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The Director's Report

The word "Primacy" is a federally coined word which means a federal program delegated to a state to implement. The Utah Division of Drinking Water has "Primacy" for implementing the federal rules associated with the federal Safe Drinking Water Act. This article will describe the issues and challenges the Division faces related to Primacy.

In order for EPA to delegate Primacy to a state, the state must demonstrate, to EPA's satisfaction, that it has capabilities in the following areas:

1. Capacity Development Program
2. Emergency Response
3. Engineering Plan Review
4. Operator Certification
5. Sanitary Surveys
6. Source Protection
7. Water Quality Monitoring and Enforcement



Ken Bousfield

Each of the above enumerated areas are required either by federal statute or by the regulations developed under the statute as a condition for receiving a Primacy delegation. It is interesting to note the areas which are not on the list of required activities from a federal perspective. These activities include: technical assistance and training, cross connection control, the state funded and implemented financial assistance program and the Improvement Priority System Rule.

As a Primacy State, the Division is also eligible to receive an EPA grant for funding some of

Meet DEQ's New Executive Director

Governor John Huntsman has appointed Amanda Smith to the position of Executive Director of the Utah Department of Environmental Quality. Amanda is currently the Acting Executive Director pending her confirmation that is expected to happen in September 2009.

Amanda Smith received her under-graduate degree in Political Science from the University of Utah and her Juris doctorate degree from Gonzaga University School of Law. She is licensed by the Utah State Bar. Ms. Smith has worked professionally on conservation issues regarding public lands, preservation of private lands, water resources and community planning. She has been a member of the Bureau of Land Management Resource Advisory Council and is currently is a member of the State Institutional Trust Lands Board.



Amanda Smith

Ms. Smith has acted as the Legislative Director and Rural Advisor to Governor Huntsman. In this capacity she has worked on a broad array of natural resource, energy, water and economic development issues. Additionally, she has worked closely with the State Legislature on Governor Huntsman's priority issues.

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the program elements listed above, and a second grant is available to fund water system improvement projects. Both federal grants are deposited in the State's accounts. The funds for construction of projects are administered in a program called the State Revolving Fund (SRF). The money from this fund is loaned to water systems to build projects. The repayments from the loans are redeposited into the SRF account and can be reloaned. Because a large amount of money is dispersed each year from the SRF account, the Division is subject to audits. The Division is audited annually by EPA Region 8 and every three years by the federal Inspector General's office.

In addition to the financial audits, program implementation audits are also performed. These audits evaluate how well we are implementing the requirements of federal drinking water regulations, or only area number 7 as listed above. EPA Region 8 performs these audits on an annual basis. Further, on an every three year basis, the EPA Headquarters commissions an audit, performed by their contractor, of our implementation of EPA's rules.

Regarding the financial audits performed by EPA, we have little difficulties in documenting the dollars and cents associated with the SRF program. This is not the case for program implementation audits. We do from time-to-time run into differences of opinion and struggles related with our implementation of the EPA regulations. To understand the differences of opinion, it starts with the differences of approach between EPA and the Division. EPA's approach is best characterized as an Enforcement approach where as the Division's approach is best characterized as a Compliance approach.

Let me give you two examples:

1. All public drinking water systems must monitor for coliform bacteria. When a water system has an acute bacteriological quality violation they will almost always have a non-acute water quality violation as well. The Division of Drinking Water will recognize the more egregious of these two violations, the acute quality violation, and cite the water system for it. EPA would cite the system for both an acute and non-acute quality violation.
2. All public drinking water systems must monitor for Nitrate at least annually. If a water system samples in 2008 for Nitrate and doesn't get the sample results to the Division of Drinking Water, the Division will send a violation letter to the system. If a system did in fact sample, they typically, upon receipt of the monitoring violation letter, will forward a copy of the results to the Division. When the Division receives the results, they will invalidate the violation. However, EPA would consider that this is a violation, not a monitoring violation, but a reporting violation and they would cite the water system for this violation.

As the above examples show, EPA is looking for opportunities to catch water systems in violation with regulations, whereas the Division of Drinking Water is trying to use a common sense approach to compliance with the regulations.

Each calendar quarter, during the middle month of the quarter, the Division is required to report: a) all monitoring, quality and treatment technique violations, b) update inventory or infrastructure information about each public drinking water system and c) the 90th percentile lead levels. This information is reported electronically from our database to EPA's database. From the violation information, EPA, using a less than clearly define computer algorithm, determines those water systems for which they want the Division to take enforcement action against.

The candidate systems for enforcement are put on EPA's "Significant Non-Complier" (SNC) list. EPA expects the Division to take enforcement action on these systems within six months of their appearing on the SNC list. Such action include: a) returning the system to compliance, b) Administrative Orders, c) Bilateral Compliance Agreements, d) Attorney General referral, e) penalty assessment or f) filing a complaint in district court. The least resource intensive activity is working with the system to return them to compliance. If the Division doesn't take enforcement against a system appearing on the SNC list, EPA has the option to over-file. This means they will initiate enforcement action.

EPA's process involves sending a notice of violation. If the system is non responsive, they will send an Administrative Order (AO) with monetary penalties. If the system is still non responsive the penalty EPA will assess starts at about \$27,000.00. Consequently it is wise for water systems to respond to the Division's encouragement to return to compliance.

When ever EPA gets involved with enforcement there are always timing problems. This is due in part to the timeliness of their information. It starts with the Division's reporting of violation information

Upon making a decision to get involved, EPA will take up to three more months to produce an enforcement document. This means that EPA potentially will be dealing with a situation that occurred a full year previous to the delivery of the enforcement instrument.



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For example, in the month of August, the Division will report to EPA violation information for the period ending June 30th. EPA produces the SNC list for this period sometime in the month of September. The EPA waits at least six months before getting involved.

This timing issue is a compelling reason for Utah to have Primacy because we can respond to violations much quicker and we can respond to a water utility's efforts to return to compliance much quicker as well. Further, we engage in a number of activities that are designed to enable water utilities to avoid violations. I highlight two: a) first among these efforts is the annual sending of monitoring schedules to water systems (the Division can send these schedules to any water system at any time upon request) and b) equally important is the training efforts we engage in particularly regarding instructions about new rules. I encourage all utilities to pay attention to these activities as they are designed to help you avoid problems with EPA.

Relative to Primacy, I would like to draw your attention to the language appearing in the federal Safe Drinking Water Act:

Title XIV Section 1413:

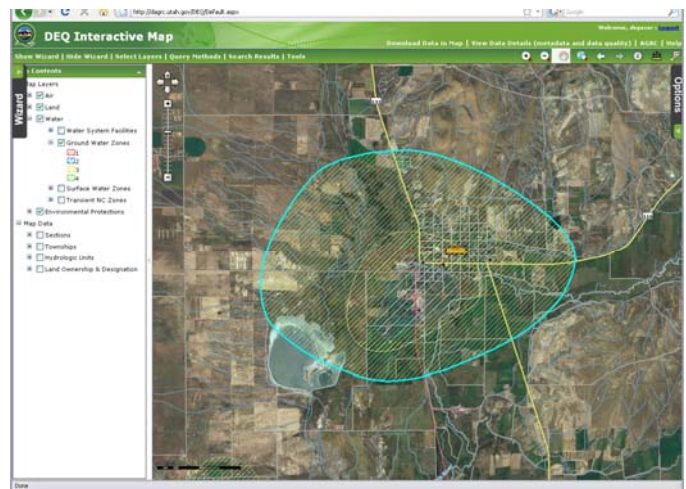
- (a) For purposes of this title, a State has primary enforcement responsibility for public water systems during any period for which the Administrator determines (pursuant to regulations prescribed under subsection (b)) that such State-
- (1) has adopted drinking water regulations that are no less stringent than the national primary drinking water regulations promulgated by the Administrator under subsections (a) and (b) of section 1412 not later than 2 years after the date on which the regulations are promulgated by the Administrator, except that the Administrator may provide for an extension of not more than 2 years, if after submission and review of appropriate, adequate documentation from the State, the Administrator determines that the extension is necessary and justified.

As the above language states, for every rule that EPA promulgates, the state is obligated to promulgate a corresponding state rule in order to retain Primacy.

The requirement that the Division write and implement every federal regulation creates stress for us. As an example, in the last 10 years EPA has promulgated 18 new rules. Some of these 18 new rules have also significantly impacted water utilities. Examples include: the Consumer Confidence Rule, the Stage 1 and Stage 2 Disinfection Byproducts Rules, the changes to the Surface Water Treatment rules, and most recently the Ground Water Rule which will take effect this December. During the same period of time, the Division's staffing levels have remained essentially constant as the funding from both State and EPA sources has remained essentially constant as well. Because there was a slight increase in federal funding in 2004, the Division was able to add three additional staff.

In summary, the State Division of Drinking Water is making a valiant effort in implementing the federal Safe Drinking Water Act as well as assisting water systems in keeping in compliance with all the requirements. To do this we must answer to EPA as well as work with water system personnel in implementing a common sense, protective of public health, program. We feel like we are walking a tight rope in trying to meet the needs of EPA and water systems. With EPA continually writing more rules our abilities to meet EPA's demands and also service water utilities is being stretched.

New DEQ Interactive Map



The DEQ Interactive Map is a new way to obtain information from the Utah Department of Environmental Quality (DEQ). The Interactive Map is a Geographic Information System (GIS) website where local planners and decision-makers can obtain information about the Drinking Water Source Protection zones within their jurisdiction. Public water systems can also work on their inventory of potential contamination sources by searching for the potential contamination sources regulated by DEQ. Users can search for environmental information by address, county, city, site name, or program, or draw a custom shape around the area of interest. The website then provides a list of the search results, including information about each zone or potential contamination source.

Source Protection programs are most effective when local planners and decision makers have the protection zones, and implement zoning ordinances to protect their drinking water sources. You can find the DEQ Interactive Map on the Utah DEQ website at <http://www.enviromap.utah.gov/>. For more information you may also contact Mark Jensen at mjensen@utah.gov or 801-536-4199.

Pandemic Flu Preparedness

By Kim Dyches

With the recent outbreak of the Swine Flu (H1N1) virus that has been going around, I thought it might be helpful to write an article on what plans water systems and government agencies should be doing in the event of a major outbreak. To update the information in this article, after I wrote it the H1N1 virus was elevated to a pandemic event. Personally I find it odd that the current Swine Flu virus that is circulating now, happened after the normal flu season which as a rule is wrapping in March. So I don't want to alarm those who may read this, but just offer some food for thought. With the threat of the avian flu (H5N1) virus a couple of years ago, the governor of State of Utah put together a task force to address what the State's role would be in the event of a pandemic flu outbreak and what emergency measures should we prepare for. I was appointed to be on the task force to address drinking water concerns.

