

# Northern Flows



Alaska's Drinking Water Program Newsletter  
 Issue 26 • Summer 2006

## Important Information



### For Water System Operators and Owners

## Northern Flows

### Drinking Water Program Directory

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Vivian Terrell	Administrative Clerk	269-7581
Jeanine Oakland	C/E Coordinator	269-2007
Vacant	Environmental Spec.	269-xxxx
Vacant	Regulations Specialist	269-xxxx
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Eric Burg	Environmental Tech.	x246
Lori Moiles	Administrative Clerk	x230

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Marci Irwin	Program Manager	451-2168
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Linda Grantham	DW Compliance	451-2137
Vacant	DW Compliance	451-xxxx
Johnny Mendez, P.E.	Env. Engineer	451-5193
Clare deHernandez	Environmental Tech.	451-2170
Hollie Wynne	Administrative Clerk	451-2108

### Message from the Manager

It's "Summer" in Alaska. Our short duration and fast paced summer season brings great expectations to most of us. Long days filled with numerous activities such that we routinely test ourselves in trying to get it all done in the day. For Alaska public water system (PWS) owners, operators, and utility managers, the summer days may not seem long enough to get everything done. What is that "everything" that PWS owners, operators, and managers should focus on for the summer? Perhaps it includes the basics of routine maintenance of the system from the hardships of winter, the upgrades or modifications to the system (don't forget the engineered plan review requirement) for achieving compliance or optimizing the system. Perhaps it includes routine monitoring or additional monitoring, operator training, the sanitary survey due this year (get it done by October to avoid any delays associated with the oncoming winter), or the annual Consumer Confidence Report for the Community Water Systems. Wow! That "everything" includes a great

deal once we write it down, plan it out (prepare a schedule), and implement the plan in a proactive and timely manner to get it done before the snow flies.

A quick update on drinking water regulatory issues shows that the State of Alaska is behind schedule on the adoption by reference of the Long Term 1 Enhanced Surface Water Treatment Rule (LT1 ESWTR). Our plan was to have the Rule adopted by March 2006; however, response to public comment and the Department of Law's detailed review has slowed the adoption of this regulatory package, which becomes effective in Alaska on August 19, 2006. This regulatory package not only includes the adoption by reference of the LT1 ESWTR, but also includes a master meter requirement for water systems and a requirement for ADEC-certified labs to use an electronic data reporting system (EDRS) to submit PWS compliance monitoring information directly to the state in an electronic format.

Additionally, ADEC Drinking Water (DW) Program staff are working on responding to comments from EPA Region 10 to obtain primacy for previously adopted federal rules that include Long-Term 1 Interim Enhanced Surface Water Treatment, Stage 1 Disinfectants/Disinfection By-Products, Lead and Copper Rule Minor Revisions, Public Notification, Arsenic, Radionuclides, Variances and Exemptions, and Filter Backwash and Recycling Rules. We expect to be able to complete a response to EPA on

these regulations and have also completed a 30-day public comment period on the proposed regulatory changes in late July 2006.

New drinking water regulations impact both the State of Alaska and PWS owners and operators. To prepare for the new regulations, we had a very active 2006 legislative session and were successful with much of our FY 2007 budget request for additional resources. As the result of our budget requests, we are actively working on preparations for recruitment of five new staff starting in July 2006. Our first priority includes hiring additional engineering staff for the Anchorage, Fairbanks, Soldotna, and Wasilla offices. Additionally, we plan to add another Environmental Program Specialist in the Anchorage office. These staff will allow us to catch up on our engineered plan review activities, compliance with current regulations, and establish proper inventory data and monitoring requirements for new systems. Future budget increment requests for additional resources will focus on the implementation of the new drinking water regulations and the State's Capacity Development Strategy.

Continuing in a positive direction, the DW Program added several new staff members during April and May 2006. Please welcome Julia Pieper, Administrative Clerk; Chris Clark, Environmental Engineering Assistant; and Jean Marie Merli, Environmental Engineer in the Anchorage office; and Hollie Wynne, Administrative Clerk, in the Fairbanks Office. Unfortunately,

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Regulations Corner *by Gloria Collins*

At last summer is here... And what would summer be without a new set of proposed changes to the drinking water regulations? The Drinking Water Program recently published the Public Notice of its latest regulations proposal (DW 2006-1), with the 30-day public comment period ending at 5:00 p.m. on July 28, 2006.

This regulation package centers on revisions that make the state regulations more consistent with federal regulations. This will allow the state to obtain primacy for many federal drinking water rules already adopted by reference. Other changes include a stipulation that a public water system (PWS) owner, operator, or employee can not do a sanitary survey on that specific PWS; a revised name for the form used in the engineering plan review for the final approval to operate step for a new PWS; and improvements in the internal consistency and readability of the drinking water regulations.

