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

Important Information

For Water and Wastewater System Operators and Owners

Northern Flows

DW/WW Program Directory

ANCHORAGE PROGRAM AREA

James Weise, DGS	Program Manager	269-7647
Kathaleen Kastens	Project Coordinator	269-7639
Margaret Hansen	Administrative Clerk	269-7656
Sherri Trask	C/E Coordinator	269-3075
James Elam	Environmental Spec.	269-2007
Karen Leis	Regulations Spec.	269-7656
Vanessa Blevins, P.E.	Env. Engineer	269-7696
William Rieth, P.E.	Env. Engineer	269-7519
Vacant	Environmental Spec.	269-8924
Leticia Tadina	Environmental Tech.	269-7517
Maria Ridgway	Program Analyst	269-7625
Daniel Rogers	Analyst Programmer	269-2008
Suzan Hill	DW Protection Coord.	269-7521
Michael Knapp	DW Protection	269-0292
Chris Miller	DW Protection	269-7549
Sarah Bendewald	DW Protection	269-3076
Lana Davis	Environmental Tech.	269-7653
Heather Newman	Program Coordinator	269-7619
Lucio Canete	DW/WW Compliance	269-7518
Jamie Stazel	DW/WW Compliance	269-7624
Trevor Fairbanks	DW/WW Compliance	269-7623
Kathleen Free	Environmental Tech.	269-7618
Leilua Fomai	Administrative Clerk	269-7594

WASILLA FIELD OFFICE

Mike Skibo, P.E.	Env. Engineer	376-5038
Lynn Lowman	DW/WW Compliance	376-5038
Kellie Alvstad	Environmental Tech.	376-5038
Allan Nakanishi, P.E.	Env. Engineer	376-5038
Martha Harrison	Environmental Tech.	376-5038

JUNEAU PROGRAM AREA

Vacant	Program Coordinator	465-5153
David Khan, P.E.	Env. Engineer	465-5317
Carrie McMullen	DW/WW Compliance	465-5333
Catherine Tide	Environmental Tech.	465-5325
Vacant	DW/WW Compliance	465-5325
Maggie Stumme	Administrative Clerk	465-5350

SOLDOTNA FIELD OFFICE

		262-5210
David Johnson, P.E.	State DW/WW Engineer	x238
David Litchfield	DW/WW Compliance	x224
Margaret French	Environmental Tech.	x223
Scott Forgue, P.E.	Env. Engineer	x243
Oran Woolley	Env. Engineer Assoc.	x227
Nancy Horan	Administrative Clerk	x222

FAIRBANKS PROGRAM AREA

Cindy Christian	Program Coordinator	451-2138
Lee Johnson	Env. Engineer Assoc.	451-2179
Linda Grantham	DW/WW Compliance	451-2137
Marci Irwin	DW/WW Compliance	451-2168
Xenia DeVito	Administrative Clerk	451-2108
Johnny Mendez	Env. Engineer Assist.	451-5193
Kim DeRuyter	Environmental Tech.	451-2109

KETCHIKAN FIELD OFFICE

Marla Peters	Environmental Tech.	225-6200

*This publication was released by the Department of Environmental Conservation,
Produced at an average cost of $0.58 per copy and printed in Anchorage, Alaska.*

Northern Flows

Alaska's Drinking Water and Wastewater Program Newsletter
Issue 15 • Summer/Fall 2003

Message from the Manager

Summer was here and it now appears to be going quickly as I write this message. I hope all of us have had an opportunity to get out and enjoy the weather and have fun. I also hope that public water system (PWS) operators and owners have kept up with the necessary maintenance and required compliance issues for their systems. Overall, our summers with those long days are actually quite short, and quite often we just lose track of time. So, for those deferred projects, the time is now to get the system ready for the fall and all too soon, our winter. If our fall is similar to what we had last year, but without the localized heavy rains and floods, perhaps many of us will be able to take care of our deferred summer projects.

