

State of Alaska, Department of Environmental Conservation
 Division of Environmental Health
 Drinking Water and Wastewater Program
 555 Cordova St.
 Anchorage, Alaska 99501

Presorted Standard
 US Postage Paid
 Anchorage, Alaska
 Permit # 69

Northern Flows



Alaska's Drinking Water & Wastewater Program Newsletter
 Issue 11 • Summer 2002

Important Information



For Water Operators and Owners

Northern Flows

DW/WW Program Directory

ANCHORAGE PROGRAM AREA

James Weise, DGS	Program Manager	269-7647
Kathaleen Kastens	Special Projects	269-7639
Margaret Hansen	Administrative Clerk	269-7656
Sherri Trask	C/E Coordinator	269-3075
Keven Kleweno, PE	State DW Engineer	269-7696
Leticia Tadina	Environmental Tech.	269-7517
William Rieth, PE	Env. Engineer	269-7519
Maria Ridgway	Program Analyst	269-7625
Suzan Hill	DW Protection Coord.	269-7521
Heather Hammond	DW Protection	269-0292
Chris Miller	DW Protection	269-7549
Sarah Bendewald	DW Protection	269-3076
Danielle Rabinovitch	DW Protection	269-3068
Lugene O'Fallon	Environmental Tech.	269-7653
Heather Newman	Program Coordinator	269-7619
Chuck Blaney	DW Compliance	269-7518
Jamie Stazel	DW Compliance	269-7624
Trevor Fairbanks	DW Compliance	269-7623
Kathleen Free	Environmental Tech.	269-7618
Vacant	Administrative Clerk	269-7594

FAIRBANKS PROGRAM AREA

Cindy Christian	Program Coordinator	451-2138
Lee Johnson	Env. Engineer Assoc.	451-2179
Linda Grantham	DW Compliance	451-2137
Marci Irwin	DW Compliance	451-2168
Xenia DeVito	Administrative Clerk	451-2108
Linda Taylor, P.E.	Env. Engineer	451-5193
Fred Zonzel	Environmental Tech.	451-2109
Vacant	Intern	451-2169

JUNEAU PROGRAM AREA

Kathleen Soga	Program Coordinator	465-5325
Erin White	Administrative Clerk	465-5350
Vacant	DW Compliance	465-5335
Vacant	Environmental Tech.	465-5348
David Khan, PE	Env. Engineer	465-5317
Vacant	Regulations Spec.	465-5318
Carrie McMullen	DW/WW Compliance	465-5333

SOLDOTNA FIELD OFFICE

David Johnson, PE	State WW Engineer	262-5210
David Litchfield	DW Compliance	x238
Margaret French	Environmental Tech.	x224
Scott Fogue, PE	Env. Engineer	x223
Oran Woolley	Env. Engineer Assoc.	x243
Nancy Horan	Administrative Clerk	x241
		262-5210

WASILLA FIELD OFFICE

Mike Skibo, PE	Env. Engineer	376-5038
Lynn Lowman	DW Compliance	376-5038
Kellie Alvstad	Environmental Tech.	376-5038
Barb Hanson	Environmental Tech.	376-5038
Vacant	Intern	376-5038

KETCHIKAN FIELD OFFICE

Vacant	DW/WW Compliance	225-6200
Marla Peters	Environmental Tech.	225-6200

BETHEL FIELD OFFICE

Bob Carlson	DW/WW Compliance	543-3215
Agnes Chaliak	Administrative Clerk	543-3215

Message from the Manager

Summer is here and the days just seem to last forever. We have so much to do, fishing, gardening, construction projects, etc, that we just lose track of time. It's also time for the owners and operators of public water systems (PWS) or wastewater treatment systems, to complete upgrades, routine maintenance, and/or correct significant deficiencies identified during sanitary surveys or site inspections that have been deferred for perhaps too long.

If you are a home owner, now would also be a great time to make sure your private drinking water well was properly sealed and that you collected samples to have them tested for coliform bacteria and nitrates, especially if this has never been done. If you also have a septic system, which hasn't been pumped for a few years, now would be the time to have the system pumped. If you have had problems with your

septic system this past winter, or worse yet, several winters in succession, now would be a good time to replace your system.