Both the Public Notice and the text of the proposed changes, entitled Drinking Water Primacy Regulations 06-26-06, are posted and can be viewed online at [http://www.dec.state.ak.us/public\\_notices.htm](http://www.dec.state.ak.us/public_notices.htm)

Our drinking water regulations project LT1 (Long Term 1 Enhanced Surface Water Treatment Rule) has been filed by the Lt. Governor and will become effective August 19, 2006. After the regulations go into effect, a responsiveness summary to the comments that were received during the 30-day public comment period (Dec. 2005-Jan. 2006) will be sent to the individuals who submitted comments.

The focus of LT1 is adding the information from 40 CFR 141.500-

141.571 (Subpart T-Enhanced Filtration and Disinfection-Systems Serving Fewer than 10,000 People). Other highlighted changes include requirements for a master meter, for sanitary survey inspectors to submit their reports in an approved format, and for state-certified laboratories to submit their data electronically.

In a previous issue of *Northern Flows*, we noted several other drinking water regulations projects being planned. Most likely, it will be 2007 before the first of these projects is presented for public notice. The preview of coming regulations projects includes a revision of 18 AAC 80, Article 3; a revision of 18 AAC 80, Article 6; and changing the public water system naming conventions (from Class A and Class B to the federal nomenclature system) and clarifying the roles of public water system owners and operators. While these projects cover a lot of ground, they revolve around improving already existing regulations.

To keep things interesting, there are two new federal rules that became effective in March 2006, LT2 (Long Term 2 Enhanced Surface Water Treatment Rule) and Stage 2 (Stage 2 Disinfectants and Disinfection By-Products Rule). We will also be incorporating these new rules into future regulations projects. Some EPA-sponsored webcast training sessions, opened to PWSs, technical service providers, consultants, and regulators, have already been provided on these two rules.

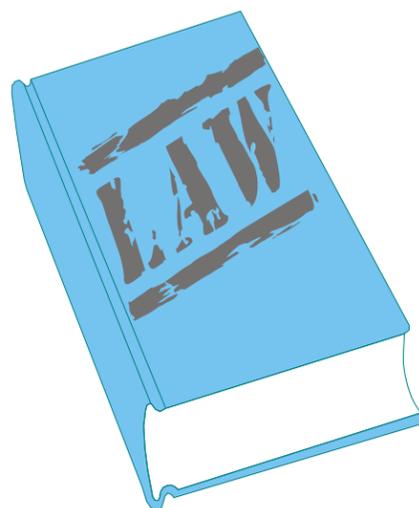
And other new federal rules are in the works. As these rules become final, we will add the relevant changes to the next available regulations projects.

Final rules from the EPA that are anticipated this summer include a "Methods Update" rule. This proposed rule first appeared in the *Federal Register* on April 6, 2004, and affects compliance monitoring programs that fall under the Safe Drinking Water Act as well as the Clean Water Act. It adds new methods and updates existing ones. These changes aim to provide a greater selection of analytical methods available to the regulated community and laboratories for analyzing drinking water.

Projected for late fall 2006 is the final rule for the Unregulated Contaminant Monitoring Rule 2 that was proposed by the EPA in August 2005.

Also, the long-anticipated Ground Water Rule is getting closer. The EPA is projecting a settlement agreement date for the final rule in August 2006. Currently, the EPA is considering new information on contaminant occurrence in ground water.

The proposal entitled Lead and Copper Rule Short-Term Regulatory



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Regs Corner cont'd. *by Gloria Collins*

Revisions was published in the July 18, 2006, *Federal Register*. This set of revisions includes monitoring, treatment processes, customer awareness, and lead service line replacement. Comments must be received by September 18, 2006, except comments on the information collection provisions must be received by August 17, 2006.

A final report is due in the fall of 2006 regarding a revision to the Total Coliform Rule (Distribution System). At present, distribution system issues and potential risks are being reviewed by EPA.

Finally, a summer 2006 publication is anticipated that focuses on a "Microbial Waterborne Disease Measure," which includes EPA research on microbial risk and indicators. This project involves collaboration with the CDC (Centers for Disease Control) and recommendations from NDWAC (National Drinking Water Advisory Council).

The EPA has also provided additional regulatory "tools" to help small drinking water systems. *Point of Use/Point of Entry* guidance was posted on the EPA website in June 2006, at <http://epa.gov/safewater/smallsys/ssinfo.htm#two>

with hard copy expected to be available in August 2006 from the Water Resource Center (800-426-5791).

