



# AQUA TALK



Colorado Department  
of Public Health  
and Environment

Volume 1 Issue 2  
Summer 2007

*A newsletter from the Drinking Water Program of the Water Quality Control Division*

We are proud to present  
our second newsletter!

You will notice that this issue is packed with valuable information. Based on positive feedback, we are looking forward to publishing *Aqua Talk* quarterly in 2008. As always, we welcome your story ideas, questions and feedback!



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## EPA Finalizes Ground Water Rule

by Jeff Lawrence

The United States Environmental Protection Agency (EPA) has just finalized the Ground Water Rule. In December, 2009, **all** public water systems that use groundwater (both community and noncommunity) will have to comply with the Ground Water Rule. What does this entail? The rule includes two main components: triggered monitoring and sanitary surveys.

**Triggered Monitoring:** Beginning in December, 2009, if a groundwater system has a positive Total Coliform Rule monitoring result, it will be required to test each groundwater source for a fecal indicator. If this triggered source water monitoring is confirmed positive, the public water system will be required to perform corrective actions.



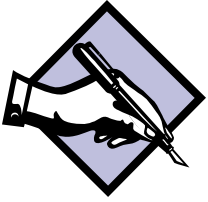
**Sanitary Surveys:** Sanitary surveys will include the same eight elements that are currently evaluated during surveys of surface water systems. Any significant deficiency identified during a survey will require the public water system to perform corrective action.

**Corrective Actions:** The corrective actions for the two components above also are outlined in the Ground Water Rule. They are

- correct all significant deficiencies;
- eliminate the source of contamination;
- provide an alternate source of water, or provide treatment that reliably achieves 99.99 percent (4-log) inactivation or removal of viruses.

The Ground Water rule is very detailed; therefore, the division recommends that public water systems start to familiarize themselves with it now. A great resource for more information is EPA's Web site (<http://www.epa.gov/ogwdw/disinfection/gwr/index.html>). The site includes the full text of the rule, as well as helpful guidance for public water systems. Additionally, the division is initiating the rule-making process and will be hosting the initial stakeholder meeting in Denver at the Colorado Department of Public Health and Environment, 4300 Cherry Creek Dr. S., Building A, DOC Training Room, on August 17, 2007 at 10:00 a.m.

If you have questions on the Ground Water Rule, please feel free to call Jeff Lawrence at (303) 692-3664, or questions regarding the stakeholder meetings can be directed to Jackie Roberts at (303) 692-3617. The division will be presenting information on the Ground Water Rule at the September Rocky Mountain American Water Works Association Section/Rocky Mountain Water Environment Association Joint Conference, in Keystone.



## Message from the Drinking Water Program Manager

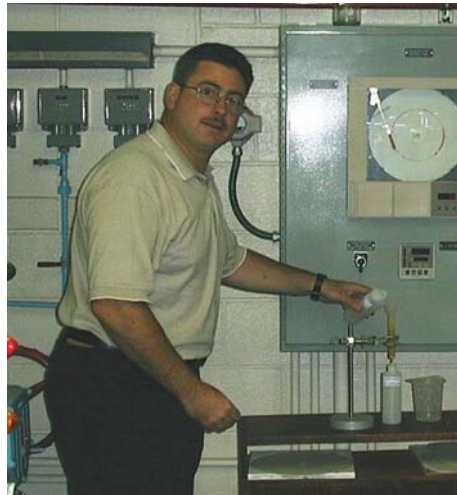
Hello everyone,

I am pleased that the Drinking Water Program is putting out this second newsletter and hope that we will be able to increase the newsletter frequency to quarterly some time in 2008. This newsletter will provide you with valuable information and can be a gateway to work with us, and to help you understand regulatory requirements and how to meet them. I encourage you to take advantage of the opportunities for training, guidance documents, compliance and technical assistance, and financing that we offer.

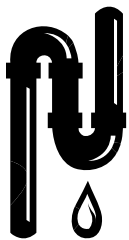
It has been about a year since I became the Drinking Water program manager after Chet Pauls retired. The program successfully worked with the legislature to secure additional resources. We have been developing and implementing new rules. We've launched new initiatives such as the excellence and radionuclide assistance programs, while still responding to acute health risks whenever they arise. I am proud of what we have been accomplishing and look forward to improving public health protection and our assistance to public water systems going forward.

Thank you for your daily efforts to provide safe drinking water to the public. Your work may be underappreciated in many quarters, but it is recognized and greatly valued here.