It seems that in the modern world we live in with the advanced medical technology, at times we become complacent thinking the days of the plagues and outbreaks are over. Rightly so, most of us including myself have never seen a major outbreak. I remember standing in line as a child and taking the polio vaccine on a sugar cube. Because of vaccination programs, diseases such as small pox, polio, mumps, and many others aren't the threats they were years ago. However in 1918 there was an influenza pandemic outbreak that killed 20 to 40 million people worldwide. We usually think of the elderly and small children as the most susceptible to disease, but the 1918 pandemic was most deadly for people ages 20 to 40. Nearly 28% of all Americans were infected and approximately 675,000 died. We think of the current swine flu virus as something major, but so far the number of deaths is much lower than the average people who die from the regular strains of flu on an annual basis.

I have tried to think this through and the impact it would have on us and personnel from our water systems. The things we will need to consider are many. Normal water system operations would be stressed due to sick employees. In the water business we have to communicate with the public one on one. Operators could become infected with the flu dealing with customers who are infected and contagious. The swine flu has caused some panic in certain areas and many have changed their vacation plans to avoid areas where the flu is originating from.

If there were a pandemic in a small community there would be an inability to get qualified and certified operators to run the system if they became infected with the virus. Smaller water systems don't have the luxury the larger water systems have of having multiple staff that could step in and take over if their primary operator became ill. Large systems would feel the impact as well and may need to help fill in for a neighboring water system. Most agencies would be lacking proper masks and protective equipment to protect operators from becoming infected. Currently the lack of training on protecting one's self from becoming infected is non-existent in most areas. I believe there is a lack of cross training with operators and system personnel on jobs within each agency. There is a possibility that we would not be able to communicate with one another and our vendors. In the communications world we communicate through telephone, e-mail, fax, and snail mail. Imagine the impact if the person we normally were to communicate with were bedridden in a hospital and didn't have anyone to fill the void.



1918 Pandemic Flu Outbreak

The Avian H5N1 virus represents a significant threat to human health and everyone is at risk. However, it can be slowed but not stopped. More than 50% of those humans infected with the Avian H5N1 virus have died. So far no there has been no sustained human to human transmission but the virus continues to evolve. Currently there is no vaccination because vaccine can't be developed until the virus emerges and is identified. The potential impact to any given agency could be 10 to 35% absenteeism. The absenteeism would not be only sick employees. There could be a substantial amount of employees that stay home due to fear of becoming infected and passing the flu virus on to their family members.

Overall, government services would suffer disproportional to private industry. There could be possible border closures and travel restrictions from State to State. The manufactory and service industry would be impacted the most. Health care providers could become overwhelmed and hospitals could be quarantined. The affect worldwide could be devastating. The world economy could quite possibly grind to a halt. There will be shortages in the supply chains that could range anywhere from getting fuel for vehicles to supplies to operate your systems. Any given water system could see a disrupt-

Pandemic Flu Preparedness

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tion of essential services such as chemical deliveries, essential products and even package deliveries. There could be a surge for certain products while other supplies could dry up. Having an inventory of repair parts could play a significant role in lessening the impact on your water system. Your agency should consider that normal operations could spread the virus. There could be an impact on safety and security to your infrastructure. Consider the risk to outsiders that visit or contract work with an organization. Infected employees may be quarantined and others may be asked to minimize their contact with other employees. Psychological trauma may have an effect on workers who have watched friends, family, and co-workers become ill or die from the virus. There would be an element of panic and helplessness not knowing how to handle your normal job for fear of becoming ill. Those individuals in the community that rely on government services, such as the elderly, for assistance may not have anyone to deliver those services.

I know I have seemed to be talking of doom and gloom, but there are some things we can do to lessen the impact. Some advanced planning should take place. First of all ensure that adequate routine maintenance has been performed before the flu season hits. Repair parts and lead times may become problematic. Have an inventory of parts and equipment on hand. Join your Water/Wastewater Agency Resource Network (WARN) by having a memorandum of understanding with a neighboring water system. Water systems can serve as a back up to each other. Perform an assessment of the supply chain risks and are your suppliers' prepared? Have back-up sources for critical domestic and imported supplies.

Develop a strategy to sustain normal business operations during a pandemic event. Incorporate a management strategy for proper disposal of waste. Plans should be made for alternate sources that would provide transportation or in-house accommodations for critical workers. Strategies should be developed for handling continuity of operations for water & wastewater systems.

Have you adequately prepared your family with essential food and water for an emergency event? Water system personnel that aren't ill may be asked cover multiple shifts for sick co-workers. Your system should incorporate a system of pay incentives for

those who would be required to cover many days of long shifts. Those employees may need to be housed at a central work location. You may need to cater meals to those who are staying on site. Agencies may need to revise paid leave policies, overtime, and flexible work hours. It may be advantageous to develop a virtual office protocol and policy that would allow workers to telecommute. How would you deal with visibly ill people in the workplace? Would send them home or allow them to work? You should send them home but do your policies have written statements that need to be followed. Review medical insurance policies for proper coverage. Systems should identify, collect, maintain and protect all essential knowledge of system operations. Your system may want to decrease the number of people at a facility at any one time to reduce the risk to your employees. Employees should be trained on how to handle quarantine conditions. In the event of wide spread illness former employees or former retired personnel could

be used as a resource. Train employees on proper hygiene practices such as hand washing, covering mouth and nose when coughing or sneezing into their shirt sleeves or (use of masks). Make available stations where employees can get products to sanitize their work station phone, computer, and desktop to minimize the spread of the virus. Encourage personnel to keep a 72 hour kit at their work station. Restrict personal contact such as handshakes, hugs, etc. Limit the use of closed meeting rooms and large meetings. Maintain a distance from others (5 Ft is recommended). If you are running a fever do not come to work. If family members become ill, distance yourself from them. Use caution around co-workers. Restrict lunchrooms by having personnel eat at their desk and possibly have lunches delivered. Don't use another employee's computer or phone. The N95 masks can be used to prevent the spread of the disease. Have a system that would provide for your staff's family support. Teleconferencing and video conferencing should be used instead of face to face conferences. Water systems could expand online transactions and self-service options for customers and partners. Develop preplanned Crisis Communications statements for external use when needed. Have internal contingency statements prepared for delivery to your workforce. Those statements must be consistent in order to maintain credibility. Develop tabletop exercises that would simulate an actual event.

Finally we need to know that a pandemic will affect all of us in one way or another. Planning and preparedness are key in minimizing the effects of a pandemic should it happen here.



Emergency Response Plans *by Pete Keers*

Does your water system have an emergency response plan? This question is asked at least every three years during a Sanitary Survey. Did you know water systems receive 10 IPS credit points for having access to this document? Are you one of the fortunate few that has a full time Emergency Management component to your organization? Has the water system operation been included in the ERP? Plans do not need to be huge and complicated, but do need to have everybody's input.



**“Personal Safety–
Have 72 hour kits
for both home and**

Has the ERP been on the shelf collecting dust for the last 3 years? (Another Survey Question). These are designed to be “living documents” that are updated frequently. What phone numbers have changed? What staffing changes (hopefully more help for you?) have occurred in your organization? Have your supplier contracts changed? I like to use the “KISS” acronym. Keep It Simple Stupid.

There are 8 core elements to an emergency response plan.

System Specific Information. Is the population and service information on file at DDW current? A distribution system map should show all facilities, including chemical handling and storage. Delineate the pressure zones. As-Built engineering drawings and process flow diagrams. SCADA System. Employee rosters, daily duties and responsibilities.

Public Water System (PWS) roles and responsibilities. Who will be the Water Utility Emergency Manager (WUERM)? Damage Assessment? Are additional resources needed beyond your organizations’ capability? What support staff will be needed? Media contact? Plans, Actions, and Procedures.

Communications. Phone, radios, or messengers. Chain of Command, follow ICS training. Notifying and gathering staff. Notifying consumers.

Personnel Safety. Emergency handbooks or checklists w/ areas of responsibility defined. Evacuation and sheltering planning and training. Assembly areas defined for employees and families. Emergency equipment and supplies. 72 hour kits for both home and work. A worker w/ a prepared family will not be distracted by concerns of their safety. Work vehicles w/ first aid kits, food, water, extra batteries, etc. *Be Prepared!*

Identification of Alternative Water Sources. Consider both long and short term solutions. Identify Points of Distribution for bottled water and other disaster supplies. Orders- Boil, Do Not Drink, Do Not Use.

Replacement equipment, Supplies and Inventory. Redundant equipment and repair parts. Chemicals and other operation supplies. Fuel. Half tank refueling policy! Mutual Aid and resource inventories. UT-WARN. See Rural Water Association of Utah website, www.rwau.net for participation information.

Property Protection. Access control and lockdown procedures. Securing perimeters and facilities. Crime scene evidence preservation. Evaluation forms and worksheets. Plans, Actions, and Procedures.

Water sampling and Monitoring Plans. Consultation w/ DDW on revised sampling requirements. Consider lab capabilities and deficiencies.

Address the 8 core elements and organize

- _Overall ERP Policies
- _General ERP Procedures
- _Mutual Aid Agreements
- _References
- _Action Plans

Two more Questions? Where can you learn more about updating ERP's and Vulnerability Assessments (VA)?

There are six free training seminars being sponsored by RWAU from Logan to St George. See the dates and locations on the training section of the website www.rwau.net

Have you been confused by the NIMS compliant issue? Well the Incident Command System (ICS) and National Incident Management System (NIMS) training programs have plenty more acronyms for you. There are several FEMA Emergency Management Institute on line classes that will issue certificates upon successful completion. The Basic ICS 100 and 200 and the NIMS 700 and 800 will give you a good base to keep your ERP alive and kicking.

Additional advanced training is available, check out

www.training.fema.gov/is

www.publicsafety.utah.gov/homelandsecurity/training

15 Year Service Pins *by Kim Dyches- Commission Secretary*

The operator certification Commission has approved the issuance of 15 year service pins to water operators that have been certified for 15 years or longer. Letters were sent in March along with a pin honoring those operators who have been dedicated to receiving training and renewing their licenses. Letters were also sent to the Management of their perspective system to let them know they were being honored. Many Councils and City entities honored the operators from their systems that received them.

The job that water operators perform on a daily basis largely goes unnoticed because of the commendable job they do. They importance of what they do in protecting the public health by supplying a safe and adequate supply of water to their customers at times is underappreciated.

For this reason the Utah Water Operator Certification Commission wanted to recognize their efforts and thank them. The current plan is to continue on with this program annually in honoring those operators.