My theme in this *Message from the Manager* is to make things happen for you (proactive) rather than have them happen to you (reactive), and to be accountable and responsible. Whether it is a deferred project around the house or maintenance and upgrades at your utility, the time to do those projects is now. This past June we completed three workshops on the Arsenic Rule and New Systems Monitoring and Compliance Rule. These workshops were joint EPA/Cadmus/ADEC taught and were held in Anchorage, Fairbanks, and Juneau. We had approximately 70 participants, many of them from the Alaska Department of Conservation (ADEC), as well as the Alaska Native Tribal Health Consortium (ANTHC), some consultants, and a few from the general public.

Overall, it was light attendance in response to a Rule, in which the new maximum contaminant level (MCL) of 0.01 mg/L will significantly impact approximately 72 PWS across the state. There will be additional workshops offered later this fall, so again, you can be proactive and learn about the Rule and your PWS requirements or you can be reactive and receive a letter in the mail from ADEC or questions from your customers because you haven't prepared for the Arsenic Rule.

In an effort to be proactive, ADEC sent all Class A PWS owners a letter this past January 2002, requiring them to collect a raw water sample from their drinking water source(s). The purpose of this project is to obtain data statewide on the distribution of arsenic in our raw water supplies, the magnitude or potential of the problem we have, and to look at those systems that currently treat their water and have arsenic levels above 10 ppb in their raw water, but below 10 ppb in their treated water. We want to review these treatment system technologies and see what could be applicable for other similar type (size and raw water arsenic level) systems. Collecting the raw water sample as soon as you can and getting the sample to a ADEC-certified lab for analyses is being proactive and concerned about public health protection for your customers. It is being accountable and responsible as a PWS owner and/or operator. So, if you are a Class A PWS owner, and you haven't collected your raw water sample for 2002, the time is now to complete this deferred project.

Enjoy the summer, catch-up on deferred projects, and lets continue to make a positive impact in a proactive manner on the quality of life in Alaska. ~

James R. Weise

James Weise
 Manager,
 DW/WW Program

This Issue

Radon Radionuclides	Consumer
<u>Sampling</u>	<u>Confidence Reports</u>
3	2
<u>Tech Tip</u>	<u>Security & Vulnerability</u>
7	7
<u>Septic Approvals</u>	<u>Certified</u>
2	<u>Installers</u>
<u>Class V</u>	<u>Schools</u>
<u>Injection Wells</u>	3
6	<u>How to Avoid</u>
	<u>Violations</u>
	4

Do you need your septic approved by ADEC? *By Scott Forgue*

There are many types of domestic wastewater treatment and disposal systems, but they all fall into one of two groups: (1) those that require written approval before construction and (2) those that do not. Systems that do not require prior approval may be installed provided that:

- the system is for a single-family home, duplex, or a small commercial facility (a *small commercial facility* is a single building with an expected wastewater flow of 500 gallons per day or less);
- the system must be installed by a registered engineer, a person supervised by a registered engineer, a person whose work is inspected by a registered engineer, a *Certified Installer*, or a *homeowner* certified by ADEC to install a system to serve the homeowner's single-family home or owner-occupied duplex;
- the installation must comply with the *ADEC Installer's Manual for Conventional Onsite Domestic*

Wastewater Treatment and Disposal Systems. This reference is commonly known as the *Certified Installer's Manual* and is part of the Wastewater Regulations, 18 AAC 72; the design of the system must conform to standard sanitary engineering principles and practices and adequately protects public health, the environment, and public and private water systems; the system must be located in soils that are predominantly sands and gravels; the system has a soil absorption system (commonly known as a "leach field") that is sized



appropriately for the soil type; the system complies with the minimum separation distance requirements; the ground surface slope is less than 25 percent for trenches, and less than five percent for beds; the soil absorption system is at least 50 feet from any slope greater than 25 percent with a drop greater than 10 feet; and the system is not located in an area known or suspected to contain permafrost; where similar systems have been known to fail; where a high groundwater table or poor soils conditions exist; or where the department finds that a discharge threatens public health, private and public water systems, or the environment.

