AQUA TALK

Colorado Department of Public Health and Environment

Volume 2 Issue 2

May 2008

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

With winter melting away, division engineers are scheduling sanitary surveys with many systems. Are your records organized? Is your plant in good condition? This is a good time to take care of maintenance issues and replacement parts. Our engineers look forward to meeting with operators all across Colorado, from large cities to rural areas. We all share the same goal: safe drinking water!

INSIDE THIS ISSUE

An Open Letter to the Drinking Water Community – An Opportunity to Say THANK YOU!!!!

by Ron Falco

In March, the Water Quality Control Division in conjunction with numerous emergency response agencies and city of Alamosa officials were deeply involved in responding to a waterborne disease outbreak within the community. While a definitive identification of the cause has not yet been determined and investigative activities are ongoing, I want to take this opportunity and use this forum to tell everyone involved...**Thank you!!**

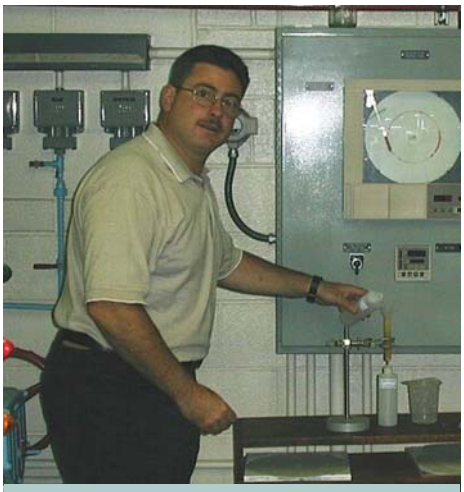
The city of Alamosa and the division could not have accomplished what they did without the assistance and dedication of all the agencies, groups and individuals involved with this response. The request for resources was placed to public water systems though our COWARN network, and the response was overwhelming and immediate. As new resource needs were identified, requests were made, and the resource materialized. Events and circumstances constantly evolved, and the response of the drinking water community was unwavering.

The boil/bottled water order was in place for 23 days and had an impact on the entire community of approximately 9,000 citizens. A staggering amount of work was accomplished within those 23 days including the following:

- An evaluation of the distribution system, including a review of potential cross-connections.
- A multi-staged systematic disinfection and flushing of the storage tanks and entire 49 miles of distribution piping.
- Extensive monitoring for a number of water quality parameters throughout the distribution system including Salmonella, total coliform, Giardia, cryptosporidium, arsenic, lead and copper, and chlorine residuals.
- The Consumer Protection Division worked with restaurants and other businesses to keep many of them operating during the event.
- Bottled water and bulk water was distributed to residents.
- Communications personnel made substantial public notice efforts with the media to keep people informed.

The drinking water community should be proud of its response.

Thank You



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

Message from the Drinking Water Program Manager

"So how is our drinking water?" This is the question I am asked most frequently by people when I first meet them and tell them what I do for a living. Of course, they do not tell me which water system serves them, and they are probably referring to taste and odor. I usually respond, "In general, terrific." But this is an important question, and I am working on developing a mechanism to report on the status of drinking water quality in Colorado.

Here are a few facts regarding the almost 2,000 public water systems in our state:

- 98 percent of our population served by community systems receives drinking water that meets all health-based standards.
- 81 percent of small community systems have drinking water that meets all health-based standards.
- 87 percent of non-community systems meet applicable health standards.
- There was one waterborne disease outbreak in Colorado in 2007 and the Alamosa outbreak in 2008. Our number one priority is to prevent waterborne disease outbreaks and mitigate their impact if they occur.
- 141,773 people served by public water systems do not receive drinking water that meets all health-based standards.
- The overall, full compliance rate is 55 percent, with 84 percent of violations due to monitoring and reporting problems.
- 95 percent of community water systems have properly certified operators.
- 153 community water systems have uncorrected significant deficiencies identified during a sanitary survey.