New 15 year pin logo to honor Utah's Water Operators

Groundwater Rule *by Elden Olsen*

In my 33 years of dealing with water system I have seen a lot of changes. All of these changes have been for the good of our water systems. These changes help us, as water operators to provide safe clean water to our customers. Mind you, we have to buy into these changes with a positive attitude. The new Ground Water Rule (GWR) is no exception.

From a regulators point of view I have yet to see information about how you can circumvent any and all Rules and Regulations. The Ground Water Rule will be a very easy to work with, if you have a good, clean water system.

The following items will help a water system to circumvent this new rule. A Water system that is following:

- Good Operation & Maintenance practices
- Clean sampling record – pull clean TCR samples
- Get low scores on every sanitary survey
- Have a full blown working cross connection control program

Have a low IPS score

If you have these standards in with your water system you will see little or no change with the new GWR. It will be business as usual. On the other hand if you do not have these standards you will get to know the GWR fully.

What is the Ground Water Rule?

The U.S. Environmental Protection Agency (EPA) published the Ground Water Rule (GWR) on November 8, 2006. One goal of the GWR is to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems (PWSs) that use ground water or ground water systems (GWSs). Instead of requiring disinfection for all ground water sources that are susceptible to fecal contamination. The GWR establishes a risk-targeted approach to identifying GWSs that are susceptible to fecal contamination. The GWR requires GWSs with ground water sources at risk of microbial contamination to take corrective action to protect consumers from harmful bacterial and viruses. Sanitary surveys are an important way for states to identify at-risk system.

Groundwater Rule by Elden Olsen

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What is a Sanitary Survey?

The Executive Secretary shall ensure a sanitary survey is conducted at least every three years on all public water systems. The Executive Secretary may reduce this frequency to once every five years based on outstanding performance on prior sanitary surveys. A sanitary survey includes but is not limited to, an onsite review of the water source(s), (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

A sanitary survey provides an on-site review of how a GWS is maintained and operated. The survey is conducted by a trained surveyor, who reviews the system's water source, equipment, facilities and treatment procedures. The purpose of the survey is to:

- Ensure that the GWS' operational, monitoring, reporting, and recordkeeping practices are in compliance with drinking water standards.
- Identify any significant deficiencies.

Better ensure that safe drinking water is distributed to the public.

The sanitary survey is a proactive public health measures that allows states to better understand a GWS' progress and needs.

What elements are examined during the survey?

The sanitary survey must include an evaluation of the applicable components. The GWR requires that a sanitary survey include a review of eight elements. That state will identify significant deficiencies found during the survey. The GWS will then need to take corrective action to fix any significant deficiencies found.

Eight elements of a sanitary survey:

- **Source**
 - Unprotected cross connection in well house
 - Spring box lacks proper drain.
 - Elevation of well casing inadequate.
 - Pitless adapters are not water tight lacks proper sealing.
- Treatment
 - Chlorine station lacks a 1 ton chlorine repair kit.
 - Cross connection between surface water and finished water via a chlorine system
 - Chlorine incorrect residual concentration calculations
 - Chlorine disinfection
 - process not continuous
- Distribution System
 - Is the air and vacuum relief vent line properly screened (#14) mesh and down turned.
 - Is the air and vacuum relief valve chamber flooded at time of inspection?
 - Distribution line crosses a surface water body of water with inadequate protection.
 - Distribution blow offs connected to sewer or with no air gaps.
 - Water hauling is not allowed if other options are available.
 - Unprotected cross connections present in the distribution system.
 - System uses unapproved pipe, fittings, or material.
 - System fails to provide 20 psi to all customers.
 - System lacks 20% of required storage capacity
 - Recreational-water hauling guidelines must be utilized
 - Are air and vacuum relief valves subject to flooding
 - Inadequate pressure provide to system post 2006
 - Air and vacuum relief

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Groundwater Rule by Elden Olsen

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• Finished Water Storage

- Storage facility is not secure
- Storage facility air vent not properly screened.
- Storage structure missing proper air vent
- Storage facility shows evidence of leakage
- Storage facility shows moderate deterioration
- Storage facility is missing proper air flow
- Storage facility shows evidence of water intrusion
- System lacks 20% of required storage capacity
- System lacks 30% of required storage capacity
- System lacks 40% of required storage capacity
- System lacks >40% of required storage capacity
- Storage facility lacks adequate drain line
- Uncovered finished storage reservoir
- Storage facility overflow pipe is missing proper screen
- Storage facility is leaking at time of inspection
- Storage facility has unsealed roof penetrations
- Pumps, Pumping Facilities, and Controls
- Unprotected cross connection in pumping station
- Pump station lacks capacity to meet demand
- Hydro-pneumatic tank and controls not secure
- Air and vacuum relief valve lacks proper screen (#14 mesh)
- Monitoring, Reporting, and Data Verification
- Inadequate bacteriological sampling site plan
- System Management and Operation
- Water system facilities lacks plan approval
- No current copy of source protection plans on site
- System lacks 20% of required source capacity
- System lacks 30% of required source capacity
- System lacks 40% of required source capacity

- System lacks >40% of required source capacity
- Unapproved system interconnection
- Old source lacks a DWSP plan
- Unapproved source no preliminary evaluation report
- Operator Compliance with State Requirements
- Operator not certified to level required of water system

What Happens If A Significant Deficiency Is Identified?

○ After the survey has been completed, the state must provide written notification to the GWS no more than 30 days after a significant deficiency has been identified. The state may also specify the corrective action(s) it requires the GWS to complete and may provide deadlines for those actions. If the does not specify the corrective action(s) it requires the GWS to complete and may provide deadlines for those actions. If the state does not specify the corrective action(s) required, the GWS has 30 days from receiving written notice from the state to consult with the state regarding appropriate corrective action needed to address the significant deficiency. The GWS has 120 days after the initial state notification of a significant deficiency to complete the required corrective action or be in compliance with a state -approved corrective action plan and schedule. Failure to comply with the required corrective action plan or schedule will result in a treatment technique (TT) violation for the GWS. The GWS must notify the state within 30 days of completing the required corrective action.

Corrective action alternatives

- Correct all significant deficiencies
- Provide alternate source of water
- Eliminate the source of contamination
- Provide 4-log treatment of viruses before first customer.



For questions on the Groundwater Rule contact Elden Olsen at 801-536-4097 or John Oakeson at 801-536-0057.



As of July 1, 2009 all operators must now show proof of citizenship

“Question Bank Validation Workshop Validates new and existing questions”



Celebrates 25 years of mandatory certification

SB 81

With the passage of Senate Bill 81 there are new regulations that have been passed on to the Utah Operator Certification program. Beginning July 1, 2009 **all** applicants applying to take an exam must provide proof of United States citizenship. Senate Bill 81 is designed to require any individual obtaining a State license or certification, to provide proof of their United States citizenship. This also applies to individuals that are upgrading their certification, renewing their certification or applying for reciprocity.

The new applications for certification, renewals, reinstatement, and reciprocity will have a form that will need to be filled out in order for the transaction to be complete. Along with the form, you will need to attach a photo ID and have the form notarized. **There is a form on Page 22 of the OpenLine** or you can access the form online at: <http://www.drinkingwater.utah.gov/documents/compliance/e-CitizenshipCertification.pdf>

If you have any questions, please call or e-mail Kim Dyches at 801-536-4202 or e-mail at kdyches@utah.gov. You can also contact Margaret Hand at 801-536-4192 or e-mail at mhand@utah.gov.

Exam Validation Workshop

On May 20, 2009, a workshop was held at the DEQ offices to validate the existing questions in the exam question banks. Operators from several agencies were involved in the review. Steve Blake, Johnny Trimble, Ron Kidd, and Craig Fahrni from Jordan Valley Water Conservancy District participated. Nathan Lunstad and Justin Parduhn from Highland City were involved. Chuck Jeffs, Curt Ludvigson, and Terry Smith participated. Gary Durrant from Metropolitan Water District of Salt Lake and Sandy, Dave Hansen from the Division of Drinking Water and Bart Smions from Provo City all reviewed questions.

Approximately 53 new questions were added to the six different banks. Four new groundwater rule questions were added but because we wait for one year to put questions on the exam for new rules they won't be on the exams until 2011.

Utah's Operator Certification Program Celebrates 25

The State of Utah has been a mandatory certification program since 1984. Utah's program actually began in 1965 and the first operators were certified in 1966. Utah administered the first ABC exam at the University of Utah. Many of you may remember that operator certification wasn't easy to implement. There were problems with the lawmakers and water agencies accepting a mandatory requirement of certifying water operators. Some of the problem was ignorance as to the importance of the job that operators actually do. Many times the attitude was, "everything is fine, why change?" Acceptance of the program was gained when the large water utilities felt that having trained and competent people run their systems was a standard of professionalism. The large systems started to compensate the operators who voluntarily passed the State exams before certification was mandatory. Operator certification has been a means to establish a base level of competency with its operators. It has been a vehicle to require operators to gain training on the changing technology surrounding us through the continuing education program.

Utah celebrates 25 years of mandatory operator certification and 44 years of certifying its water operators.

THE PROPOSED HYDRAULIC MODELING RULE - Status Report

by Kenneth H. Bousfield, P.E., Director

The purpose of this article is to provide an update on a proposed rule known as “The Hydraulic Modeling Rule”.

An outline of the proposed rule: The rule, as it was proposed back in February, places additional requirements on community type water systems when they propose construction expansion projects to accommodate growth. Specifically, water systems would be required to document that the expansion of the water delivery system could be accomplished without adversely affecting the quality of service to either existing or new customers, as measured by flow capacity and pressure. The rule would require, at the time of plan submission for an expansion project, that a hydraulic model be developed and run to provide the needed documentation. When existing piping systems are required to convey more water to meet the demands of growth, water system pressures within these piping systems will be lowered.

The intent of the proposed rule is to ensure that these pressure drops are not excessive or fall below minimum requirements. Evaluating water systems using computer modeling techniques may show that upgrades to the existing delivery system are needed in addition to the installation of piping to service the growth. Further, computer modeling would enable the design engineer to properly evaluate different options to ensure that adequate service to existing and new customers is provided.

From idea to rule: At the September 10, 2008 Drinking Water Board meeting, I presented the idea of the rule to Board members. I described the conceptual idea of the rule, and briefly outlined the process I intended to follow (which will be outlined below) in order to prepare a draft rule for the Board’s consideration. Because the process I had in mind was rather involved, I asked the Board for conceptual approval which they granted.