If all of these conditions cannot be met, a written plan approval prior to construction will be required. If you have any questions about these requirements, call your local ADEC office. ~

Consumer Confidence Reports Is yours done? *By James Weise*

Just as a reminder to Class A PWS that are community water systems (CWS), you have to put the required arsenic "educational statement" or "health effects statement" in your Consumer Confidence Report (CCR), due to the state by July 1, 2002. These statements are required for the calendar year 2001 CCRs by the Arsenic Rule even though compliance with the 0.01mg/L MCL is not required until January 23, 2006. ADEC Drinking

Water and Wastewater (DW/WW) Program staff will be making sure all Class A CWS complete their 2001 CCRs and that the CCR contains the required "educational statement" or "health effects statement" for arsenic.

It is important for PWS owners and/or operators to recognize the importance of their CCR. This lets the public know from YOU, the quality of their drinking water and what you are doing to provide them

a quality product for their best public health protection. You as a PWS can be proactive and get your CCRs completed on time and distributed to your customers, or you can be reactive when you receive an enforcement letter from ADEC for not doing what you were required to do. The choice is yours. Be accountable and responsible, or be reactionary and irresponsible to your customers. ~

Tech Tip - Cross-Contamination and Your Water Samples *By Heather Newman*

You know that proper sampling techniques help ensure your public water system samples do not get cross-contaminated. But did you know that equipment you use during the sampling process and the environment surrounding sample sites, or simple faucet filters could potentially cause sample cross-contamination and erroneous sample results?

Even your hands can be a source of contamination in your drinking water samples. Therefore, prior to collecting any water samples, be sure to wash your hands, or better yet wear simple latex gloves (make sure the gloves are new and have not been previously used).

Some markers (e.g. Sharpie or Mark-A-Lot) have levels of volatile organic compounds (VOC) that easily contaminate water samples with low levels of VOC's. If you can smell the ink while using the marker or pen you are labeling your samples with, find another pen or marker for labeling VOC samples. Prior to

collecting VOC samples take a quick look around the sample site area. Are there any containers of fuel, paint thinner, or other volatile



chemicals in the area and are any of these containers open? Are there any small spills of such materials in the area that have not been cleaned up? Have you been working around any fuel sources? Are your coveralls or clothes dirty from a long days work? Fumes from these containers, spills or clothes could contaminate your water sample with VOC's. Even low levels of VOC's detected in your water sample can increase the number of samples you'll be required to collect.

A dirty sample site area is a sure way to cause a false positive coliform sample. The sink and surrounding area of a coliform sample site should be clean prior to sample collection. Don't collect your sample from a faucet with an over-the-counter filter (e.g. a Brita filter). These filters create a great place for bacteria to grow. This bacteria in turn could end up in your sample. Remember if you get a positive coliform sample you will be required to collect four repeat samples within 24 hours and an additional five samples the following month.

Making note of these common potential causes of cross-contamination will help you to make sure that you are taking the necessary precautions so you don't contaminate your sample with VOC's or bacteria. Additional samples will be required when a water system's sample tests positive for total coliform bacteria or has low levels of VOC's, so these steps could save your water system both time and money! ~

Security and Vulnerability Self-Assessments for PWS *By Kathy Kartens*

As you all know security of our drinking water system's infrastructure has become a high priority. Right now it looks as though all PWS serving more than 3300 persons will be required to conduct and submit vulnerability assessments to EPA and the State between March 2003 and June 2004. The ADEC Drinking Water Wastewater (DW/WW) Program has submitted a grant application to EPA for funding of counter terrorism concerns. If awarded, the grant funds will be used to bring instructors to the state in early fall of this year to conduct two sets of workshops. One of these workshops will provide an overview of counter terrorism. The other workshop will be designed to train PWS owners, operators, managers and their consultants to conduct vulnerability assessments, perform security reviews and in turn enable them to heighten overall facility security. If you have any questions please contact your local AEC DW/WW Program office. ~

Class V Injection Wells in Alaska *By Suzan Hill*

When it comes to injection wells, many people think of deep boreholes, high pressures, protective casings, and heavy industry or petroleum production. But most injection wells are much simpler and shallower, and can pose a significant threat to ground water quality. Common examples in Alaska are sumps, drains, drywells, and drainfields that are used to dispose of septic tank effluent; storm water and snowmelt; motor vehicle waste fluids; equipment and shop floor wash water, and other commercial waste fluids. Common contaminants associated with injection wells including nutrients, bacteria, viruses, solvents, anti-freeze, used oil, and dissolved heavy metals, can potentially contaminate a groundwater aquifer that serves as a source of drinking water through a private or public water system well.