In these and other ways, the dynamic world of drinking water continues its quest to consistently provide clean and safe water. Thanks-and have a wonderful summer!

Gloria Collins  
Gloria\_collins@dec.state.ak.us

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

during May 2006, the DW Program also lost two staff: Brad Ault, Compliance and Technical Services Manager; and Karen Leis, Regulations Specialist, resigned from the program. "Thank you" to Brad and Karen for

their diligence and good work. Let's continue doing what we do best with our jobs, and have a great summer filled with many enjoyable and fulfilling adventures.

*James R. Weise*

James Weise  
Manager  
Drinking Water Program

**Dear Doctor Drip:** I noticed on the April 2006 Significant Non-Complier (SNC) List there are many Public Water Systems (PWSs) with a SNC for violations of the Stage 1 Disinfectants and Disinfection By-Products (D/DBP) Rule. What are the most common violations that cause this SNC status?

The most common reason PWSs are listed as a Stage 1 SNC is due to violations for failure to consistently monitor for the distribution chlorine residual, which is to be taken each month at the same time and location as the monthly bacteria (Total Coliform) sample(s). This is required to ensure the chlorine residual is at a sufficient level to reduce the production of harmful disinfection by-products (DBPs). High levels of DBPs have been linked to bladder cancer and to adverse developmental and reproductive health effects. A great way to avoid the violation is by reporting the distribution chlorine residual on the paperwork for the monthly bacteria sample.

It is also important to note that in order to return to compliance (i.e., no longer be listed as a SNC), the PWS needs **12 consecutive months** with **NO** violations of the Stage 1 D/DBP Rule.

*This is a new area of our newsletter; we hope you will both 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 public water system wellhead with sanitary risks and safety hazards.

The pitless adapter, the subsurface connection between the pipe on the well pump and the supply line to the distribution system, failed and was leaking. The owner contacted a drilling company to make a repair. After replacing the pitless adapter, the well was left in the condition you see here. The Department received a complaint and investigated.

The source protection requirements of the Drinking Water Regulations (18 AAC 80.015) require the well casing to have a sanitary seal to stop the entry of contaminants. There is no seal on this casing. The pipe that was used to pull the pump and also drop pipe from the casing can be seen sticking out of the top of the well, preventing the replacement of the sanitary seal.

Source protection regulations also require that the area around the well casing be graded to drain away from the casing. This casing has a corrugated plastic pipe surrounding the wellhead. Unless the entire wellhead and plastic pipe are enclosed, rainfall will be prevented from draining away from the casing. The water collected between the plastic pipe and the well casing may leak down along the casing, potentially contaminating the drinking water source.

The exposed electrical wires for the well pump are hanging out of the top of the well casing. Chafing of the wires on the rough edge of the casing or a break in the wiring insulation could result in an electrical hazard. The sanitary seal needs to be replaced and the wires enclosed in conduit from the sanitary seal to below the ground surface.

If you would like to see something interesting in a future issue, send your picture showing something wrong with a drinking water system to Scott Forgue at [Scott\\_Forgue@dec.state.ak.us](mailto:Scott_Forgue@dec.state.ak.us). ~

Get to Know the Anchorage Compliance Staff *by Vivian Terrell*

The photo on the right shows the DW Program Compliance and Engineering staff in the Anchorage office. In the back row, from left to right, are Leticia Tadina, Environmental Program Technician who works with Sanitary Survey Inspectors; Jamie Stazel, Environmental Program Specialist III, who oversees compliance for Anchorage and the Pipeline Corridor PWSs; Heather Newman, Environmental Program Manager I and the south-central DW Program area Coordinator, who oversees work related to the compliance and enforcement of the south-central program area PWSs; Kathleen Spaulding, Administrative Clerk III, who performs data entry for the south-central DW Program area; Doug Zellmer, Environmental Program Specialist II, who oversees compliance of the Bethel/Yukon Kuskowim area PWSs; and David Edmunds, Environmental Program Specialist II, who oversees compliance of the Kodiak/Bristol Bay/Aleutian Islands area PWSs. In the front row, from left to right, are Jean Marie Merli, Environmental Engineer I, who oversees engineering issues for the south-central DW Program area; Allan Nakanishi, Environmental Engineer I, who oversees engineering issues for the south-central DW Program area; Vanessa Wike, Environmental Engineer II, the Statewide Engineer Coordinator; and Chris Clark, Environmental Engineer Assistant I, who works with PWS Capacity Development projects and initiatives. Not pictured is Julia Pieper, Administrative Clerk II, who performs upkeep and organization of the south-central DW Program area files.