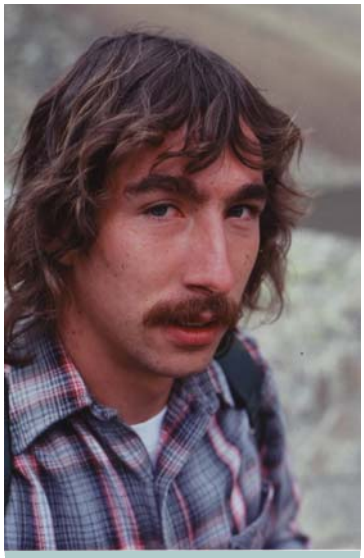
Thus, I believe that our collective performance is stellar in many areas and that we still are striving to improve in others. I look forward to developing a comprehensive reporting tool on the public health and compliance outcomes that we are achieving are together.

Thank you for your ongoing efforts to serve safe drinking water!

Sincerely,

Embracing Change

by Glenn Bodnar, P.E.



Glenn A. Bodnar, P.E., 1976

Stop a second. Take a quick look around you. Everywhere you look you'll see change. Flowers are blooming. Drinking water regulations are changing. Organizational structures are changing. So too are design criteria, sanitary survey procedures and, yes, even those folks whom you have worked with for so long. As of April 1, 2008 I too am once again changing. After nearly 32 years with the Colorado Department of Public Health and Environment, I am retiring from public service. Talk about change!

Taking on such a drastic change in my life does not come easy. It may seem like an easy decision to leave those long, intense days in the Water Quality Control Division and to move on to a slower pace of life. But I have likened it to jumping off a runaway train traveling at 100 miles per hour. You know that it is a good thing to exit that train, but watch out for that landing!

Looking back throughout my life, I realize that I have experienced numerous times where I changed. As a 21-year-old I realized that I needed to make a serious change in my life. I fought off my natural instincts to remain in the flow of everyday life in Connecticut and packed up those few things I owned and moved to Colorado. There I stood in Capitol Hill, confused and not having a clear picture of what I was going to do next. But if I hadn't taken on that change, I would not have put myself in the position to take on the role of the Drinking Water Technical Expert, nor Drinking Water Engineering Unit Manager for the division.

How fortunate I am to have worked with so many professionals with the common goal of protecting public health through the provision of safe drinking water. I may have lost many a night's sleep anguishing over the correct steps and processes to accomplish my goals. But I often slept easy knowing that I provided technical assistance and regulatory oversight equally to Colorado water suppliers independent of whether they serve 25 or hundreds of thousands of people.

To borrow a few lines from psychologist Randi Blatt's writings on Coping with Change, "Letting go of the old and familiar is rather like parting with a favorite pair of jeans – you know, the ones that feel more like a friend than an article of clothing. Eventually, new jeans become old jeans. Just wear them and wash them and wear them and wash them again. Dealing with work place transition is much the same: letting go of the past requires living and working in the present, doing your best, and believing that, eventually, new systems and new ideas will become familiar and comfortable. More important than how fast you learn is that you allow yourself a time of readjustment."

So, off I go. On a sabbatical of sorts, to give my mind the time for readjustment and to determine where my next steps in life may take me. To take the time to embrace change and break in that new pair of jeans. I leave behind many friends and colleagues who have left their mark on me. There are so many memories that I will reflect upon for the rest of my life. Until we meet again, thanks for the ride.

Glenn A. Bodnar, P.E., 2008
after 32 years of service with the Water Quality Control Division

Capacity Building Coaches – What Are They?