Sincerely,



Ron Falco, P.E.,  
Drinking Water Program Manager



## Coming Down the Pipe... News Alerts for the Drinking Water Community

- The Drinking Water Program's homepage Web address is [www.cdphe.state.co.us/wq/drinkingwater/index.html](http://www.cdphe.state.co.us/wq/drinkingwater/index.html).
- TRAINING OPPORTUNITIES! Please visit the division's Web site at [www.cdphe.state.co.us/wq/drinkingwater/Training.html](http://www.cdphe.state.co.us/wq/drinkingwater/Training.html).
- In the near future, the division will be introducing a new policy regarding compliance determination for surface water plants and the use of microscopic particulate analyses to determine filter performance.
- The Water Quality Control Division has mailed the 2008 Eligibility Survey to all systems on the Drinking Water and Wastewater Eligibility Lists. To date, approximately 50 percent of all systems have

responded. If you haven't returned yours, please do so as soon as possible so development of the 2008 Eligibility Lists can be accomplished. Contact Erick Worker at (303) 692-3594 if you require a new survey or need additional information.

- The 2007 calendar year marks the last year in a three-year compliance cycle for drinking water monitoring. If your water system is required to monitor certain contaminants on a three-year cycle, this is a good time to make sure all of your requirements have been met.
- New fees for all public water systems started July 1, 2007. For more information visit <http://www.cdphe.state.co.us/wq/drinkingwater/index.html>.

## Investigating Total Coliform Positive Results

by Emily Clark

How much do you really know about your water system? How fast can you find and eliminate any contamination that may be occurring in your water system? Are you ready to put your Sherlock Holmes skills to use?



Every time you get a positive routine total coliform result (with or without E. coli or fecal bacteria), you are required to investigate the reason for the positive result. This is an important step in protecting public health! It also can help you identify any sampling errors or contaminated sampling taps. The investigation should be conducted immediately after collecting the required set of repeat samples. The scope of the investigation should include conditions at the source, treatment facilities, storage sites and distribution system and should be customized to include any unique conditions of your water system. The investigation also should include an evaluation of any potential cross connections.

The Colorado Primary Drinking Water Regulations Section 5.2 requires water systems to document the investigation and keep it in the system's records. The division may request to review the investigation. The division has created a generic *Total Coliform Positive Investigation Form* intended to assist you with this requirement. It can be found online at <http://www.cdphe.state.co.us/wq/drinkingwater/PublicWaterSystemReportingForms.html>.

## Special Purpose Sampling For Total Coliform

by Emily Clark

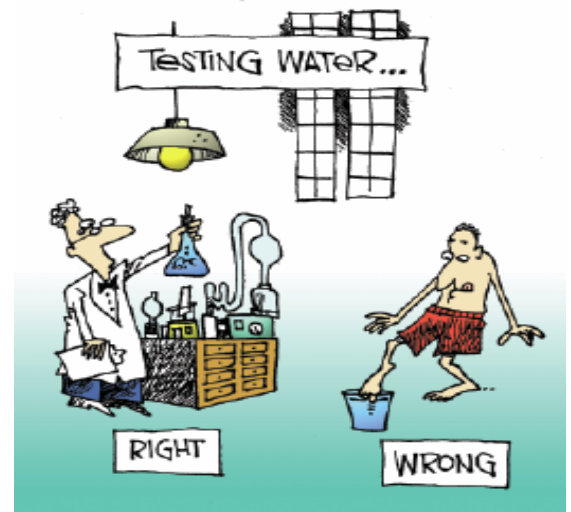
*Confused about the use of "special purpose" designation on total coliform samples?*

The division has noticed some confusion among water systems and labs regarding the use of the "special purpose" designation on total coliform bacteria samples. The regulations state in Section 5.1.1(f) that special purpose samples "...shall not be used to determine compliance..." In

other words, any *required* sampling, whether it be your regular routine monitoring, a set of repeat samples after a positive, or a temporary increase in your routine monitoring the month after a positive *should not* be marked "special purpose." Even samples taken because of a customer complaint or taken by a local health department employee as part of a quality control program are considered compliance samples and should not be designated as "special purpose."

The term "special purpose" should be used only in situations where you are sampling water that is *not being consumed*, such as a raw water sample (if you treat the water), a sample following repair and disinfection of a section of pipe, or any other situation where you are taking a sample that is not consumable water from the distribution system.

Questions regarding the use of special purpose total coliform sampling can be directed to Emily Clark at (303) 692-3502.