Initially, I asked key individuals to participate in a series of scoping meeting to flesh out ideas for the rule. I wanted the input from a variety of sizes and types of water systems, the designers of water system infrastructure projects, local health departments and Division staff. The selected participants included: Lee Barnes representing Lehi City; Kevin Bourne representing the U.S. Forest Service; Kevin Brown representing the engineering firm of Sunrise Engineering; Mike Collins representing the engineering firm of Bowen & Collins; Michelle Cook representing the Weber-Morgan Health Department; Keith Hanson representing the Town of Alta and Snowbird; Stan Postma representing the engineering firm of Montgomery Watson Harza; Rod Sorenson representing Sandy City, and Clyde Watkins representing the Rural Water Association of Utah. Division staff included Michael Grange, Heather Bobb and me. As a result of the deliberations that occurred in meetings held every other week during the months of October through early December of 2008, ideas started to take shape. From these ideas I drafted a rule with help from the Division’s engineering staff.



With the substance of a rule drafted, I sent out a letter on February 27, 2009 inviting affected water systems and engineering consultants to meetings held throughout the State. Prior to the actual occurrence of the meeting, I participated in presenting the idea at two conferences. One presentation was made at a conference of cities engineers on January 22, 2009 in St. George. The other presentation was made at the Rural Water Association of Utah’s 2009 Annual Conference in St. George on March 5, 2009.

My February 27, 2009 letter was sent to all potentially affected water system’s contacts in our database as well as the engineering design community. In my letter, I invited recipients to come to one of seven meetings held throughout the state to learn about and comment on the intent and substance of the proposed rule. I also included a copy of the text of the proposed rule with the letter. My letter invited recipients to participate in a public meeting held at the following seven locations, in their chronological order: Brigham City, Salt Lake City, Richfield City, Cedar City, Vernal City, Price City, and Monticello City.

From these seven meetings a number of opinions were expressed and suggestions were offered. A frequent concern expressed in most of the meetings dealt with the cost, particularly for small systems, to gather and prepare their base line hydraulic model in anticipation of a future plan submission addressing growth. In response to that concern, I would like to comment specifically on two suggestions that would definitely help small systems. Further, these suggestions could have value for larger systems as well.

Shem Liechty, of Brown and Caldwell consulting engineers, suggested that small water systems look into working with engineering students at the three engineering colleges in Utah; specifically: Brigham Young University, the University of Utah and Utah State University to assist in developing the baseline hydraulic model.

Following up on this idea, I met with faculty of each of the three universities and each could see the value of their students participating with this effort. It is important to note that from the faculty’s point-of-view, they wanted to maximize the learning experience for the students who would be participating. In order to maximize the learning experience, the faculty from all three universities would like to pick systems that already have information about their infrastructure. For storage tanks this would include: the storage volume and water level elevations. For piping systems this would include: pipe materials, diameters, age, elevation, and location of all: pipelines, valves, fire hydrants and pressure zones. For pumping stations this would include: individual pump capacities operating conditions and elevations. For source waters this would include: well elevations,

THE PROPOSED HYDRAULIC MODELING RULE

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pump capacities and operating conditions; for springs it would include: spring capacities and elevations; and for surface water intakes it would include locations, elevations, and flow characteristics, etc.

The volunteering student would then become involved in assisting water utilities with data entry regarding the infrastructure and proceed with determining water demands within the water system's distribution system. Then the students would design, calibrate and run the hydraulic model. Because the Division would need a certification from a licensed engineer, the students would have to be supervised by a licensed professional engineer chosen by the water utility.

A second idea came from Mike Carlson, of Centerville City. Mike reported that he has done extensive monitoring of his distribution system involving flow and pressure measurements, as well as water level measurements in storage tanks. He has also simulated fire flow conditions with wells purposefully turned off. As a result of his efforts, he's made adjustments to hydraulic control valves, installed further telemetering equipment and participated in a number of minor construction projects to improve the delivery capability of his system. From this experience, Mike theorized that similar measurements could be made by systems to obtain a baseline of information. Mike also theorized that the baseline information could be used as a starting point for a computer model of only the proposed expansion project. Professor Christine Pomeroy, of the University of Utah, confirmed that such an approach was feasible. If this approach was used, there could be a reduction in the cost of modeling because only the expansion of the delivery system would be modeled.



Regarding developing baseline data of an operating system, Division's management team met with Dale Pierson and Vern Steel of the Rural Water Association of Utah (RWAU). At this meeting I asked if RWAU would be willing to assist water utilities in obtaining the baseline data. In response they indicated that they would. Also at the meeting we committed to RWAU that the Division would work with RWAU in defining what information would be needed as a baseline for modeling only an expansion to the system. RWAU's assistance in this effort would be significant for utilities. This is because: 1) it would enable them to comply with the rule, once it was adopted, at minimum expense, and 2) it would possibly uncover, without the Division's knowledge, existing weaknesses within the distribution system. The knowledge of weaknesses would enable the system to make upgrades to its system as time and resources allow, and thus prepare the system to accommodate future growth.

With either the student assisted approach or the field measurement approach, it is important to note when the rule applies. The rule would be in effect only when a water system expands to accommodate growth. When an expansion is proposed, there should be two parties interested in the outcome of the hydraulic model evaluation: 1) the water utility and 2) the proposing party, or developer, needing the expansion. If a water system already had a hydraulic model or obtained a starting point, using either of the two suggested options, (student assisted approach or field measurement approach) the system could reasonably expect the developer to pay the costs of evaluating the expansion of the system using a computer generated hydraulic model. Further, after doing the hydraulic modeling evaluation, the water system would have documented evidence of the true cost of providing water to the proposed expansion.

Another consideration for systems needing to prepare a baseline hydraulic model is that such projects would be eligible for funding from either the State funded or Federal funded loan program. The allocation of these monies would be based on project need, availability of funds and ability of the community to repay the loans. In hardship cases, grants or principle forgiveness funding arrangements could be offered.

Next Steps: Changes need to be made to the proposed rule to accommodate the suggestions offered as noted above. Also, additional comments received from the public meetings need to be incorporated into the rule. Consequently, Division staff will be making revisions and presenting the changed rule to the Board at its September 9, 2009 meeting. We anticipate that the official comment period associated with the formal rule making process will occur in the month of October 2009. In anticipation of this formal comment period, I intend to send a letter to all affected water systems and the design community advising them on how to comment. Included with the letter will be a copy of the modified and updated rule.

GROUNDWATER RULE MONITORING REQUIREMENTS

by Janet Lee

The US Environmental Protection Agency (EPA) published the Groundwater Rule (GWR) on November 8, 2006 which becomes effective December 1, 2009. One goal of the GWR is to provide increased protection against microbial pathogens, specifically bacterial and viral pathogens, in public water systems (PWS) that use groundwater. Instead of requiring disinfection for all ground water sources, the GWR establishes a risk-targeted approach to identifying groundwater sources that are susceptible to fecal contamination. The GWR requires systems with ground water sources at risk of microbial contamination to take corrective action to protect consumers from harmful bacteria and viruses. Monitoring is a key element of this risk-targeted approach.

What are the Source Water Monitoring Requirements?

Assessment Source Water Monitoring

Ground Water Systems (GWS) with sources that seem susceptible to fecal contamination (higher risk) may be required to conduct assessment source water monitoring. Assessment source water monitoring may be required at any time, and may require GWS to regularly monitor each source (or representative source) on a state-specified schedule (e.g. monthly) for an extended period (e.g., 12 months). Based on the results of the assessment source water monitoring, systems may have to take corrective action.

Triggered Source Water Monitoring

The purpose of triggered source water monitoring is to evaluate whether the presence of total coliform in the distribution system is due to fecal contamination in the ground water source. This type of source water monitoring is triggered by routine total coliform monitoring required by the Total Coliform Rule (TCR). Since TCR monitoring is conducted regularly, triggered source water monitoring can occur at any time and thus provides an ongoing evaluation of ground water sources.

Within 24 hours of being notified of a positive total coliform result under routine TCR monitoring, a GWS must collect at least one ground water source sample from each source in use when the positive total coliform result under the TCR was collected. If any triggered monitoring sample is positive for fecal indicator, GWS must take corrective action or collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator test result. If any one of the five additional samples is fecal indicator-positive, the system must take corrective action.

Small Systems

GWS serving fewer than 1,000 people that have a total coliform-positive

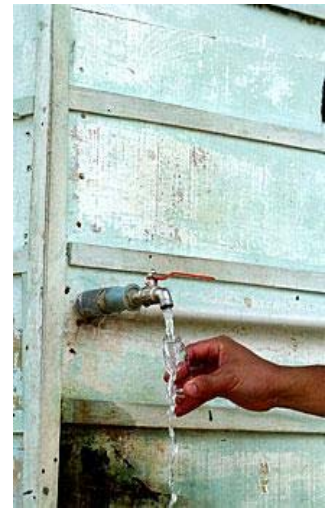
result under the TCR may use the triggered source water monitoring sample collected from the ground water source to meet both the triggered source water monitoring requirement of the GWR as well as part of the repeat sampling requirement of the TCR.

Consecutive Systems

A consecutive system with a positive routine total coliform result under the TCR must notify its wholesale system(s) within 24 hours of being notified of the positive sample.

Wholesale Systems

A wholesale system that receives notice from a consecutive system of a positive total coliform result under routine monitoring of the TCR must collect a triggered source water sample from its ground water source(s) and analyze the source water sample(s) for a fecal indicator within 24 hours of being notified by the consecutive system.



New Monitoring Requirements

“Instead of requiring disinfection for all ground water sources, the GWR establishes a risk-targeted approach”

GROUNDWATER RULE MONITORING REQUIREMENTS

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If the triggered source water sample is positive for the fecal indicator, the wholesale system must notify all consecutive systems served by that source within 24 hours of the positive sample result. The wholesale system and any consecutive systems served by the fecal indicator-positive source must all notify their consumers within 24 hours of learning of the result. The wholesale system must take corrective action or collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator test result. If any one of the five additional samples is fecal indicator-positive, the wholesale system must take corrective action.

Triggered Source Water Monitoring Exemptions

GWS providing at least 99.99 percent (4 log) treatment of viruses (using inactivation, removal, or a state-approved combination of inactivation and removal) of all of their groundwater can notify the state of this treatment and would not be required to conduct triggered source water monitoring. Those systems are, however, required to conduct compliance monitoring to show they are providing consistent and sufficient treatment.