Over the past month, the Drinking Water and Wastewater (DW/WW) Program has public noticed our proposed revisions to the Drinking Water Regulations, 18 AAC 80. This proposed set of regulation revisions contains some fee increases and new fees, a new Variance and Exemption section, enhancements to the sanitary survey and sanitary survey inspector section, increased operational, monitoring, and reporting requirements for Class C PWS owners, and minor clarifications to some definitions. The initial public comment period closed on August 12, 2003. We did not receive very many comments, however, responding to requests from the public and some Alaska State Legislators, the Alaska Department of Environmental Conservation (ADEC) has extended the public comment period on these proposed regulation revisions until September 16, 2003. So, if you have not provided comments to ADEC about these proposed regulations, please take the time to review the proposed regulations carefully and provide meaningful comments to ADEC.

Now that I have your attention about Drinking Water Regulations, I want to keep your attention, and let you know that the ADEC DW/WW Program also plans to begin, very soon, a 30 day public comment period for another set of revisions to the Drinking Water Regulations, 18 AAC 80. Yes, it is planned that there will be two sets of proposed revisions to the Drinking Water Regulations out for public comment at the same time. The second set of proposed revisions to the Drinking Water Regulations will include the adoption by reference of the federal Radionuclides Rule, Lead and Copper Rule Minor Revisions, Public Notification Rule, and Analytical Methods. We also plan to repeal Article 5, and adopt by reference the Lead and Copper Rule as well as update all the references in the current Drinking Water Regulations, 18 AAC 80. The timely adoption of the federal rules and updating references is required for primacy, and the State of Alaska has primacy for Drinking Water and PWS oversight.

What I continually try to emphasize as a recurring theme in my "*Message from the Manager"* is to become involved in a proactive manner and make things happen for you (proactive) rather than have them happen to you (reactive). The Drinking Water Regulations, 18 AAC 80, are for public health protection, and they are "all of our regulations". All of us have a collective ownership in these regulations, whether we are involved in reviewing proposed regulation revisions and providing comments to ADEC, or whether we chose to not become involved in the review and comment of the regulations. The choice is yours, be accountable and responsible, or be reactionary.

Continue to enjoy the waning days of summer, catch-up on deferred projects, and let's continue to keep clean, safe, and good tasting drinking water flowing to our customers and visitors to the State of Alaska. ~

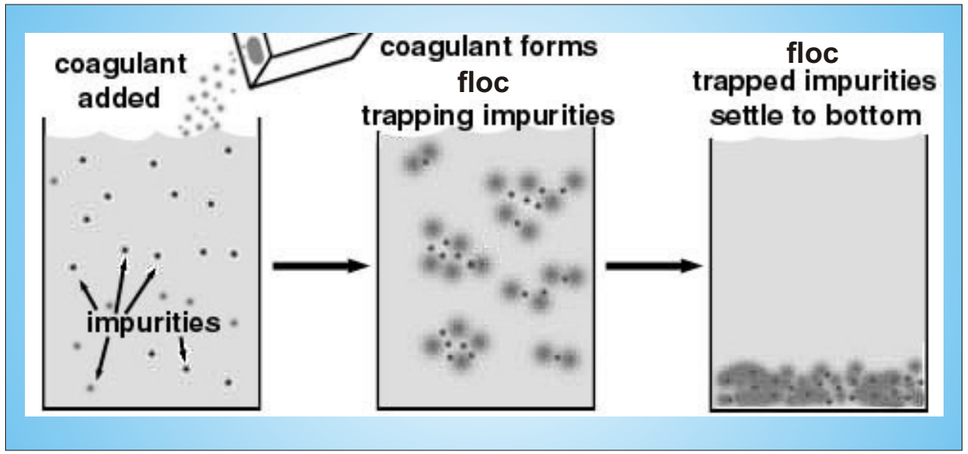
James R. Weise

James Weise, Manager
DW/WW Program

This Issue

Use of Coagulants for Water Treatment and D/DBP *by Scott Forgue*

Northern Flows issue 12, Fall 2002, included an article titled *Filtration Technologies* that provided an overview of the five types of filtration (conventional, direct, slow sand, diatomaceous earth, and alternate) used for removing suspended or colloidal material (impurities) from water. All five technologies use a filtering medium, for example sand, to strain this material from the water. In addition to the filtering medium, conventional and direct filtration rely upon the addition of coagulants "to combine or aggregate small particles into larger masses or clumps called floc, using chemical, biological, or physical means."[1]



Why are coagulants needed for direct and conventional filtration? The finest particulate and dissolved contaminants in water are so small that they can not be removed by the filters used in conventional and direct filtration systems. In addition to being very small, these particles have other characteristics that make them difficult to remove. Depending on the type of material, these particles may have electrostatic charges that cause them to repel each other. Coagulants are added to help overcome these repulsive forces and combine the small particles into larger particles that will more readily be removed by either sedimentation or filtration.