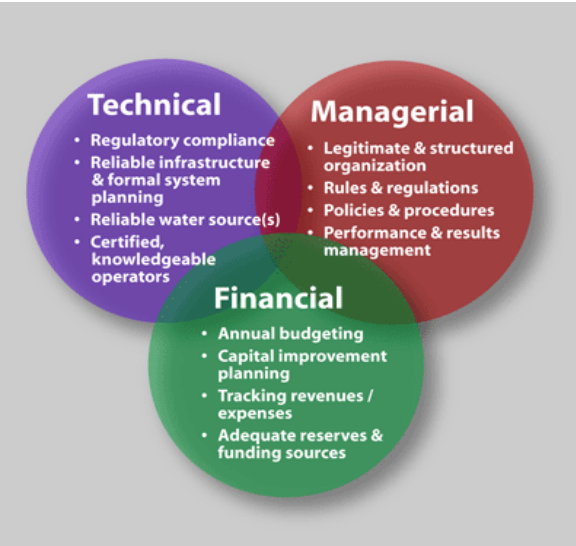
by Jon DeBoer

Have you ever tried to develop a new rate structure or get a rate increase, and been unable to convince your town council or water board to ask the community for the rate increase? Have you had operational problems that you have not been able to solve by yourself, and you don't have the money for a high-priced consultant? Ever wanted to just discuss your problem with someone else, to see if you can find a solution? We might have the answer you are looking for.

The Drinking Water Program, under the capacity development effort, has started a new project that will provide direct assistance to drinking water systems with technical, managerial or financial issues. To understand this program, it is first necessary to understand capacity development in general. Capacity development is defined as follows:

> Capacity is the overall ability of a system to plan for, achieve and maintain compliance with applicable drinking water standards. It is an ongoing process of acquiring and maintaining capabilities that enable the system to consistently provide safe drinking water.

The following graphic shows the basic elements of a drinking water system that fall under each of these three general headings.



The new Capacity Building Coaches Project will provide two new people: one a technical coach, the other a managerial/financial coach. Each will be available to meet with representatives of drinking water systems, discuss problems, and help find solutions. These coaches have years of direct experience operating and managing drinking water systems and understand the problems you face each and every day. They have been there, and have had to find solutions for their own system.

The coaches will be sent to systems where the Drinking Water Program is aware of a problem, and we will try to tackle the most significant problems first. However, if you need assistance, you can call and discuss your concerns, and we will put you into the priority schedule.

The priorities established for the coaches will include, among other factors

- public health impact (first and foremost);
- compliance history;
- economic affordability;
- population affected;
- resource demands and urgency;
- availability of alternative resources and;
- a willingness to take ownership of the problems.

System visits typically will start with telephone conversations to get a better understanding of the issues facing the water system, followed by research into existing records, assembly of tools to help the system, and an initial on-site visit to begin the coaching program. The on-site visit(s) may last from a few hours for a simple problem to several days (perhaps spread over several weeks) for a more complex problem. At times, both the technical coach and the financial/managerial coach will work with the same system. At other times, they each will be working with different systems.

If you are interested in this program, call or e-mail

Jon DeBoer, work group leader
303-692-3607

Jean Bissett, technical capacity coach
303-692-3205

Source Water Assessment and Protection Project Awards the Standley Lake Cities a $50,000 Pilot Planning Project Grant

by John Duggan

Located due west of Denver is the 575- square-mile Clear Creek Watershed. Clear Creek spans from its headwaters near the Continental Divide at 14,000 feet in elevation down to the Denver metropolitan area at 5,000 feet in elevation, where it joins the South Platte River. In addition to offering numerous recreational opportunities, Clear Creek supplies drinking water to approximately 350,000 people in the suburban Denver area. It also provides industrial water to Coors Brewing Company and other local businesses, and agricultural water to farmers, as well. Water from Clear Creek is delivered by three ditches to Standley Lake. Standley Lake is an agricultural and municipal water supply reservoir located in Jefferson County. The reservoir supplies water for agricultural use by the Farmers Reservoir and Irrigation Company and is a municipal supply for the cities of Northglenn, Thornton and Westminster, referred to as the Standley Lake Cities.