**Answer:** 3) "break up the silt and debris crust and redistribute it evenly over the surface of the filter" is not a correct solution for eliminating filter cracking.

Are You a Technical Assistance Provider? *by Kathy Kastens*

The ADEC DW Program has been working on several initiatives to improve our way of doing business. We have even put some of these initiatives into our work plan that we submit to EPA for their approval. One of these initiatives involves the DW Program hosting DW/Technical Assistance (TA) Provider meetings to develop some strategies for assisting Alaska water systems. TA Providers include Alaska Rural Water Association (ARWA); the Alaska Training and Technical Assistance Center (ATTAC); Rural Community Assistance Corporation (RCAC); Alaska Water and Wastewater Management Association (AWWMA); and the National Tribal Environmental Council (NTEC), among others. DW Program staff and TA Providers are working on coming up with a set of guidelines to select a specific PWS for technical assistance, and also a process to coordinate

activities for those involved in working with these individual systems to develop sustainable capacity. For the most part, we are looking specifically at systems that are having significant difficulties, such as being on the EPA SNC List for a long time. Each of the TA Providers has specific areas of expertise that help in developing the financial, technical, and managerial capacity of the PWS to successfully operate and maintain its system. Developing this expertise is one of the primary goals of the DW program.

One of the stumbling blocks for this initiative to be most successful is the lack of a clear communication process for all of the individual agencies to exchange information. So, the ADEC DW Program wants to create a communication "exchange" process to keep everyone in the loop on PWS status and initiatives. TA Providers

need to be able to access information about Alaska PWSs and their needs. There should also be a mechanism for DW Program staff and TA Providers to readily communicate and relay information back and forth on the systems. The long-range plan is for ADEC to use an interactive website where TA Providers and DW Program staff can log in; access information; and deposit trip reports, system information, current issues, and maybe even current photos to assist in assessing issues the system may have. As conceived, the site will be accessible and usable by a very wide variety of operating systems, such as windows, apple, and unix, etc. We will try to have the site up for review before the July 27th meeting so that everyone can bring their comments to the next meeting. This type of site will allow all the TA providers the ability to post information and access

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What's Wrong With This Picture?

*by Scott Forgue*

The photograph below was taken during the investigation of a complaint regarding an Alaska public water system. "What's wrong with this picture?" (Answer on page 6)



AWWMA Conference Awards *by Kathy Kastens*

Every year the Alaska Water Wastewater Management Association AWWMA recognizes “the shining stars,” the individuals and facilities that do an outstanding job in the drinking water industry. They are recognized for their capabilities and willingness as dedicated professionals to deliver quality water to their customers. ADEC DW Program staff echo these words of “Thank You” to those special individuals and systems for taking seriously the responsibility of their communities’ public health, by providing clean and safe drinking water.

Greg Wagner was named AWWMA’s Small Water System Operator of the Year. Greg has water treatment and distribution operator certifications and is the lead operator for the Anaktuvuk Pass PWS. Greg was recognized for his positive attitude and using any new problem that develops as an opportunity to use the troubleshooting skills and knowledge he’s acquired.

Tim Oosterman was named AWWMA’s Large Water System Operator of the Year. Tim is the Bethel Heights Water Treatment Plant lead operator and has been with the system for 23 years. Tim has demonstrated the quality of true professionalism and excellence in the operation of not only his own plant, but in assisting his peers with their plant operations as well. Tim has a dedication to his profession, his family, and his community that deserves

recognition. Thank you, Tim, for all your hard work!

Monica Thompson received AWWMA’s Large System Laboratory Analyst of the Year Award for her work with the Yukon-Kuskokwim Health Corporation’s Water Quality Laboratory. The laboratory provides services to 47 villages, 17 schools, and 38 local businesses, serving a total of approximately 48,000 people in the Yukon-Kuskokwim Delta. The work Monica does goes directly to the improvement of the health and quality of life of the people in the area.

AWWMA’s Large System Manager of the Year Award went to Natalie Baumgartner. AWWMA cited Natalie as being “recognized for initiating significant improvements in the operation and maintenance of the City of McGrath’s water and sewer system, and for successfully seeking funding for capital improvements to these systems.” Natalie is responsible for overseeing the treatment and distribution of safe drinking water to approximately 400 people in McGrath. Natalie’s positive and proactive attitude encourages teamwork and an environment where many accomplishments can happen and where customers concerns and needs are met.