## Acute Health Risks — Can it happen to you?

by Emily Clark

### POP QUIZ

What is the Boy Scout's Motto?

Answer: "Be Prepared."



We could all learn a little something from the Boy Scouts, especially when it comes to acute health risks in drinking water systems. Preparing for emergencies can be a very simple process. It will save you time and money and help you keep your cool in a stressful situation. It also can save lives.

- Plan: Gather forms and phone numbers, create public notice templates and think through possible acute situations.
- Designate people responsible for specific activities.
- Practice!
- Document your emergency procedures so others will know what to do if you aren't there.

Public water systems must **always** consult with the department in the event of a possible acute health risk. Acute health risks for public water systems include

- acute total coliform maximum contaminant level violations (when fecal or E. Coli is present);
- failure to collect repeat samples after a fecal or E. Coli positive sample;
- failure to test for fecal or E. Coli in a total coliform positive *repeat* sample;
- nitrate, nitrite or total nitrate nitrite maximum contaminant level violations;
- failure to take nitrate or nitrite confirmation sample within 24 hours after receipt of the first sample showing exceedence of the maximum contaminant level;
- surface water treatment rule violations, such as a single exceedence of the maximum allowable turbidity limit or failure to maintain chlorine level entering the distribution system;

- suspected waterborne disease outbreak;
- a treatment or supply emergency (for example, failure or significant interruption of key water treatment processes, a natural disaster that disrupts water supply, chemical spill or unexpected loading of pathogens);
- other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure as determined by the department (for example, significant water line breaks, water shortages, significant loss of pressure, terrorism/vandalism, etc).

If your system has experienced tampering or suspected tampering, you are required to notify the Colorado Department of Public Health and Environment immediately. For details, see section 1.6.8 of the Colorado Primary Drinking Water Regulations.

Ever wonder how many real acute situations have occurred in Colorado in recent years? Don't miss our presentation "**Call the Acute Team!**" at the 2007 Rocky Mountain Section American Water Works Association/ Rocky Mountain Water Environment Association Joint Annual Conference in Keystone, Colo., September 9 - 12, 2007. Visit <http://www.rmsawwa.net/> for details on the conference. We hope it will inspire all water systems to be prepared!

If an emergency occurs outside normal business hours, call the **Colorado Department of Public Health and Environment, Water Quality Control Division, toll-free emergency phone number (877) 518-5608.**



## The Drinking Water Special Programs Unit is Here to Help You!

by Sharon Williams



*Special Programs Unit 100th Day Celebration  
April 1, 2007!!*

What makes the Drinking Water Special Programs Unit so “special” and what does it mean for the Colorado drinking water community? We are the leaders of the Capacity Development Program, the Drinking Water Security Program, and the Colorado Drinking Water Excellence Program. Our job is to help water systems achieve their full potential to provide the best drinking water for Colorado now and for future generations. This includes offering training,

technical assistance, coaching, emergency preparedness and response coordination, and recognition of excellent performance. We are here to help you become the best operator and the best water system you can be! For more information, visit the Colorado Drinking Water Program Web site or contact Sharon Williams, Special Programs Unit manager at (303) 692-3635.



**Drinking Water Special Programs Unit:** (front row) Mary Smith, Gloria Duran, Sharon Williams; (back row) Jon DeBoer, Dean Vlachos.

## Colorado Source Water Assessment and Protection Project Summary

by John Duggan



Colorado Source Water Assessment and Protection is a new project designed to provide public consumers with information about their untreated drinking water, as well as provide you and your community a way to get involved in protecting the quality of your drinking water.

The Water Quality Control Division completed the initial source water assessment reports for more than 1,700 public water systems in November 2004. The results of the assessment reports can be reviewed at <http://www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html>.

The long-term project goal is voluntary development and implementation of local source water protection statewide.

The role of the division is to assist local protection planning efforts by supplying the lead protection entity with the necessary consultation and tools to complete a protection plan. A protection plan template and additional information is available on the Colorado Source Water Assessment Web

site at <http://www.cdphe.state.co.us/wq/sw/protectionplanningtemplate.html>.