Through the removal of particulate matter, including both organic and inorganic contaminants, the concentration of contaminants known as "disinfection by-product precursors" is reduced. The precursor material forms disinfection by-products (DBPs) that include: trihalomethanes, haloacetic acids, bromate, and chlorite when chemical oxidants (disinfectants) are used to treat the water. The concentration of DBPs in drinking water are regulated by a set of new regulations known as the "Microbial-Disinfectants and Disinfection Byproducts (M-DBP) Rules".

The most commonly used coagulants are aluminum (alum) and iron (ferric) salts and polymers. The type of coagulant and optimum dosage are dependent on both the source water quality and the water treatment system. Pilot studies and bench-top testing utilizing a process known as "jar testing" are typically used to test various coagulants and required doses to establish the most effective treatment.
It is very important to determine the optimum coagulant dosage to avoid several potential water treatment problems.

Inorganic contaminant levels for iron, manganese, aluminum, sulfate, chloride, and sodium in the treated water may increase with increased coagulant dosages.[2] Filter run-time may be shortened and the frequency and volume of backwash required for effective filtration may be increased if coagulant addition is not properly controlled. Not only is the coagulant wasted, but the volume of backwash water and treatment waste sludge is increased and this must be properly managed.

[1] American Public Health Association, et.al., *Glossary Water and Wastewater Control Engineering*, 1981.
[2] EPA Guidance Manual LT1ESWTR Disinfection Profiling and Benchmarking, 2003. ~

Question: Both Alum and Ferric Sulfate are affected by:
A) Alkalinity
B) Filter Media Selection
C) Other Coagulants
D) Sunlight
E) All of the Above

(Answer on Page 7)

Case Study - Arsenic Treatment Tech. cont'd *by EPA* (816-F-03-012)

air was drawn into it. By feeding concentrated oxygen into the generator, ozone output was increased to 10 gph. The ozone was then drawn into the system by a vacuum. At a flow rate of five gpm, the 54.5 gallon stainless steel tank allowed 5.45 minutes of contact time for the ozone to react with the water.

Conclusions
The Oxidation Reduction Potential (ORP) for arsenic removal is highly influenced by the production rate of the ozone generator. In the eight tests where the ORP was between 471 and 849 millivolts (mV), the finished water arsenic level was below the revised arsenic MCL of 0.010 mg/L (10ppb) and below the secondary MCL (SMCL) for iron of 0.3 mg/L. The iron present in the raw water was sufficient to adsorb and remove 0.237 mg/L (237 ppb) of arsenic. The system also successfully reduced manganese levels to below the SMCL of 0.05 mg/L in the nine tests where the ozone generator produced 10 gph. The costs associated with the installation and operation of the CampWater$_{TM}$ Porta-5 system are variable. The unit itself costs about $15,000, but if mass-produced in the future, that cost may decrease. The CampWater$_{TM}$ Porta-5 needs a source of raw water (preferably a flooded suction), a source of power (30 amp 220 volt breaker), and about 40 square feet of floor space (4'x10'). The system was recently added onto an existing system at a cost of approximately $200 for parts and 8 hours of labor. If additional floor space, forwarding pump, or electrical service were necessary, the price would be higher. Since there are no chemicals to purchase, filter replacement is the predominant maintenance cost. The particulate filters cost $70.00 (12 each) and if used by the system, the carbon filters cost $48.00 (4 each). While the frequency of replacement will depend on the contaminant load, an 800 hour run time for filters is anticipated. Other costs include the air filter and dessicant in the ozone generator ($20.00 per year), a pump replacement every 5-years ($750.00), and electricity costs.[2] For example, if a system runs 12 hours per day, filters would last approximately two months. The cost of replacing the particulate filters would be $35.00 a month (replacement six times a year at a total cost of $420.00) and the cost of replacing the carbon filters would be $24.00 a month (replacement six times a year at a total cost of $288.00). Adding in the monthly ozone generator cost of $1.70 and a monthly pump replacement cost of $12.50 ($750.00 spread across 60 months), the costs for maintaining the CampWater$_{TM}$ Porta-5 is approximately $73.50 a month. The CampWater$_{TM}$ Porta-5 conservatively produces 5 gpm. Using the example above, if the system is running 12 hours a day (720 minutes) at the 5 gpm estimate, the system will produce 3,600 gallons in the 12 hour day. At the monthly maintenance of $73.50 a month (or $2.45 a day), the operating costs are approximately 0.07 cents per gallon . In addition, the CampWater$_{TM}$ Porta-5 is estimated to need 288 kwh per month. Estimating $0.07 per kilowatt hour (kwh), the operating cost per gallon increases slightly to 0.09 cents per gallon.[3]