It is beneficial for the Standley Lake Cities to pursue source water and watershed protection for Standley Lake to protect and improve water quality and control drinking water treatment costs. All of the drinking water for the cities of Northglenn and Westminster is stored in Standley Lake, as well as nearly half of Thornton's water supply. The cities of Northglenn, Thornton and Westminster have a responsibility on behalf of the public to deliver safe and clean water from Colorado's high mountains to each drinking water tap. Recognizing this responsibility, the Standley Lake Cities began working cooperatively to establish programs for the protection of the water quality in Standley Lake.

The Colorado Department of Public Health and Environment recently awarded the Standley Lake Water Quality Intergovernmental Agreement Committee (cities of Northglenn, Thornton and Westminster) a Source Water Protection Planning Grant of $50,000. This is the first pilot planning project grant awarded in the state of Colorado to develop an exemplary source water protection plan. The primary focus of the Clear Creek Watershed source water protection plan will be identification of nutrient sources and other potential sources of contamination and the development of best management practices to limit nutrient loadings and other impacts to the creek from both discrete (point) and dispersed (nonpoint) sources.

The project goals are to create a plan that connects and references existing water quality documents Intergovernmental Agreements, lake and water-shed modeling efforts, and identifies source water protection informational gaps. In addition, the plan will address nutrient related water quality issues within the watershed, through public and stakeholder involvement.

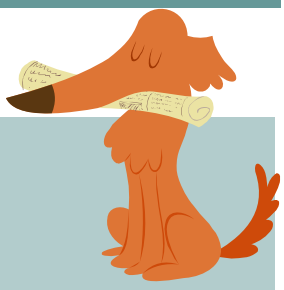
The Source Water Protection Plan will achieve the following measurable results:

(1) collaboration with the upper basin entities to mitigate against potential source water pollution hazards.
(2) establish and maintain a working relationship with stakeholders.
(3) create a comprehensive source water protection plan that minimizes the potential threats to the drinking water supply and incorporates the project goals.

Clean and dependable public water supplies are critical to the health and economic sustainability of the Clear Creek Watershed and Standley Lake. Considering the associated economic value and the importance of our water resources, local public water providers have worked diligently for years to protect the water sources. However, ongoing development pressures and competition for scarce resources mean that even greater cooperation is needed to ensure protection into the future. Source water issues often affect multiple public water providers and long-term solutions will require both communication and cooperation between public water providers and community stakeholders. The grant funding will be used to create a program that engages stakeholders from numerous agencies, municipalities and the public to work together on the plan. The source water protection plan will increase public awareness of protecting water resources and improve communication between water providers, decision makers and stakeholders.

For more details on grant guidance and source water protection planning information visit http://www.cdphe.state.co.us/wq/sw/protectionphasehom.htm.

Facility Operator Program News



System Compliance with ORC Requirement

The Facility Operator Program of the Water Quality Control Division communicates with Colorado's public drinking water systems and the domestic and industrial wastewater systems, as well as with the certified operators who are in responsible charge of the systems. This communication results in a database that lists the systems and their operators in responsible charge (ORC). The ORC requirement is spelled out in Section 100.21.1 of Regulation 100 which stipulates ***"that no owner of a water or wastewater facility shall allow the facility to be operated without direct supervision of a certified operator in responsible charge."*** Compliance is ongoing with many challenges: new systems are added; owners and operators change; and many of our small, rural systems struggle to afford proper maintenance of their system, including having an operator in responsible charge.

Based on our database and communications with the systems and operators, compliance to date is as follows:

- Community Water – 853/901 – **95%**
- Non-Transient NC Water – 173/178 – **97%**
- Transient NC Water – 665/759 – **88%**
- Consecutive/Purchased – 114/117 – **97%**
- Domestic WW (major) – 77/78 – **99%**
- Domestic WW (minor) – 432/449 – **96%**
- WW Collection Only – 83/87 – **95%**
- Industrial (major) – 24/24 – **100%**
- Industrial (minor) – 80/82 – **98%**

Update ORC Information

If you are an operator in responsible charge or believe that you may be listed on our database for a system for which you are no longer an ORC, please make sure that your information is current by contacting the Facility Operator Program.