EPA regulates shallow injection wells through the Underground Injection Control (UIC) Program. Alaska also has its own set of requirements that apply to injection wells. Most shallow injection wells are allowed without a permit if well inventory information is submitted to the EPA in a timely manner and the well is operated, maintained, and (eventually) closed in a manner that prevents groundwater contamination. Alaska requires a permit for injection wells used for non-domestic wastewater disposal, including storm water. Both federal and state regulations ban the injection of hazardous waste above or into a fresh water aquifer.

Do you have an injection well at home or in your business? By following good housekeeping practices, you can avoid contaminating our groundwater and avoid the possibility of violations or fines. Here are some do's and don'ts for injection well use.

DO's...

- Do you know where your floor or shop drains go?
- Do you use secondary containment and drip pans in your shop to prevent spills from entering floor drains?
- Do make sure employees are trained to properly handle chemicals and wastes to prevent spills and leaks?
- Do you promptly respond to and clean up any spills or leaks at your company or place of business?
- Do you have a drain plug that you can use to block the floor drain? You may be required to submit a closure plan for vehicle waste disposal wells-do you have one prepared?
- Do you keep containers closed unless they are in use?

DON'Ts...

- Do not store hazardous chemicals or wastes near floor drains.
- Do not pour oil, solvents or antifreeze down shop sinks.
- Do not allow drums to tip or fall in secured storage areas.
- Do not use water to clean the floor, instead use a dry sweep in the area.
- Do not put fluids like oil, solvents, paints, chemicals or industrial wastewater into a floor drain or an injection well system such as a septic tank.
- Do not use floor drains to discharge industrial wastewater without a permit. This includes discharges into storm drains. You must find another way to manage your wastewater, or obtain an National Pollutant Discharge Elimination System (NPDES) permit from the U.S. EPA. ~

Safe Drinking Water in Schools *By Kathy Kastens*

The ADEC Drinking Water and Wastewater Program is working on a large project, "Safe Drinking Water for our Schools." Our goal is to increase compliance with the Drinking Water Regulations, to ensure children are getting safe drinking water at school. Of the 131 Alaska schools that have their own public water system, 81 had at least one violation last year. Some of the violations were for exceeding the Maximum Contaminant Level (MCL) in a sample, but the majority were for not taking samples and/or reporting the results to ADEC. If the monitoring and reporting of drinking water samples is not done, we (ADEC and PWS owner and/or operator) have absolutely no idea of the quality of the water our children are drinking or what contaminants

they may be exposed to. Compliance with drinking water requirements for public water systems at our schools equals public health protection for our children. In 81 of our public schools, compliance is not being attained and adequate public health protection of our children drinking this water is not being ensured.

The DW/WW Program plans on doing everything it can to increase compliance in the schools that it has regulatory authority over. We are stepping up technical assistance to PWSs that are owned and operated by a school; providing tools to the PWS operators to aid them in their work; and talking to parents, teachers and children about potential risks and ways to reduce them. But most importantly, we need to get the word

out that noncompliance with drinking water quality standards is unacceptable. We are establishing a workgroup of individuals concerned about this issue to help us accomplish our goal. The commitment needed to be part of this workgroup would be time, being a resource for both providing and reviewing information, and to be an added voice to relay our message. If you are interested in becoming part of the workgroup, please call Kathy Kastens, Project Coordinator at (907) 269-7639 or E-mail her at kathaleen_kastens@envircon.state.ak.us. If you are unable to be part of our workgroup, your assistance in spreading the word about our project, and the need for safe drinking water in our schools, would in itself be invaluable, and greatly appreciated. ~