GWS that Have More than One Ground Water Source

Representative Source Water Monitoring

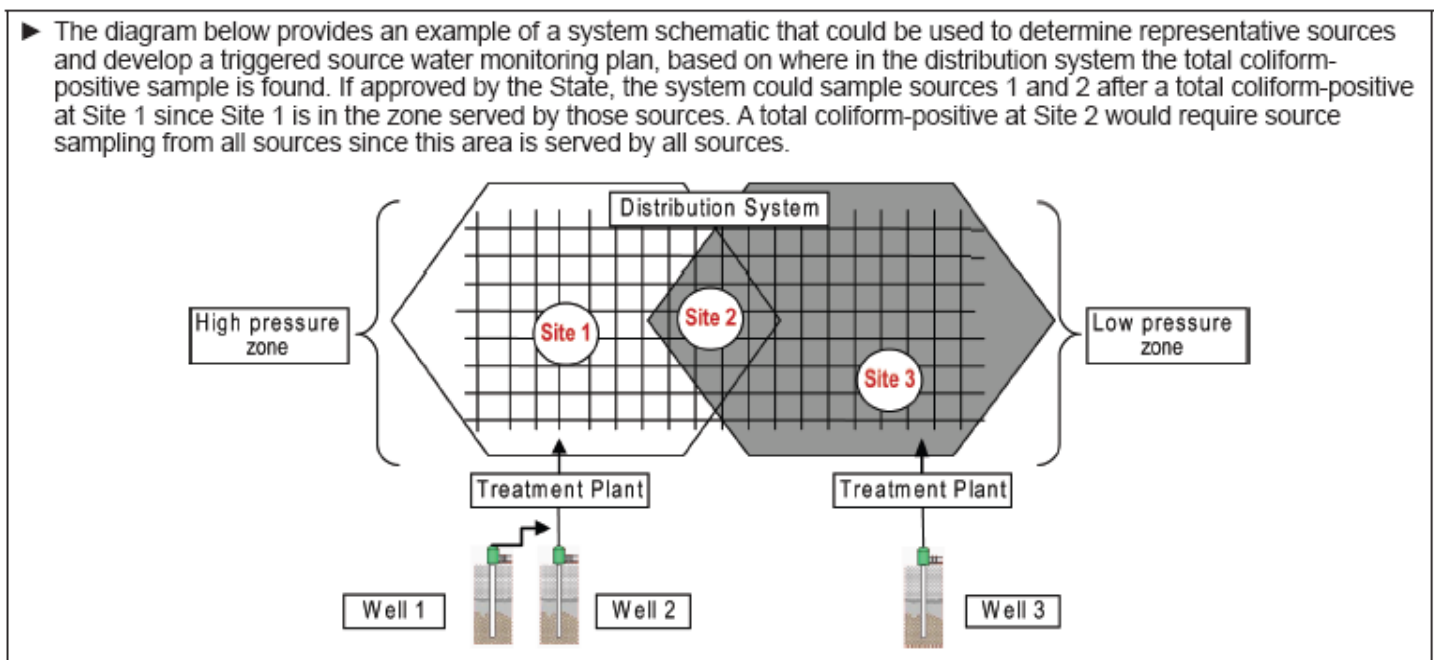
With State approval, GWS with more than one ground water source may fulfill the triggered source water monitoring requirements by taking a ground water sample at a representative source. Representative source water sampling allows systems to collect samples from the sources that represent (serve) the TCR monitoring site rather than from all sources. GWS are required to submit a triggered source water monitoring plan that identifies the sources that are representative of its TCR sampling sites.

Triggered Source Water Monitoring Plan

A triggered source water monitoring plan should be submitted to the

Division of Drinking Water by September 30, 2009. Plans must include:

1. A map of the water system with location of groundwater sources, location of pressure zones, and location of storage and disinfection facilities,
2. A written explanation of how the GWS knows which source feeds which section of the distribution system, and
3. Seasonal or intermittent ground water sources and when they are used.



GROUNDWATER RULE MONITORING REQUIREMENTS

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Collecting and Analyzing Triggered Source Water Monitoring Samples

When triggered source water monitoring is required, GWS must:

Collect at least one ground water source sample from an approved representative source monitoring location, or at each source in use at the time the total coliform-positive sample was collected.

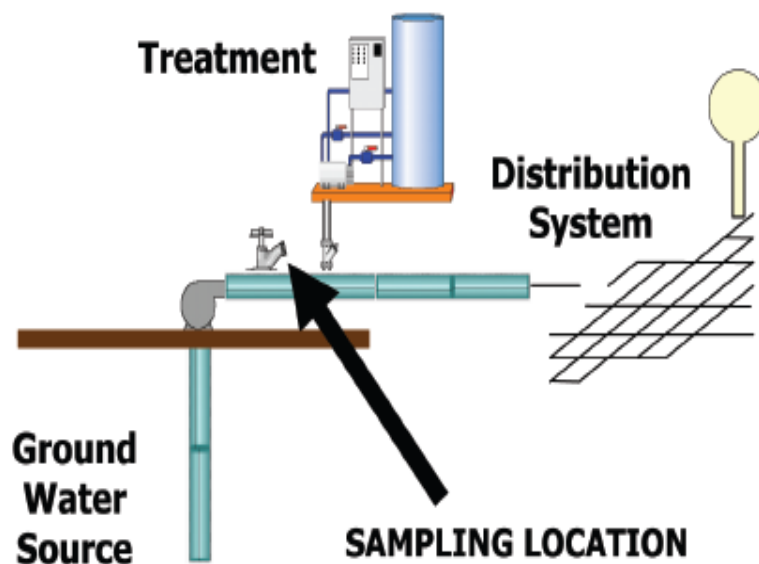
Samples must be collected within 24 hours of being notified of the total coliform-positive sample (unless the 24-hour limit is extended by the State)

Sample must be taken before treatment and disinfection or at a State-approved location after treatment and disinfection.

Samples must be analyzed for the presence of a fecal indicator (e.g. *E. coli*, enterococci, or coliphage) using an approved GWR method.

If a fecal indicator-positive source sample is invalidated by the State, the GWS must collect another source water sample within 24 hours of being notified by the State of the sample invalidation.

► The diagram below represents an appropriate sampling location for triggered source water monitoring. GWSs should have a sample tap at each source that enables triggered source water monitoring.



Triggered Source Water Monitoring Plans should be submitted to the DDW by September 30, 2009.

Sustainable Infrastructure *by Michael Grange*

Sustainability

What is “Sustainability?” The UN World Commission on Environment and Development defined sustainability as: “The ability to meet the needs of the present generation without compromising the ability of future generations to meet their needs.” In addition, the BC Roundtable *Towards Sustainability: Learning for Change* defines sustainability as: “Achieving a balance between human impacts and the capacity of the natural world that can be sustained indefinitely, taking into account three interdependent elements: the Environment, the Economy, and the Social System.”

With these definitions of sustainability in mind, and given our knowledge of water system infrastructure, what is “Sustainable Infrastructure?” How do we get it? Once we get it, how do we keep it?

First things first. What is Sustainable Infrastructure? Sustainable Infrastructure encompasses everything a water system needs to deliver a quality product at a reasonable cost with limited service interruptions on an ongoing basis. This includes equipment for source, storage, transmission and distribution; management and staff; operation and maintenance plans; long- and short-term planning and budgeting; and a host of other considerations. Sustainable infrastructure also includes water system policies, practices, and procedures that address existing needs so that future generations will not be left with the responsibility of responding to the needs that will arise as aging infrastructure reaches a critical stage. Water utilities nationwide face significant challenges as they look to the future. In addition to sustainable infrastructure, these challenges include growing populations, a changing workforce, resource management, rising costs, and a constantly evolving regulatory framework. To help water systems meet all of these challenges the U.S. Environmental Protection Agency formed a coalition with six major water and wastewater associations and identified the major attributes of effective utility management. A brief discussion of these attributes is found below. For a more detailed description the reader is referred to the Effective Utility Management website at www.watereum.org. This consortium of water experts determined that “Effective utility management is essential to sustaining our nation’s water and wastewater infrastructure.”

The Ten Attributes of Effectively Managed Water Sector Utilities

As presented, the Ten Attributes form an open framework for effective utility management encompassing aspects of operations, customer satisfaction, infrastructure, financial performance, resource stewardship, and community welfare. The attributes are not presented in any particular order and no hierarchy should be inferred. They are intended to provide a basic foundation upon which individual utilities can build a program of continual, system-wide improvement based on those attributes the utility deems most important.

The Ten Attributes are:

Customer Satisfaction	Financial Viability
Product Quality	Operational Resiliency
Operation Optimization	Community Sustainability
Water Resource Adequacy	Infrastructure Stability
Employee Leadership and Development	Stakeholder Understanding and Support

The following is taken from the document “*Effective Utility Management: A Primer for Water and Wastewater Utilities*” available from www.watereum.org.

Customer Satisfaction

Does the utility really know how satisfied its customers are? Do the products and/or services provided meet the level of service that the customers expect? This includes factors such as reliability, responsiveness and affordability, as well as receiving and acting upon customer feedback in a timely manner.

Product Quality

Does your water utility reliably produce drinking water that is in full compliance with regulatory requirements? Is your water quality consistent with customer expectations and public health needs?

Sustainable Infrastructure by Michael Grange

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Employee and Leadership Development

Is your utility able to recruit and retain a competent, motivated workforce? Is your workforce adaptive and safety-minded? Has your utility established a participatory, collaborative organization dedicated to continual learning and improvement?

It has been reported that up to 35% of the existing water utility workforce will retire in the next few years. Furthermore, it can take up to 15 years for an employee to become a subject matter expert. Do you have a plan to ensure employee institutional knowledge is retained and improved upon over time? Does your organization provide a focus on and emphasize opportunities for employee's professional and leadership development?

Operational Optimization

Are your utility operations cost-effective and reliable? Do you have a plan to ensure ongoing, timely, and sustainable performance improvements in all aspects of your utility operations? Does your operating plan minimize resource use, loss, and impacts from day-to-day operations? Is your utility aware of information and operational technology developments and can it anticipate and adopt improvements in a timely manner?

Financial Viability

Does your utility understand life-cycle cost? Has it established or does it maintain an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues? Are user rates adequate to recover costs, provide for reserves, and plan and invest for future needs? In addition, are user rates consistent with community expectations and acceptability?

Infrastructure Stability

Does the utility understand the condition of and costs associated with critical infrastructure assets? Does the utility's operating plan act to maintain and enhance the condition of all assets over the long-term? Is this maintenance performed at the lowest possible life-cycle cost and acceptable risks that are consistent with customer, community, and regulator-supported service levels? Is it consistent with anticipated growth and system reliability goals? Does the operating plan assure asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences?

Operational Resiliency

Does utility staff (both management and operations) work together to anticipate and avoid problems? Is staff proactive in identifying and assessing business risk? Is a full range of business risk (including legal, regulatory, financial, environmental, safety, security, and natural disaster-related) accounted for and have tolerance levels for these risks been established? Does staff effectively manage the full range of business risks in a proactive way consistent with industry trends and system reliability goals?