The portable nature of the CampWater$_{TM}$ Porta-5 system could allow water to be delivered to a number of work camps and native villages and would work well in areas like Fairbanks. However, the system requires more maintenance than a stand-alone system where weight and volume are less critical and the success of this system is linked to a number of water quality factors such as the level of iron in the raw water, the amount of ozone produced, TOC levels, and the pH of the raw water.

1 Jon Dufendach. "Arsenic Removal from Groundwater by Coprecipitation"
2 Email correspondence from Jon Dufendach to Joe Steiner, November 20, 2002 .
3 This per gallon cost does not take into account purchase and installation costs.
Office of Water (4606M) EPA 816-F-03-012 May ~

Is it time to Renew your Contractor License *by Margaret French*

One of the requirements to become a Certified Installer is to have, or work under, a General Contractor or Specialty Contractor license. General Contractor licenses expire on December 31st in even-numbered years. Specialty Contractor licenses expire on August 31 in odd-numbered years. August 31, 2003 is here already. Did you apply early to avoid a lapse in your Certified Installer status? If not, please contact your local ADEC office if you have any questions about this requirement.

Answer: E) All the above. Depending on geographic location, all of the above could affect the effectiveness of both Alum and Ferric Sulfate.

Case Study - Arsenic Treatment Tech. Fairbanks, Alaska *by EPA* (816-F-03-012)

Background: Water Quality Characteristics
Fairbanks, Alaska has unique water needs due to its remote geographical location and cold climate. Fairbanks is in an area of discontinuous permafrost, where most of the moisture in the soil occurs as ground ice, rendering it difficult to drill wells and lay pipe. There are a number of work camps and native villages surrounding Fairbanks that cannot easily access the local public water system (PWS). To help provide safe drinking water to the residents of the area, Northern Testing Laboratories, Inc. and Delta Industrial Services, Inc. developed a 5 gallon per minute (gpm) portable water treatment system and tested it on the Taiga Woodlands PWS well located outside of Fairbanks. The well serves a community of 14 homes. The raw water in the Taiga Woodlands well has an arsenic content of 0.237 mg/L (237 parts per billion - ppb) and an iron content of approximately 9.43 mg/L. According to compliance monitoring data from the Safe Drinking Water Information System (SDWIS), the system has incurred monthly total coliform and antimony maximum contaminant level (MCL) violations and a number of total coliform rule monitoring/reporting violations.

Pilot Testing
The CampWater ™ Porta-5, a portable water treatment system that can be mounted on a truck and transported to areas where connecting to the PWS is not possible, was pilot tested from February, 2001 to May, 2001 at the Taiga Woodlands PWS well. The pilot consisted of several initial "run-in " trials,14 days of performance testing, and complete evaluation of the raw and treated water. The CampWater ™ Porta-5 uses ozonation and cartridge filtration to reduce arsenic content. The system relies on co-precipitation, which occurs when ozone oxidizes both iron and arsenic. The iron and arsenic adsorb to each other and are deposited on the filter media. The adsorption rate of arsenic to iron depends upon a number of factors; higher pH decreases adsorption and higher iron concentration increases adsorption.