Certification Renewals

Please check your renewal date on your certification! Renewal must be completed with the appropriate amount of training units, a complete application and an application fee **BY THE RENEWAL DATE**. If you think that you may not be able to complete your renewal by the expiration date, please call the Facility Operator Program to request a bridge letter. Certificates expired for more than two years are automatically revoked!

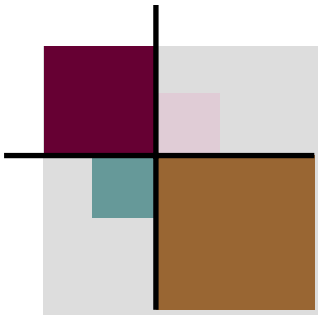
Exam Information

Upcoming exam dates and locations will be available on the Operator Certification Program Office's website on or around April 1. The exam application deadline for the summer/fall exam cycle is June 1, 2008. Late applications will not be accepted!

WWFOCB News

There are four Water and Wastewater Facility Operators Certification Board (WWFOCB) terms ending June 30, 2008. If you are interested in being appointed to the WWFOCB, please contact Paul Forhardt at 303-692-3468 for information.

For all other inquiries you may visit www.cdphe.state.co.us/op/ocb (the official Water and Wastewater Facility Operators Certification Board website).



Contacts for the WQCD Facility Operator Program

Betsy Beaver
303-692-3503

Lori Billeisen
303-692-3510

Less Paperwork for Water Systems! Residual Disinfectant Report

by Emily Clark

The regulations state that water systems using chlorine or chloramines must measure the disinfectant residual in the distribution system with each total coliform bacteria sample (Articles 7.6.3(c)(1) and 7.9.1(c)(2)). Community and non-transient, non-community water systems are required to submit those residual readings to the state. The division previously required these systems to submit a Maximum Residual Disinfection Level (MRDL) Form 2 even if the residual was already reported on the total coliform lab result. This duplicative reporting has been eliminated.

> The division can now accept chlorine and chloramine residual data directly from the total coliform bacteria sample results.

The division now can accept chlorine and chloramine residual data directly from the total coliform bacteria sample results. As long as the sampler writes the residual on the total coliform lab slip, there is no need to submit a MRDL Form 2 for compliance. Operators must confirm with their lab that the residual data are reported to the state for **each** total coliform sample result. Systems that use the Colorado Department of Public Health and Environment labs in Denver or Grand Junction must continue to use the MRDL Form 2 due to a limitation in electronic data transfer. That limitation will be resolved soon.

When should a water system submit an MRDL Form 2?

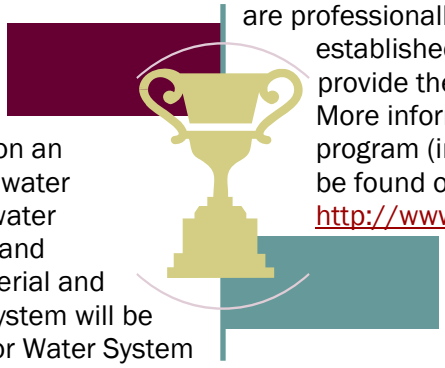
1. If the sampler forgets to write the residual on each total coliform lab sample slip;
2. If the water system submits a summary of bacteria sampling instead of individual sample results (only appropriate for systems doing a high volume of sampling); or
3. If the lab does not transmit the residual data to the state with **each** total coliform sample result.

The division requests that water systems begin using this new reporting method immediately. Systems using surface water (or ground water under the direct influence of surface water) must continue to submit disinfection residual data on the Monthly Operational Report in addition to their total coliform samples.