Community Sustainability

Does the utility fully understand and pay attention to the potential impacts its decisions have on current and long-term future community and watershed health and welfare? Does the utility consider a variety of pollution prevention, watershed, and source water protection approaches as part of an overall strategy to maintain and enhance ecological and community sustainability?

Are operations, infrastructure, and investments managed to:

- Protect, restore, and enhance the natural environment;
- Efficiently use water and energy resources;
- Promote economic vitality; and
- Stimulate overall community improvement.

Sustainable Infrastructure by Michael Grange

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Water Resource Adequacy

Has the utility performed long-term resource supply and demand analyses, conservation, and public education activities? Does the utility explicitly consider its role in water availability and does it manage operations to provide long-term aquifer and surface water sustainability and replenishment? Can the utility ensure water availability consistent with current and future customer needs?

Stakeholder Understanding and Support

Does the utility work to create understanding and support from oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions? Does the utility actively involve stakeholders in decisions that will affect them?

Conclusion

Water utilities are encouraged to look over this list of attributes and select one, two, or three areas where improvement is most needed or where it might easily be achieved. Starting on Page 10 of the Primer at www.watereum.org is a self-assessment module that individual utilities are encouraged to use to determine where they can start the improvement process. Improvement in any one of the Ten Attributes will be a positive step on the path to sustainable infrastructure. In addition, as improvements in one attribute are seen the utility will likely be encouraged to undertake other improvement projects and will thus embark on the journey of continual improvements that may lead not only to sustainable infrastructure, but to a sustainable utility.



Drinking Water Board Changes

Governor Huntsman has established a policy that board members of the various boards within state government serve no more than two terms. Consequently, when Chairman Anne Erickson and Vice Chairman Myron Bateman completed their second terms of office in May of this year, they were replaced with new board members. Governor Huntsman appointed: Betty Naylor to replace Anne Erickson and Terry Beebe to replace Myron Bateman. Betty Naylor represents the public-at-large and Terry Beebe represents the local health departments. Also, by state statute, the Executive Director of the Department of Environmental Quality serves on the Board. In a separate action, Governor Huntsman appointed Amanda Smith to the position of Executive Director for the Department of Environmental Quality.

Both Anne Erickson and Myron Bateman deserve the thanks for a job well done from the Drinking Water Board, the Division of Drinking Water and water system operators and managers. Through the years of their service they have authorized financial assistance to many water systems and promulgated state rules enabling Utah to maintain Primacy. They have also provided guidance and direction to the Division of Drinking Water staff on the implementation of the rules and programs of the State.

In addition to the new Board members, the Board at their April 23, 2009, meeting elected a new Chairman and Vice Chairman. The new Chairman is Paul Hansen, representing the engineering design community, and the new Vice Chairman is Ken Bassett, representing municipalities.

DRINKING WATER STATE REVOLVING FUND (SRF)

By Julie Cobleigh

The American Recovery and Reinvestment Act (ARRA) of 2009 was passed by US Congress on February 17, 2009. The Division of Drinking Water (Division) received \$19.5M to administer through their existing federal State Revolving Fund (SRF) financial assistance program, which offers low interest loans and grants to water systems for drinking water infrastructure projects. Typically, the federal SRF program receives roughly \$8M annually, which when combined with this year's ARRA funding and payments from existing loans equals a total of \$36 M of financial assistance available for drinking water infrastructure projects in Utah!

To prepare for the increase in funding, the Division sent out a letter to eligible water systems in November 2008, requesting information on potential projects to be considered. More than 100 requests were received from water systems for more than \$400 M in projects! The Division was tasked with an enormous responsibility of selecting projects to be funded, since clearly there were more projects than available funds.



Each project was given a priority rating based on criteria established by Division Rule, R309-705-6. Once a rating was determined, projects were placed in numeric order on a Project Priority List for funding.

The ARRA funding comes with numerous requirements new to the SRF program. Projects must be "shovel-ready" which simply means they must be ready to proceed to construction by February 17, 2010. The Division must reserve 50% of the funds to assist public water systems in the form of principal forgiveness, negative interest or grants. The Division must allocate 20% of the funds for projects that are considered "Green Infrastructure," such as water and energy efficiency projects. Other requirements include compliance with the Davis-Bacon Act and Buy American Act.

Taking into consideration the additional requirements of the ARRA funding, projects were selected not only based on their ranking on the PPL, but also on their ability to meet these new requirements. On April 23 and June 4, 2009 the Board authorized approximately \$36M for drinking water projects, that when combined with other funding sources, will build roughly \$80M worth of drinking water infrastructure in Utah.

Lead and Copper Rule Confusion

by Don Lore

Are you confused about the lead and copper rule?

This rule is different than most drinking water rules because the samples are taken from the distribution system (i.e. kitchen or bathroom taps) and not from the source as is the case with most water samples. The next level of confusion comes from the fact that multiple samples are required (from tier 1 homes) and not just one sample from the source. The other two requirements are just as confusing. The samples must be "first draw" meaning they are taken after the water has sat in the pipes six to eight hours and before any other water is used in the home. Also, annual and triennial samples must be taken during the warmest months of the year (i.e. June - September). Just to keep things less than simple, the number of samples required depends on the population of the water system (at least 5) and there are three sampling frequencies (6 months, yearly and every 3 years). Wow, what a rule!

I am sorry for any confusion caused by the lead and copper rule. Let's try to review this from the top.

First, each water system needs to identify sample sites in the water system. Tier 1 sites are homes with a lead service line or homes built between 1982 and 1986 with metal pipe. Tier 2 sites are multi-family homes with a lead service line or homes built between 1982 and 1986 with metal pipe. Tier 3 sites are single family homes built before 1982. The water system should document the way homes are chosen where samples will be taken with preference given to tier 1 homes and spread through the distribution system.

Next, to find the number of samples needed for sampling each year, or every three years, look at the following schedule:

- >100,000 population- 50 samples**
- 10,001 to 100,000 population- 30 samples**
- 3,301 to 10,000 population- 20 samples**
- 501 to 3,300 population- 10 samples**
- 101 to 500 population- 5 samples**
- 100 or less population- 5 samples**

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Backflow Technician Certification Fees to Increase

Backflow Technician Certification Program fees are scheduled to increase July 1st of 2009. The fee increase is needed to offset the operating and administration costs of the cross connection control certification program. The last fee change was July 2003 for the reason of increased administrative costs.

Documentation was submitted to the Legislature which approved the following changes:

Class I - Cross Connection Control Program Administrator : **\$160.00**

Class II - Backflow Assembler Tester : **\$200.00**

Written and or performance retest fees : **\$120.00**



These Backflow Technician certifications are for a three (3) year period. The correct fee shall be required for any certification testing being done after June 30, 2009. Training organizations have been notified of these changes. Please check the website:

<http://www.drinkingwater.utah.gov/> for details. Remember that it is under "For Backflow Technicians".

BACKFLOW TECHNICIAN CERTIFICATION / RECERTIFICATION COURSE Utah Schedule		
2009		
<p>Rural Water Association of Utah 76 East Red Pine Alpine, Utah 84004 Call: (801) 756-5123</p> <p>Register Online: www.rwau.net/training.html</p>	<p>Class II Tester Certification Class: Jan 12-16, 2009 UVU, Orem, UT Jul 13-17, 2009 Logan, UT Aug 31-Sep 4, 2009 Wellington, UT Sep 14-18, 2009 St George, UT Nov 16-20, 2009 Lehi, UT Dec 07-11, 2009 Ogden, UT</p> <p>Class I Administrator Certification: Feb 10-13, 2009 Lehi, UT Mar 10-13, 2009 Hill AFB, UT Jun 09-12, 2009 Syracuse, UT Oct 6-9, 2009 Ogden, UT</p>	<p>Class II Tester Re-certification Class: Jan 6-8, 2009 UVU, Orem, UT Jul 15-17, 2009 Logan, UT Aug 11-13, 2009 Lehi, UT Sep 2-4, 2009 Wellington, UT Sep 16-18, 2009 St George, UT Oct 14-16, 2009 Lehi, UT Dec 01-03, 2009 Lehi, UT Dec 9-11, 2009 Ogden, UT Dec 15-17, 2009 Syracuse, UT</p> <p>Class I Administrator Re-certification Feb 3-5, 2009 Lehi, UT Feb 25-27, 2009 St George, UT July 20-22, 2009 Logan, UT Aug 4 -6, 2009 Lehi, UT</p>
<p>Backflow Training Services 2071 West Byron Circle West Valley City UT 84119 Call: (801) 554-6052 E-mail: greg@backflowtrainingservices.com</p> <p>Location: Salt Lake Community College Miller Campus 9750 South 300 West Sandy UT</p>	<p>Class II Tester Certification Class: Mar 16-20, 2009 May 11-15, 2009 Aug 17-21, 2009 Dec 14-18, 2008</p> <p>Class I Administrator Certification: Mar 17-20, 2009 May 12-15, 2009 Aug 18-21, 2009 Dec 15-18, 2009</p>	<p>Class II Tester Re-certification Class: Mar 18-20, 2009 May 13-15, 2009 Aug 19-21, 2009 Dec 16-18, 2009</p> <p>Class I Administrator Re-certification Mar 18-20, 2009 May 12-15, 2009 Aug 19-21, 2009 Dec 16-18, 2009</p>

Lead and Copper Rule Confusion

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(If you need to take 6 month sampling, this means you are just starting lead and copper testing. You should call me at: 801-536-4204.)

Now we know where to sample and how many samples to take. When to sample is not to confusing, sample after the water has sat in the pipes six to eight hours and before any other water is used in the home. Okay, this really means that we ask the home owner to take the sample, from a bathroom or kitchen tap, usually first thing in the morning. Also, sampling each year, or every three years, must happen June to September, when it is warm outside. (If you need to take 6 month sampling, call me at: 801-536-4204.)

So, late spring, or early summer, we contact the lab and ask for the number of bottles we need. Then we take a bottle to each home on our sampling plan and ask them to take a "first draw" sample. We send the filled, and labeled, bottles back to the lab. When we get the results we write them down on a summary sheet from least to greatest and send this to the Utah Division of Drinking Water. For more information, contact Don at dlore@utah.gov or by phone at 801-536-4204.

New Staff at the Division

Jesse Johnson

Jesse began working for the Division of Drinking Water in October, 2008. His responsibilities include work in the State Revolving Fund (SRF) and State and Tribal Assistance Grant (STAG) programs, plan reviews and sanitary surveys. He graduated from Utah State University with a Bachelors degree in Biological Engineering. His previous work experience came at WesTech Engineering, where he was a project manager / applications engineer and worked on design, construction and start-up of filter systems. construction and start-up of filter systems.