In the chemical process of oxidation,1.5 mg/L of ozone is necessary per 1 mg/L of total organic carbon (TOC). This relationship determines the size of the ozone generator necessary for the system. The ozone generator used in the Fairbanks test had a capacity of 4.5 grams per hour (gph) at approximately seven standard cubic feet per hour (SCFH) when ambient

Continued on page 7

Staff Profile - Environmental Specialist III- Wasilla *by Cindy Christian*

Lynn Lowman is an Environmental Specialist III for the Southcentral Drinking Water and Wastewater (DW/WW) Program area in the Wasilla Office. She is responsible for a wide range of activities, including compliance assistance and enforcement for all of the Class A Community and Non-transient Non-community and Class B Transient Non-community PWSs in the Mat-Su Borough, Copper Center, Glenallen and Prince William Sound areas. Lynn reviews all of the laboratory data received for those PWS to ensure the accuracy of the data and to determine compliance with various rules. She works with system owners and operators to make sure that they remain in compliance and are serving safe drinking water to their communities. Lynn is very active in providing technical assistance to the PWS in her area. She also conducts sanitary survey inspections and filtration avoidance inspections for PWS, as well as, on-site septic system inspections.

Lynn graduated from Central Washington University with a bachelor's degree in Special Education. She came to Alaska in 1973 seeking adventure and worked to pay for her education. Prior to coming to work for ADEC, Lynn worked as a Special Education teacher in Kodiak. She also worked for the Corps of Engineers on hydroelectric projects at Elmendorf AFB and for a Seattle construction company. Lynn first came to work for the ADEC in 1985 as a Permit Information Specialist. She also worked on the Exxon Valdez Oil Spill coordinating the contracts for clean-up vessels, materials and supplies. In 1990, she came to work for the DW/WW Program. She was interested in using her knowledge of environmental issues to assist PWS in delivering safe drinking water to their customers. Over the past thirteen years, Lynn has been dedicated to ensuring that the PWS in her area are providing the best quality drinking water as possible. She really enjoys being able to have daily contact with the owners and operators of PWS and building the relationships necessary for the protection of public health. She likes being an advocate for operators by helping to guide them through the ever-increasingly complex federal

Continued on page 5

Staff Profile - cont'd *by Cindy Christian*

and state drinking water regulations.

Lynn is actively involved in many activities outside of ADEC. She is currently attending ground school for her pilot's license, and she is a very accomplished quilter and gardener. Lynn and her husband, Dick, like to spend their leisure time with their two dogs and their cat, working on their house and going to their retirement property at Trapper Lake. Lynn is a very important member of the ADEC team, working to ensure the protection of public health by offering compliance and enforcement assistance to PWS owners and operators in the southcentral area of the state.

Resources Corner: Health Corporations *by Trevor Fairbanks*

Villages throughout the state have many resources to help keep their drinking water safe and clean. One of the most valuable resources is the local Health Corporation or Office of Environmental Health (OEH); for some villages this would be staff from the Village Safe Water (VSW) Program. Whichever program your village uses there will most likely be a Remote Maintenance Worker (RMW) and Health Specialist or Sanitarian assigned to your village. Most villages also have an Engineer from either the Alaska Native Tribal Health Consortium (ANTHC), VSW Program or Municipal Grants and Loans (MGL) Program. Each of the specialists mentioned above have an area of expertise to best assist the water system when needed.

Of all the people available to assist villages, the **RMW** is the most familiar with the village water system because of their constant contact with the operator. The RMW frequently assists in the maintenance of the water plant to keep the water system running smoothly. The RMW is also interested in the everyday operation of the water plant, i.e. the turbidity readings, chlorine residual, and pump settings that are recorded daily on the monthly water log or operator report. The operator report is a useful tool for the RMW to help troubleshoot the water system and to predict future events like when to backwash filters and to clean chlorine pumps. The RMW also keeps the operator apprised of training opportunities and can train operators on new instruments and treatment components as well as train new water system operators.