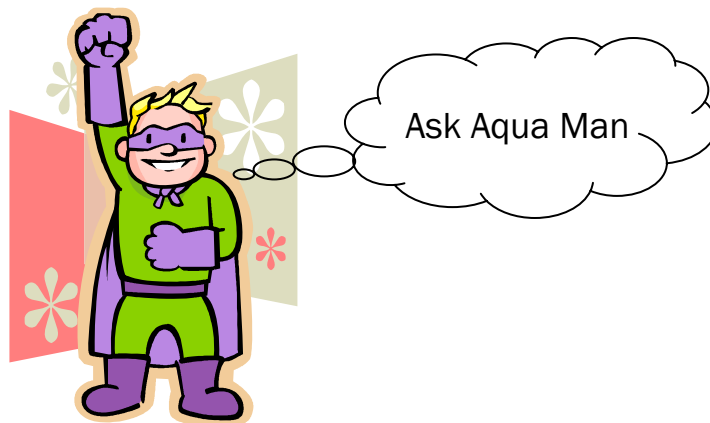
Funding for protection planning is available from the State Drinking Water Revolving Fund set-asides. For more details on grant requirements, guidance and access to the electronic grant application, please check the grant information on the Web <http://www.cdphe.state.co.us/wq/sw/swaphom.html>.

In addition, the division has developed a source water protection planning DVD/CD toolkit to assist you in developing a protection plan. To obtain a free copy of the DVD/CD toolkit, simply e-mail your contact information (include mailing address) to [cdphe.wqswap@state.co.us](mailto:cdphe.wqswap@state.co.us).

**Did you know?**

"A reduction of 4-5 percent in body water will result in a decline of 20-30 percent in work performance."

– *N.Y. Times Guide to Personal Health*

**Health Effects Quiz**

- What are the potential health effects from *short-term* exposure to copper above the 1.3 mg/L Action Level?
  - Gastrointestinal distress
  - Liver or kidney damage
  - Increased risk of cancer
  - All of the above
- What are the potential health effects from exposure to inorganic mercury above the .002 mg/L maximum contaminant level (MCL)?
  - Nervous system disorders
  - Bone disease
  - Kidney damage
  - All of the above
- What are the potential health effects from exposure to thallium above the .002 mg/L MCL?
  - Hair loss
  - Changes in blood
  - Kidney, intestine or liver problems
  - All of the above
- What are the potential health effects from exposure to vinyl chloride above the .002 mg/L MCL?
  - Slight nervous system problems
  - Increased risk of cancer
  - Stomach discomfort
  - All of the above
- What are the potential health effects from exposure to total trihalomethanes (TTHMs) above the .08 mg/L MCL?
  - Liver, kidney or central nervous system problems
  - Increased risk of cancer
  - All of the above

Answers: 1) a 2) c 3) d 4) b 5) c

## Operator Forum

Recognizing Exceptional Teamwork and One Operator's Extra Effort  
by Rich Hayes, Colorado Rural Water Association

On March 28, with virtually no warning, Holly was struck with a killer tornado, that destroyed or severely damaged many of the homes and buildings in this Eastern Colorado town. This Eastern Colorado community, with a population of 1,000, is located just 5 miles from the Kansas border. Looking at the devastation, "it's a miracle that only one person was killed" was the quote by many who saw the devastation.

The tornado took out power lines and uprooted trees. Without power to the town's wells, water continued to be supplied by the elevated storage tank.

J.W. Neal is the town's certified operator. He also was one of the residents that lost his home. "I feel lucky" he told me, "at least several of the walls are still standing and most of my belongings are intact. There is nothing left of my next door neighbor's house but the foundation."

J.W. worked through the night to secure the town's water and wastewater systems. A generator restored power to one of the town's four wells that began refilling the elevated storage tank. Time was running out to fix the numerous leaks caused from all of the open water fixtures from the homes that were destroyed. Crews from the city of Lamar worked to isolate the most damaged sections of town by closing valves and service lines. The Colorado Rural Water Association and the city of Lamar staff assisted to restore the town's water system by flushing lines and taking water samples that were required by the Colorado Department of Public Health and Environment as a precautionary measure. The water system was restored to potable status by Saturday, March 31, thanks to effort of all involved.



(From left) Doug Montgomery, city of Lamar; Curt Armstrong, Colorado Rural Water Association; Lloyd Martinson and Rob Batdorf, city of Lamar. Not shown Rich Hayes, Colorado Rural Water Association, and Victor Sacedo, city of Lamar.



J.W. Neal, certified operator for the town of Holly.



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is a semiannual newsletter published by the Drinking Water Program, Water Quality Control Division,  
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Purpose - to communicate division drinking water-related issues to stakeholders in a fun and informative format.



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Drinking Water Program

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