Radon and Radionuclides Sampling Projects, 2002 *By James Weise*

In the Summer of 2002, ADEC will be completing a random sampling of 50 PWS, primarily CWS, for radon. We are trying to target those systems that have high arsenic, as well as possible radionuclides. ADEC is paying for the analyses and has contracted with the Washington State Department of Health to analyze the samples. It is a repeat of a similar project completed during the Summer of 2001. Additionally, ADEC DW/WW Program is going to complete a radionuclides sampling project of nine Class A PWS that are CWS. These systems have been selected using the radon sampling data collected during the Summer of 2001. We have selected systems that had high radon levels in their drinking water. We have very little radionuclides data for Alaska's PWS and we want to see if there is a direct correlation between high radon in drinking water and radionuclides. EPA promulgated the new Radionuclides Rule, December 7, 2000. The State of Alaska has until December 7, 2004 to adopt this Rule, which we plan to do by reference.



So, if you get a letter from ADEC requesting your participation in either the radon or radionuclides sampling project, please participate. Our goal with both of these projects is to look at the distribution of radon and radionuclides in our public drinking water supplies and to identify the magnitude of our potential problem, and those systems most likely to be impacted. If you have any questions about these projects, or if you have been selected and decide not to participate in the project, please contact Heather Newman at (907) 269-7619.

Our goal with any statewide sampling project is to collect useful and current information about the quality of Alaska's drinking water so that we, the State and PWS owners and/or operators, can make more informed decisions and provide the best information to the general public, our customers. Thank you in advance to all those systems that will be helping us in this endeavor. ~

How to Avoid Drinking Water Violations *By Sherri Trask*

Because of the increasing number of Public Water System (PWS) violations statewide, I decided to write a brief article on how the most common violations happen and how to avoid them. First of all, **monitoring and reporting violations make up about 97% of all violations statewide.** That leaves 3% where the PWS received a violation for exceeding the maximum contaminant level (MCL). Here are a few guidelines to avoid some of the most common violations throughout the year.

Total Coliform Rule:

If you sample for bacterial analysis ("bacti") late in the month or quarter, you may not have enough days remaining to submit a sample. Plane delays and weather are the remote PWS's worst problems! Late samples are an easy violation to avoid. **The key here is to sample EARLY!**

Keep extra sample bottles on site. When you receive positive bacteria results, you have 24 hours to collect 4 repeat samples from the time you are notified by the laboratory or ADEC. If you have to wait for spare bottles to arrive via plane, you will probably get a violation for not sampling within the 24 hours. In most cases, you are also required to do additional testing throughout the following month with 5 more samples to confirm if the contamination is really due to sampling error or if you have removed the source of contamination. This is also an easy violation to avoid by keeping extra bottles on site.

Collect your sample properly.

Most unsatisfactory bacteria tests are due to the person collecting the sample contaminating it accidentally. Wash your hands with warm soapy water; remove any screen from the faucet; let the cold water run for about 3 minutes; and don't stick your fingers on the rim of the bottle, inside the cap, or lay the cap down on the sink. Positive bacteria results generate violations and usually require a total of at least 9 additional samples.



Synthetic Organic Contaminants/Other Organic Contaminants (SOC/OOC): SOC/OOC contaminants are the pesticides and herbicides used widely in the Lower 48. Since Alaska has very limited use of these compounds, most systems are able to receive a monitoring waiver every 3 year period. The cost of monitoring without the waiver averages about \$2,500 every year. Cost of the waiver renewal & review - \$65. You can apply for the SOC/OOC waiver

anytime, but it is due no later than March 31, 2004 for this monitoring period. Since the waiver covers 30 contaminants, you can accumulate 30 monitoring violations every quarter past the deadline until you receive a waiver or begin testing. Contact your area's local ADEC office for a monitoring waiver application.

Lead & Copper Rule:

Collect the samples during the exact time period required. Some systems need to monitor for two consecutive 6 month periods ("initial" monitoring). Others may be on a reduced monitoring schedule and required to collect samples once a year or once every three years. If the initial sampling requirement is not met, you will get a violation every quarter until you can return to compliance with two initial sets of samples. You will also be immediately placed on the EPA Significant Noncompliers (SNC) list if you miss any one of the initial sampling requirements.