Colorado Drinking Water Excellence Program Initiates a New Awards Program

by Dean Vlachos

The Colorado Drinking Water Excellence Program has launched a new initiative to recognize and award public water systems that have demonstrated excellent performance in various areas of public water supply and protection. This program will recognize multiple water systems on an annual basis in five award categories: water treatment, water distribution, source water management and protection, security and emergency preparedness, and managerial and financial capacity. One public water system will be granted the "Glenn A. Bodnar Award for Water System of the Year" for outstanding performance in all five of the categories listed above. This award program is intended to promote those Colorado water systems that are professionally dedicated to go above and beyond established compliance requirements and strive to provide their customers with a superior product. More information on the recognition and award program (including nomination applications) can be found on the department's website at http://www.cdphe.state.co.us/wq/drinkingwater/ExcellenceProgram.html.



Ask Aqua Man

Dear Aqua Man,

Our water system recently underwent a sanitary survey and received a letter documenting a number of significant deficiencies. What categorizes a deficiency as significant?

- Norm Alyright

Dear Norm Alyright,

The *Colorado Primary Drinking Water Regulations* defines the term "significant deficiency" as follows:

> *"Significant deficiency means any situation, practice, or condition in a public water system with respect to design, operation, maintenance, or administration, that the state determines may result in or have the potential to result in production of finished drinking water that poses an unacceptable risk to health and welfare of the public served by the water system."*

Examples of significant deficiencies are (1) not filtering, providing inadequate filtration, or bypassing filtration for surface water or groundwater under the direct influence of surface water sources; (2) not disinfecting or providing inadequate disinfection; (3) not retaining a certified operator; (4) not undergoing construction design approval for treatment or source modifications, and; (5) unprotected high hazard cross-connections (e.g. cross connection between raw water and treated water).

Because this is not an exhaustive list, please refer to the *Colorado Primary Drinking Water Regulations*, the *Potable Water System Design Criteria*, and/or contact the person who conducted the sanitary survey to help direct you further.

- Aqua Man

Dear Aqua Man,

I am the operator in responsible charge for a Colorado community water system. My client received a sanitary survey itemizing various significant deficiencies. Does my client have to remedy all the significant deficiencies within 45 days of the notice?

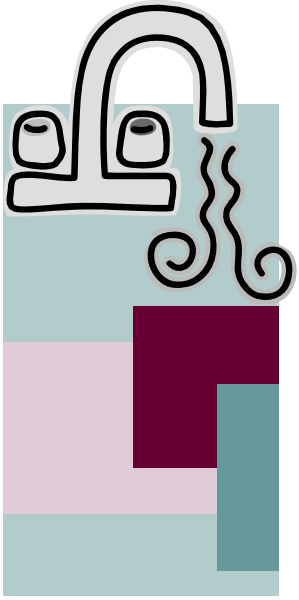
- Major Operator

Dear Major Operator,

The system must respond to significant deficiencies identified during a sanitary survey in accordance with section 11.4 of the *Colorado Primary Drinking Water Regulations*. In summary, this section requires the water system to provide a letter to the Water Quality Control Division that indicates the actions the system will take to address the identified significant deficiencies and include a proposed schedule for completing the corrective actions to achieve compliance. The division must receive this letter within 45 days of the notification date. The division has the option of adjusting the proposed compliance schedules through negotiation with the water system. If the system fails to comply with the agreed upon schedule, the division has the ability to formally enforce corrective action per section 1.6.7 of the *Colorado Primary Drinking Water Regulations*.

- Aqua Man

If you have any questions for Aqua Man, please send them to comments.wqcd@state.co.us. Enter "Drinking Water Newsletter" as the subject.



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

- **Monitoring data submission change.** The preferred method for submittal is via U.S. mail. For time-sensitive situations, monitoring forms may be submitted to the Drinking Water e-mail box at cdphe.drinkingwater@state.co.us or via facsimile to 303-758-1398. All documents must be signed by the lab representative or person who conducted the analysis. If submitting by e-mail, data must be in a pdf file format to be accepted.
- **CoWARN.** Colorado's Water/Wastewater Agency Response Network, is a formalized system of "utilities helping utilities" designed to facilitate aid during emergencies by using a practical statewide mutual aid agreement that reduces bureaucratic red tape. CoWARN works with water industry groups and public agencies, linking the Colorado water community to provide members a broader pool of emergency resources in the form of supplies, equipment and personnel. CoWARN was critical in supporting response to the recent salmonella outbreak in Alamosa. To learn more, visit www.cowarn.org.