The **Health Specialists and Sanitarians** help the village in many ways including helping the village's water system stay in compliance with various environmental regulations. More specifically, they help the village water systems stay in compliance with the drinking water regulations so that the village has a better chance of receiving funds to improve the public health protection for the village. In special cases, your Health Corporation may have the funds to pay for water tests when the village's water quality is questionable and the village is absolutely unable to pay for water testing. Health Specialists and Sanitarians also do sanitary surveys, assist with writing consumer confidence reports and help remind water system operators of their water testing requirements.

The **Village Engineers** design, engineer and re-engineer water systems according to the water quality and new regulations. Village Engineers also help the water systems complete corrosion control studies when the water is found to be excessively corrosive. Village Engineers will also get involved when a water system is tasked with removing contaminants from the water such as arsenic or nitrate.
In conclusion, the RMWs, Health Specialists and Sanitarians, and Village Engineers are all here to help the water system operators whenever any problem arises, but ultimately it is the water system operator that needs to make the call for assistance when needed. The goal for all of these programs is to ensure that clean and safe drinking water is available to all the villages in Alaska.

Why do we need Separation Distances? cont'd

by Lynn Lowman

Class C *- PWS that is neither a Class A or Class B. (PWS that serves less than 25 individuals each day and is not a single family home or duplex).*
Private Water System *potable water system serving one single-family residence or duplex.*

If your source is **surface water**, the water system intake should be in an area that is upstream and protected from runoff or outfall lines and is at least 100 feet from the mean high water level of a lake, stream, river, spring, slough, or coastal waters. Protection of the site from freezing, recreational or animal activities will further enhance the quality of the source. Distance requirements assist in the protection of the source from contaminants that cannot be addressed by the treatment design.

Wells need to be far enough away from a potential contamination activity to discourage contamination from entering the source. Other measures to protect the source include adding grout around the well casing, making sure the top of the casing is at least 12" above the ground level, having a concrete pad or packed soils in place to deflect water away from the casing, and a sanitary seal secured on the top of the casing.

Why do we have separation distances?
Minimum separation distances were developed to ensure that public health is better protected from potential environmental contamination entering into drinking water sources. Separation distances utilize population served by the system as a measure to determine the best protection.

For example, the more individuals served by the water source, the greater the separation distance from a septic system. This is because the more water used, the greater amount of waste released. Separation distances were developed to provide a safety margin for your septic system from your well (drinking water source), your septic system from your neighbors well (drinking water source), your neighbor's septic system from his neighbors well (drinking water source), and so on.

Separation distances not only protect drinking water sources, but also the environment from water borne diseases transmitted by domestic wastewater. While it is easy to understand the need for a 100 feet separation distance between a septic tank and a private drinking water source, it is difficult to appreciate a 100 feet separation distance between a septic tank and the coastal waters. So why do we need a separation distance provision for coastal waters? There is a logical reason for it. Just as people need protection from the diseases transmitted by the domestic wastewater, the fish and the microorganisms in marine and fresh waters need protection from it too. Whether it is the water we drink or the fish and shellfish we eat, they both need the protection provided by separation distances.

Septic systems are not the only activity that has separation distance requirements, and septic systems have multiple separation distance requirements. Examples of other activities that require separation distances are: fuel tanks, sewer lines, absorption fields, holding tanks, and sewer cleanouts.

Remember: consulting with your engineer and getting approval from the ADEC is required if minimum separation distances as stated in the regulations cannot be met.

There is a separation distance from the septic tank to the water table, leach fields, etc. Fortunately, the State of Alaska has taken the guess work out of the equation for you. Page 17 of the **Installer's Manual** provides all the appropriate distance requirements that must be met.

What happens if I do not meet the required separation distance?
If you followed proper procedures:
1) assessed the site conditions,
2) consulted with your engineer, and
3) received approval from the ADEC,
this situation should not occur.

However, situations may arise that change conditions regarding a water system. Example: a Class C PWS becomes a Class A PWS. There is a waiver process available for systems to gain approval for less than the required separation distance. **THIS IS ONLY ON A CASE-BY-CASE BASIS.** A private engineer must submit documentation and calculations that the lesser separation distance will not harm public health. It does not mean that a separation distance waiver will automatically be granted; it will be up to the ADEC engineer to determine and weigh the public health aspects against the lesser distance.