Surface Water Treatment Rule (SWTR):

Monthly operator reports afford the operator numerous ways to receive violations. Here are a few ways to avoid them:

Record the chlorine reading taken in the distribution system (at the same time and from the same faucet that you collect your monthly "bacti" sample) this is called the **"distribution chlorine"**, record the turbidity every day that you filter the water, record the chlorine residual at the entry point to the distribution system every day and maintain at least 0.2 mg/L chlorine,

How to Avoid Drinking Water Violations cont'd *By Sherri Trask*

mail or fax your operator report to your local ADEC area office no later than the 10th dat of the following month.

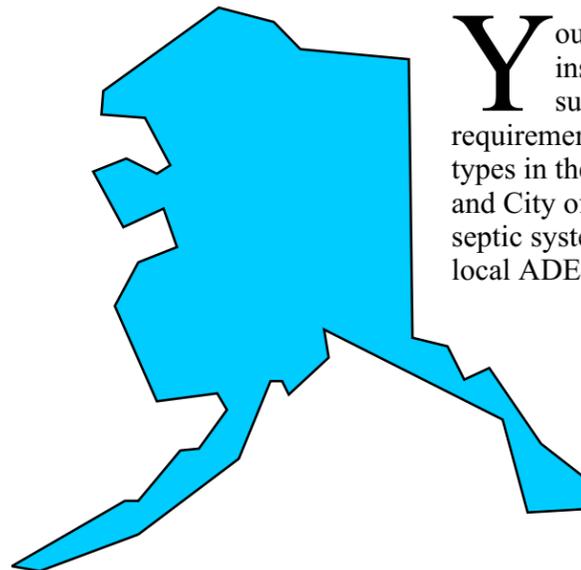
Sending in your monthly report on time will prevent you from getting at least 3 violations for not reporting, and a phone call from your local ADEC office.

Overall, the key to lowering the

number of violations a PWS could receive is to know what, when, and where to sample and report. The Environmental Specialist assigned to your area mails or faxes a monitoring summary report to the operator every year. **The monitoring summary lets you know what tests you are required to do, how often you need to sample, and when your next sample is due.** If you have not received a monitoring

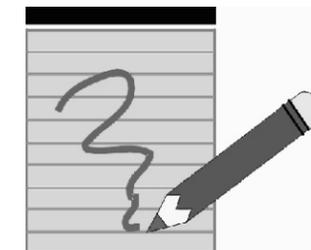
summary in the past, please call your local ADEC area contact (see back page) to receive a copy of this invaluable compliance tool. If you received the summary, but don't know how to use it, please call your ADEC contact for assistance. **Remember to sample early, apply for waivers on time, and follow the correct sampling procedures.** ~

Brief Bits - Certified Installers of Onsite Septic Systems *By Margaret French*



Your Certified Installer status is valid statewide. If you are installing an onsite septic system outside your usual area, make sure YOU are aware of any differing local conditions and requirements (i.e., sand liner exemption in the Nikiski area, unique soil types in the Fairbanks area, etc.). Also, the Municipality of Anchorage and City of Valdez each have their own requirements for installers of septic systems. It is always a good idea to contact the local government or local ADEC office prior to installing septic systems in those areas.

An addition to the Wastewater Disposal regulations effective January 17, 2002 allows the department to waive the contractor license requirement if the individual applying for certification is employed by a government or health corporation and provides documentation to the department of that employment. These individuals are not exempt from complying with the training and fee requirements for a Certified Installer.



Did you know that ADEC Division of Environmental Health-Drinking Water and Wastewater Program's webpage at www.state.ak.us/dec/deh/septic.htm has links to the Certified Installer training schedule, Installer Manual for Conventional Onsite Domestic Wastewater Treatment and Disposal Systems, Documentation of Construction form, the current wastewater regulations, list of Certified Installers by area, and other onsite septic system and domestic wastewater treatment and disposal information. ~