He and his wife are parents of three children, who keep them on their toes. He also serves as a Scoutmaster in his neighborhood. When he has spare time, he enjoys playing basketball, golfing and skiing.

Gary Kobzeff

Gary joined the Division of Drinking Water in September of 2008. Before the Division he lived in California where he was born and raised. He graduated from California State University Northridge in 2003 with a BS in Civil Engineering. Following graduation he worked for land a development company for four years. That experience led him to acquire his Professional Engineer's License.

He works in the Construction Assistance Section for the Division, evaluating applications for the Federal and State Revolving Fund. He also review plans for water system improvements. He enjoys working for the State of Utah. He says, "it gives me a sense satisfaction that I'm contributing to the health and safety of the public."

His favorite hobby is enjoying life.

Steve Brenchley

Steve Brenchley, PE, has over 11 years of engineering and project management experience working as a consultant engineer for two firms in the Salt Lake valley. He has worked as a project manager and engineer on sanitary sewer, storm drain, culinary water and secondary water master plans for master planned communities in Salt Lake, Wasatch and Tooele Counties. These communities have included over 11,300 acres and 14,700 residential, commercial and mixed use units. Work has included the design of pressurized water lines up to 30-inches, sanitary sewer collection lines, drainage facilities including major outfalls and detention basins, and roads. Steve is also experienced in the design and regulatory control of earthen reservoirs. He has worked on agricultural and urban irrigation distribution system and reservoir projects. Design work has included pump stations, reservoirs and major trunk line distribution systems.

Steve graduated from Utah State University in 1996 with a Bachelors degree in Environmental Engineering and in 1998 with a Masters degree in Civil Engineering (Hydraulics). He enjoys spending time with his family hiking, camping, skiing and motorcycle riding.

Nagendra Dev

Nagendra originally joined the Division of Drinking Water August 6, 2007, as an Environmental Engineer. He left for a brief period and now is back with the Division. He is originally from Nepal - the country of highest peak Mt. Everest and Himalayan Range.

His educational and working experience background started from his home country Nepal and ended up in the U.S. via Belgium. He received his Bachelor's Degree in Civil Engineering from Nepal in 1995. He worked in the Ministry of Water Resources as a Civil Engineer emphasizing on irrigation projects and water supply and sanitation schemes for various districts of my home land.

Nagendra Dev- Continued from page 21

After some time for around six years, he got a fellowship to prosecute his Master’s Degree in Water Resources in Belgium in 2001. Immediately after graduating, he got the chance to work for a while in Hydrologic and Hydraulic Modeling for a water resources project. Nagendra then started further graduate studies at the University of Utah emphasizing in the field of Environmental and Water Resources Engineering. He has worked with local consultants including Synergy, where he performed works in Land Development focusing on hydraulic modeling, drainage design, water distribution systems and surveying.

His job at Drinking Water is under the Engineering Section where he shall be assigned to work as a project engineer. His job will include plan reviews, operating permits, and being cordially incorporated with the rest of the related concerned colleagues and seniors. His ultimate goal at Drinking Water is the same as the rest of the members—“Maintain superior drinking water quality based upon water demands, complying Laws and Rules of DDW.”

Nagendra is a family oriented person and likes to spend much time with his family. He is a person who believes that “work is worship” and he has always given top priority to accomplish the assigned work successfully. His hobbies include traveling, spending time with friends and most importantly, he likes to increase his knowledge in fields where he doesn’t have expertise.

Attached form the will need to be filled out for SB81 — Article on page 10

Utah Department of Environmental Quality
Certification Pursuant to UCA 63G-11-104

I, _____, hereby certify under penalty of perjury that I am:

a United States citizen, copy of photo ID attached (driver’s license, passport, or similar),

Or
a qualified alien as defined in 8 USC, Sec. 1641, and lawfully present in the United States. Alien ID No. _____.

Dated this _____ day of _____, 20____.

Applicant’s Name _____

Address _____

Applicant’s Signature _____

PHOTO ID
(Attach here or on a separate sheet)

NOTARY PUBLIC
My commission expires: _____

SUBSCRIBED AND SWORN to before me this _____ day of _____, 20____.

2008 Operator Renewals

A total of 518 water operator certificates were renewed in 2008. According to the State of Utah Operator Certification Rules, "An operator may renew a certificate by showing evidence of required training and by payment of a renewal fee." An operator who fails to renew the certificate is listed as inactive in the Utah operator certification database.

The operators listed below submitted a renewal application and fee, and successfully completed the required water-related training. The certificates will be valid until December 31, 2011. The Rules state that these operators must again earn a sufficient number of CEUs in the three-year period January 1, 2009, to December 31, 2011, in order to be eligible for renewal again in 2011.

Operator Name	Certificate Number	Water System	Type of Certificate
Abel, Roy	25528	Marble Hill Water Company	D-S
Adamson, Charles S.	00467	Salt Lake City Corporation	T-IV
Adkins, Marlowe C.	22100	Richmond City	D-II
Aitken, Robert J.	22101	Central Utah Water Conservancy District	T-IV
Aldridge, David M.	99500	Midvalley Estates Water Company	D-I
Allen, Bevan H.	92100	Holliday Water Company	T-IV
Allen, Chris J.	99184	Ashley Valley Water and Sewer ID	D-IV
Allen, Daniel	25038	South Jordan City	D-IV
Allinson, Matt	22501	Saratoga Springs City	D-IV
Allred, Clayton R.	22502	Jordanelle Special Service District	T-IV
Allred, Darrell Andy	99501	Rocky Ridge Town	D-III
Allred, Terry A.	22503	Rocky Ridge Town	D-II
Andersen, Arthur W.R.	23009	Alton Town	D-S
Anderson, Blake B.	20066	West Bountiful City	D-IV
Anderson, Blake R.	87760	Kearns Improvement District	T-IV
Anderson, Floyd	25529	Water Specialist	D-S
Anderson, Lance B.	25002	KWU Inc	D-S
Arnold, Michael S.	84002	Sandy City	D-IV
Astill, Danny J.	96500	Murray City	D-IV
Austill, Kevin Red	96100	American Fork City	D-III
Backman, Gus P.	92103	Salt Lake City Corporation	D-IV
Backman, Ronald E.	88501	Centerville City	D-IV
Bair, Robert M.	22104	Richmond City	D-II
Baker, James L.	93011	Energy West Mining Company	T-II
Banks, Marvin J.	93501	Spanish Fork City	D-III
Barnes, Brian S.	99102	Taylorsville-Bennion Improvement District	D-IV
Barnes, Dennis G.	86673	Santaquin City	D-III
Barnes, E. Lee	87745	Lehi City	D-IV
Barnett, Tim S.	96101	Bountiful City	T-IV
Barr, Steve L.	25530	Cedar City	D-IV
Baum, Russell J.	86578	Granger-Hunter Improvement District	D-IV
Baxter, Paul K.	22105	ATK Thiokol	D-IV
Beagley, Stephen B.	25004	Hinckley Town	D-I
Beck, Steve M.	90502	Jordan Valley Water Conservancy District	D-IV
Belliston, Troy	99105	Granger-Hunter Improvement District	D-IV
Belnap, Scott A.	90103	Garland City	D-II
Bennett, Shane D.	93103	Saratoga Springs City	D-I
Beratto, David H.	94505	Jordan Valley Water Conservancy District	D-IV
Bevins, Michael J.	93504	Water Specialist	T-II
Bird, M. Scott	99107	Mapleton City	D-III
Black, Cody J.	25531	Hyrum City	D-II
Black, R. Bruce	96502	Pleasant Grove City	D-III
Blair, Mark H.	93505	Lewiston City	D-II
Blonquist, Brody B.	22003	Pine Meadow Mutual Water	D-I
Blymiller, Rick R.	24502	Taylorsville-Bennion Improvement District	D-IV
Bohn, Patrick C.	86054	Salt Lake City Corporation	T-IV
Boshard, David J.	93506	North Fork Special Service District	D-IV, T-IV
Bowen, Ronald L.	25007	Oakley Town	D-I
Bowler, Scott L.	99108	St George City	D-IV
Bowlin, Tony L.	23015	S&W Trailer Court	D-S
Brimhall, Richard J.	87721	Water Specialist	D-IV
Brinkerhoff, Eric R.	25042	Water Pro	D-IV
Brinkerhoff, Kirk S.	25043	Layton City	D-IV