The Operator’s Meritorious Service Award went to Jeff Horak. Jeff is a senior operator in AWWU’s Distribution Operations work unit, operating and maintaining a

distribution system with over 750 miles of water mains varying in size from 4” to 54”, extending over 125 square miles, and serving nearly 57,000 customers. Jeff takes the lead on nearly every major project undertaken by his section involving upgrades of existing facilities or construction of new facilities. The public’s health and safety are Jeff’s highest priority by assuring that the best quality water is delivered to customers.

The George Warren Fuller Award was presented by the Alaska Section of AWWMA to Susan Lang “for her distinguished service to the water supply field in commemoration of the sound engineering skill...the brilliant diplomatic talent...and the constructive leadership which characterized the life of George Warren Fuller.” Susan, ADEC wants to extend its thanks to you for all of your high quality work and positive influence on our industry.

Eklutna Water Treatment Facility (WTF) is AWWMA’s pick for Large Water Treatment System of the Year. Eklutna WTF was constructed in 1988 and has consistently met or exceeded all regulatory requirements since then. Recently, Eklutna WTF has been working with various chemical coagulants to lower maintenance costs, chemical costs, and overall energy costs.

Each year just before the conference, AWWMA requests nominations for these awards; you have about 9 months to think of who you would like to nominate as a “shining star.” ~

Are You a TA Provider? Cont’d. *by Kathy Kastens*

a “real time” communication link (information exchange) while they are out at the system. An email notification will be sent to all TA Providers that have been attending the meetings when the test site is ready for

review. We are taking the opportunity here to thank those TA Providers that have offered their time, resources, and energy so far in this process, and to

extend an invitation to other TA Providers and systems if they would like to join the DW/TA Provider meetings. If you would like more information on the meetings, please contact Kathy Kastens at 269-7639. ~

AWWMA Conference Awards cont’d. *by Kathy Kastens*

The Operator's Meritorious Service Award is presented annually for recognition of special performance in the following areas: Continuous compliance with all public health standards in treated drinking water. Consistent and outstanding contribution to plant maintenance, thereby prolonging the useful life of equipment. Development of new and/or modified equipment or significant process modifications to provide for more efficient and/or effective treatment. Special efforts in the training of treatment plant operators. Special acts not directly related to water treatment, but which demonstrate dedication to the public beyond the normal operating responsibilities. Consistent and outstanding contribution to operation and/or maintenance of distribution lines, pump stations, and reservoirs.

Upcoming Conferences

AWWMA SE Region Operator Training Conference, October 3-5, 2006, Ketchikan, Alaska

More info? Contact: Angie Monteleone @ 561-9777 or visit [www.awwma.org](http://www.awwma.org)

ARWA Conference, September 11-14, 2006, Anchorage, Alaska

More info? visit [www.arwa.org](http://www.arwa.org)

ADEC/EPA SWTR/ESWRT AND D/DBP Rule Technology and Regulatory Workshop, October 31 - November 1, Anchorage, Alaska

More info? Contact: Chris Clark @ 269-7631

More Recognition and Certificates *by Kathy Kastens*

Each year Analytica recognizes Alaska water systems that have successfully completed their PWS Compliance Monitoring Program for the year with a certificate, and it also publicizes a list of these systems during the AWWMA Annual Conference. This year’s PWSs receiving certificates are:

- Anchor Point 247490
- City of Ambler 300214
- Anchorage Grace Church 214049
- Chilkat Indian Village 110562
- City of Fort Yukon 360256
- Eek 270281
- City of Eagle 360010

- Galena 360272
- Haines 110619
- City of Hoona 130067
- Holy Cross 280074
- Larson Bay 123456
- City of Nenana 360065
- Ouzinkie 250053
- Platinum 271059
- Ptarmigan Heights 310934
- Russian Mission 270168
- Savoonga 340183
- Salmon Creek Ct 241062
- Toksook Bay 270215
- Town & Country 310895
- Tok Community Ctr. 380078
- Tatitlek 291130
- Tanacross 380531

- Too'gha Inc. 360109
- UIC NARL 320816 & 320052

DW Program staff want to add their thanks to these systems for making sure their sampling is completed! ~

Filter cracking is caused by poor agitation of the surface of the filter media during backwash, which will leave silt surrounding the media grains. As the headloss increases, the silt and debris will become compressed, creating a crust on the top of the filter media. The crust increases headloss that further compresses the media, causing it to crack and pull away from the sides of the filter basin. Unfiltered water can then flow down the sides of the filter and into the under-drain.

**Question:** Which of the following four (4) options is **NOT** a solution for filter cracking? 1) remove and replace the top 1” of the filter media; 2) increase the backwash rate; 3) break up the silt and debris crust and redistribute it evenly over the surface of the filter; and 4) check the effectiveness of the surface wash.