SPRING RUNOFF HAS BEGUN!

If you have a maximum turbidity exceedance (an acute or a potential acute situation), then…

Call Serenity Valdez
Surface Water Rule Manager
303-692-3519
or call the
24hr Incident Report Line
1-877-518-5608
Do not just leave messages.

Make sure to speak to a live person!

Public Notice Templates can be found at www.cdphe.state.co.us/wq/drinkingwater/PublicWaterSystemReportingForms.html

- The Drinking Water Program's homepage Web address is www.cdphe.state.co.us/wq/drinkingwater/index.html
- TRAINING OPPORTUNITIES! Please visit the division's website at www.cdphe.state.co.us/wq/drinkingwater/Training.html
- To access Aqua Talk online www.cdphe.state.co.us/wq/drinkingwater/QuickLinks.html
- To access the district engineer county listing www.cdphe.state.co.us/wq/engineering/pdf/ESDElist.pdf
- To access the contact list for drinking water rules www.cdphe.state.co.us/wq/drinkingwater/pdf/CADM_Contact_List.pdf

Drinking Water, Compliance Assurance and Data Management Section

Water Quality Control Division

4300 Cherry Creek Drive South, Denver CO 80246-1530

Fax 303-782-0390 or 303-758-1398

1-800-886-7689 (ext. = last four digits of individuals direct line)

Contact Information for Individual Drinking Water Rules

Disinfectant/Disinfection Byproducts Rule

Stage 1 Rule

Emily Clark (rule manager) 303-692-3502

Stage 2 Early Implementation

Julie Conroy (Early Implementation) 303-692-3405

Total Coliform Rule & Consumer Confidence Report Rule

Cristin Jones (rule manager) 303-692-3308

Surface Water Treatment Rules

SWTRs, Microscopic Particulate Analysis (MPA), & Filter Backwash Recycle Rule

Serenity Valdez (rule manager) 303-692-3519

Long Term 2 Enhanced Surface Water Treatment Rule Early Implementation

Julie Conroy (Early Implementation) 303-692-3405

Lead & Copper Rule & Organic Chemical Rule

Lauren Worley (rule manager) 303-692-3547

Radionuclide Rule

Jacalyn Whelan (rule manager) 303-692-3617

Inorganic Chemical Rule (including arsenic, fluoride, nitrate and nitrite)

Bryan Pickle (rule manager) 303-692-3527

Ground Water Rule

Bryan Pickle (rule manager) 303-692-3527

Monitoring and Reporting *(M&R)*

M&R for Organic, inorganic, nitrate and nitrite

Desiree Griffin (compliance technician) 303-692-3538

M&R for D/DBP, turbidity and total coliform

TBD

SDWIS Development & Unregulated Contaminant Monitoring

David R. Rogers 303-692-3535

New Systems, SDWIS Updates (changes in source, treatment, contact info, etc.)

Erica Kannely 303-692-3543

Laurie Findlay - General Assistance (including forms, schedules, & other printed materials)
303-692-3556 or 303-692-3541

Inquiries on Public Notice requirements should be directed to the appropriate rule manager listed above.

AQUA TALK

is a quarterly newsletter published by the Drinking Water Program, Water Quality Control Division, Colorado Department of Public Health and Environment

303-692-3500

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Internet address http://www.cdphe.state.co.us/

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Editor: Gloria M. Duran

Purpose - to communicate division drinking water-related issues to stakeholders in a fun and informative format

Colorado Department of Public Health and Environment

Drinking Water Program

Water Quality Control Division
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WQCD DRINKING WATER PROG - 2030