Take a look at your system. Measure the distance of your drinking water source from the septic system, holding tank, edge of the river, etc. Determine your separation distances. If you are at or greater than the requirements, good for you! If you are less than the requirements, ADEC encourages you to contact your engineer and local ADEC engineer for advice on the next step to be taken. Remember: the purpose of separation distances is to protect public health. We at ADEC want everyone to be healthy and live long, safe, productive lives. ~

Northern Flows

Why do we need Separation Distances?

by Lynn Lowman

One of the reasons Alaskan's can enjoy the water they drink is because separation distance guidelines have been established between wells, lakes, streams, septic systems, fuel tanks, and other activities that can potentially contaminate your drinking water supply. The population in our great state is so varied, depending on age and health factors, that some individuals could be faced with illness and worse, death, from drinking unsafe water if these guidelines were not in place.

The State of Alaska, Department of Environmental Conservation (ADEC) has specific separation distances necessary to protect your drinking water source. When surface water sources or drinking water wells are first proposed for development, they must meet minimum separation distance criteria for the source and those activities around the source. This means you will need to evaluate the surface conditions in your area, consult your engineer for design criteria and submittals to ADEC, and receive approvals BEFORE you install a system.

Separation distances can be obtained from the State of Alaska's **Installer's Manual** for Conventional Onsite Domestic Wastewater Treatment and Disposal Systems which is part of the Wastewater Regulations (18 AAC 72). You can access this handbook by going to the ADEC website at: http://www.state.ak.us/dec/deh/water/72manual.pdf, or pick up a copy at your local ADEC, Drinking Water and Wastewater Program office.

How do you know what type of separation distances are required?
Separation distances are determined for water systems by the population served. ADEC defines these populations using the Drinking Water Regulations (18 AAC 80) definitions, regardless of the source type:

Class A *- Public Water System (PWS) that is expected to serve, year-round, at least 25 individuals, is expected to serve, year round, at least 15 residential service connections; or regularly serves the same 25 or more individuals for at least six months of the year;*
Class B *- PWS that is expected to serve, in the normal order of events, at least 25 individuals each day or 10 service connections for at least 60 days of the year, and is not a Class A PWS;*

Continued on page 6

Source Water Assessments

by Suzan Hill

The Drinking Water Protection group has been very busy during the last year completing Source Water Assessments for public drinking water systems (PWS). As of June 30, 2003 we have completed 961 assessments, leaving us approximately 770 assessments to complete by June 30, 2004. Staff are currently working on assessments in the Kenai, Fairbanks, and Southeast Alaska areas and will be moving into the Western Alaska area in August. To view a list of the PWS that have had assessments completed, visit our web site at http://www.state.ak.us/dec/deh/water/source.htm.

While the source water assessments are an important component of protection activities, it is time to move forward with a more comprehensive program that will provide PWS owners and operators, and local communities with guidance, assistance, incentives, and the necessary tools for developing local wellhead protection plans for their drinking water source. The centerpiece of this program is an interactive compact disc (CD) that will be a template or "fill in the blank" Wellhead Protection Management Plan. Users will be able to enter specific information about their PWS or community; prioritize protection efforts based on their Source Water Assessment and latest Sanitary Survey; chose from a variety of protection methods that best fit the contaminant sources posing risk to their drinking water supply; establish a schedule for implementing protection efforts; and develop a contingency plan in the event their primary drinking water source becomes contaminated or at serious risk of contamination. The CD also includes letter templates that can be used to educate or increase involvement by members of the community; a list of printed references on Best Management Practices that can be used as educational tools; and a comprehensive list of web resources.

The Drinking Water Protection staff will be introducing our Wellhead Protection Program and the interactive CD at three one-day workshops to take place in September, 2003. Workshops will be held in Fairbanks, Kenai, and Anchorage, and announcements will be sent to PWS owners and/or operators in those areas. We encourage your attendance to learn how you can use your PWS Source Water Assessment as a tool for protecting your drinking water source.

If you would like more information on the workshops or on wellhead protection, contact Lana Davis at (907) 269-7653. ~