answers on page 6.)



Answer: A) Check the surface wash for proper operation, and if no surface wash exists, consider installing one. and: C) Check the backwash rate to make sure it meets the design criteria.