Brown, Albert E.	99111	Metropolitan Water District of SL & Sandy	D-I
Brown, Arthur Rodney	22005	Elk Meadows Special Service District	D-I
Brown, Harlow F.	22006	Koosharem Town	D-S
Brown, Harold M.	95106	Salt Lake City Corporation	T-IV
Bryner, Ross L.	90505	Price River Water Improvement District	D-IV
Buck, Albert K.	88765	Tooele City	D-IV
Buckley, Kelly L.	25532	Metropolitan Water District of SL & Sandy	T-IV
Budge, Jeffrey D.	95506	Water Specialist	T-IV
Burr, Ron R.	23010	Marysville Town	D-S
Burringo, Richard R.	23014	S&W Trailer Court	D-S
Burt, David E.	99508	Canyonlands National Park, Needles	T-I
Busch, Chad D.	22110	Metropolitan Water District of SL & Sandy	T-IV
Cain, Barry H.	91105	Ashley National Forest	D-II, T-III
Callaway, Jason P.	25046	Santaquin City	D-III
Callison, Jim	96105	Water Specialist	T-IV
Callister, Brian J.	97504	Jordan Valley Water Conservancy District	D-IV
Cameron, Max J.	87766	Payson City	D-III
Carlson, Brian W.	99113	Fruit Heights City	D-IV
Carney, Charles L.	96106	Washington County WCD	T-II
Carroll, Garn E.	87810	Bountiful City	D-III, T-IV
Carter, Barry K.	92106	Water Specialist	T-IV
Carter, Chris B.	89503	Provo City	D-IV
Carver, Kimberley	25534	Metropolitan Water District of SL & Sandy	T-IV
Cattelan, Frank	84223	Echo Mutual Water Company	D-I
Chalk, Mark E.	24504	Taylorville-Bennion Improvement District	D-IV
Chamberlain, Steven M.	25500	Glendale Town	D-S
Chappel, James M.	97507	Spanish Fork City	D-IV
Chatwin, Maurice C.	88811	Heber City	T-II
Cheney, Dale S.	22111	Summit Water Distribution Company	D-IV, T-IV
Chesnut, Scott	22008	Torrey Town	D-S
Childers, Henry F.	85003	Washington County Water Conservancy District	D-IV
Childs, Donald R.	84225	Gunnison City	D-III
Christen, Ron S.	90106	Provo City	D-II
Christensen, David A.	25009	Fishlake Nat'l Forest, Gooseberry Guard Station	D-S
Christiansen, S. Scott	84005	Hooper Water Improvement District	D-IV
Clark, Bradley Shane	24505	Washington County Water Conservancy District	D-II
Clark, Dan L.	00536	Salt Lake City Corporation	T-IV
Clark, Mark H.	90107	Weber Basin Water Conservancy District	D-I
Clayburn, Scott H.	85015	Park City	D-III, T-IV
Clements, Christopher M.	22113	Orem City	D-IV
Coburn, Terry R.	84325	Layton City	D-IV
Cook, Jerry G.	22042	Five C's Mobile Home Park	D-S
Cossey, Val E.	89109	Jordan Valley Water Conservancy District	D-IV
Covey, Max L.	99509	Jordanelle Special Service District	T-IV
Covington, Robert L.	25011	American Pacific Corporation	D-S
Crane, Kevin R.	25047	Jordan Valley Water Conservancy District	D-IV
Crawford, Jon M.	21509	Kearns Improvement District	D-IV
Creamer, J. Lynn	84443	Nordic Mountain Water	D-I
Crump, Danny R.	95108	Riverton City	D-IV
Cummings, Ross J.	84335	Fillmore City	D-III
Dalton, Matthew C.	25048	Lehi City	D-II
Davis, Hal	92109	Ogden City	D-IV
Davis, Larry Mike	90507	Vernal City	D-IV
Davis, Michael L.	22562	Canyon Fuel Company	D-S
Davis, Stewart J.	99117	West Bountiful City	D-IV
Davis, Thomas D.	25049	Portage Town	D-S
Dawdy, Timothy L.	20081	Hill Air Force Base	D-IV
Dawson, Ron C.	98114	Taylorville-Bennion Improvement District	D-IV
Decker, David K.	99511	Draper City	D-IV
Decker, Joe H.	93511	Zion Canyon Water System	D-II
Defa, Jody J.	98115	Timber Lakes Water	D-IV, T-III
deJong, Frank	99118	Kearns Improvement District	D-IV
Dennis, Patrick P.	94514	Water Pro	T-IV
Desmarais, Jason P.	22115	Sandy City	D-II
Devey, Daryl L.	87804	Central Utah Water Conservancy District	D-IV
DeVries, Michael J.	98511	Metropolitan Water District of SL & Sandy	D-IV
Deware, Allan W.	99512	Erda Acres Water Company	D-I

DiLello, Anna	98116	Sandy City	D-IV
Dodson, Eric	25501	Water Specialist	T-IV
Doolan, Timothy E.	88098	Ogden City	D-IV
Dotson, Timothy M.	24545	St George City	D-IV
Douglas, Shane W.	95110	South Ogden City	D-IV
Doyle, Jason J.	22117	Kennecott Utah Copper	D-I
Drummond, Brad L.	98118	St George City	D-IV
Duncan, Neil K.	99513	Water Specialist	D-IV
Dunn, Dorene R.	99564	Clearfield City	D-I
Durrant, Gary C.	00640	Metropolitan Water District of SL & Sandy	T-IV
Eddy, Louis K.	00260	Weber Basin Water Conservancy District	D-IV
Eggett, Brett K.	91110	Bountiful City	T-IV
Elliott, Lynn R.	22181	Eureka City	D-I
Elmer, Jeffrey F.	99120	Roy City	D-IV
Emerson, Rocky G.	96112	Sandy City	D-IV
Engleman, Philip J.	93111	Bureau of Land Management	D-II, T-IV
Espinoza, Todd N.	99121	Ogden City	D-IV
Estrada, James K.	25052	Jordan Valley Water Conservancy District	D-IV
Eva, Wade A.	25053	Santaquin City	D-III
Evans, Stephen C.	22510	Salt Lake City Corporation	D-IV
Eyre, Jon F.	88511	Salt Lake City Corporation	T-IV
Famuliner, Larry L.	21117	Farmington City	D-IV
Farnsworth, Bruce A., Jr.	94517	Orem City	D-IV
Farrer, Nathan L.	25537	Granger-Hunter Improvement District	D-IV
Favero, Adam D.	25054	West Point City	D-IV
Fenn, Kevin W.	87724	Taylorville-Bennion Improvement District	D-IV, T-IV
Fisher, Lance R.	98120	Taylorville-Bennion Improvement District	D-IV
Fleming, Daniel A.	84238	Blanding City	D-IV, T-IV
Flores, Richard J.	20086	Salt Lake City Corporation	T-IV
Folkman, Lee G.	00254	Weber Basin Water Conservancy District	D-IV, T-III
Folkman, Mike S.	21517	Summit Water Distribution Company	T-IV
Fox, Matthew J.	23095	Bona Vista Water Improvement District	D-IV
Foy, Jack R.	22511	Canyonlands National Park, Island	D-I
Freeman, William L.	24014	Wendover City	T-II
Fritz, Ken J.	86664	Metropolitan Water District of SL & Sandy	D-IV, T-IV
Fulgham, Paul C.	88129	Tremonton City	D-IV
Fuller, David W.	22118	Summit Water Distribution Company	D-IV, T-IV
Fulton, Stephen C.	99518	Roy City	D-IV
Gale, Troy A.	96114	Questar Pipeline, Clay Basin Camp	T-I
Gallegos, Michael R.	99519	Ogden City	D-IV
Garbett, Fred L.	25511	Eureka City	D-S
Gardiner, Bruce A.	22011	New Harmony Town	D-S
Gardner, David A.	00466	Water Pro	T-IV
Garrison, Raymond H.	22559	South Jordan City	D-IV
Gee, Martha J.	89130	Mountain Regional Water SSD	D-III
Gines, Rick G.	21124	Mountain Regional Water SSD	T-II
Glenn, David L.	00641	Ivins City	D-IV, T-IV
Gonzales, Clarence L.	93007	US Magnesium LLC	D-I, D-II, T-III
Goodell, John E.	25015	Best Friends Animal Sanctuary Society	D-S
Goodrich, Jerry W.	84246	Tridell LaPoint Water Improvement District	D-III, T-III
Goodwin, Bret	21521	Metropolitan Water District of SL & Sandy	D-IV
Grace, Bryan S.	22012	Spanish Fork City	D-II
Grace, Cody J.	97124	Provo City	D-IV
Grammer, Brad C.	99522	Central Utah Water Conservancy District, Ashley	T-IV
Gray, Lane D.	90113	Orem City	D-IV
Green, Daniel H.	22123	Fruit Heights City	D-II
Green, Duane C.	88120	Riverton City	D-IV
Green, Michael E.	93517	Pleasant Grove City	D-III
Griffiths, Derek M.	25085	Milford City	D-II
Grimsdell, Jeffrey L.	92119	Salt Lake City Corporation	D-IV
Grover, Kevin L.	96119	Tooele City	D-II
Grundy, Stanley R.	99523	Jordan Valley Water Conservancy District	D-IV
Guard, Troy T.	99127	St George City	D-IV
Gubler, Douglas	93519	LaVerkin City	D-III
Gunderson, Jared D.	98123	Water Specialist	D-IV
Haas, Merrill A.	93521	Orem City	D-IV
Hackwell, Gary J.	92507	Ogden City	D-IV

Haile, Jeffrey L.	21524	St George City	D-IV
Hall, Gary M.	98514	Kanab City	D-III
Hans, Paul D.	99524	Springdale Town	T-I
Hansen, Anne K.	25512	South Jordan City	D-IV
Hansen, Douglas A.	92508	Holliday Water Company	T-IV
Hansen, Edwin J.	84253	Magna Water Company	D-IV
Hansen, Garrett L.	91115	Castle Valley Special Service District	D-III
Hansen, Loay R.	96121	Logan City	D-II
Hanson, Keith J.	89510	Salt Lake County Service Area #3	T-IV
Harris, Jordan K.	22126	Eagle Mountain City	T-II
Harwood, Gary R.	84254	Helper City	D-III
Haslam, John S.	90117	Salt Lake City Corporation	T-IV
Hatch, David L.	84043	Ashley Valley Water & Sewer ID	D-IV, T-IV
Hatch, Ray M.	99132	Centerville City	D-I
Hatch, Roger K.	00354	Central Utah Water Conservancy District	D-III
Hawkinson, Larry E.	99526	Green River City	T-III
Hebert, Michael B.J.	25538	Kennecott Utah Copper	D-I
Herbert, Lorin K.	23104	Ogden City	D-IV
Hilbert, Jeff R.	84212	Jordan Valley Water Conservancy District	D-IV
Hilbert, Richard W.	86213	Park City	T-II
Hill, Tracy L.	99134	Provo City	D-IV
Hills, Kim	00190	Salt Lake City Corporation	T-III
Hindes, Robert W.	99135	Clearfield City	D-III
Hodson, Keith D.	95120	Clearfield City	D-III
Hodson, Paul A.	00148	Bona Vista Water Improvement District	D-IV
Hoff, Marvin T.	22128	Kennecott Utah Copper	D-I
Hogan, Donald B.	25017	South Rim Water	D-S
Hogan, John P.	25001	Hi-Lo Estates, Kanosh Town	D-II
Hogan, Matthew C.	25018	South Rim Water	D-S
Holt, Wayne D.	22015	Venice Ward Church	D-S
House, Brian R.	93143	Bear Lake State Park	D-I, T-I
Howard, Matthew L.	99528	Roy City	D-IV
Hoyt, Jeffrey H.	98518	Kane County Water Conservancy District	T-I
Huggard, Don A.	84339	Midway City	D-III
Huish, Joe P.	25057	Central Utah Water Conservancy District	T-IV
Hunsaker, Kellie L.	22189	Salt Lake County Service Area #3	T-II
Hunting, Terrill	89117	Central Utah Water Conservancy District, Ashley	D-IV, T-IV
Huntington, Royal Mack	84259	Castle Valley Special Service District	D-IV
Hutcheon, A. Jack	98127	Taylorville-Bennion Improvement District	D-IV
Hutchings, Larry	86684	Hurricane City	D-III
Ipson, Blaine	23016	Country Estates	D-S
Israelsen, Harold Jay	00405	Water Specialist	T-IV
Iverson, Kelby B.	23164	Diamond Ranch Academy	T-II
Jackson, Jared C.	25516	Simplot Phosphates LLC	D-S
James, William K.	22519	Jordan Valley Water Conservancy District	T-IV
Jeffries, Jonathan L.	24113	Metropolitan Water District of SL & Sandy	D-IV
Jeffer, Charles E.	00535	Water Specialist	D-IV, T-IV
Jensen, Jonathan P.	99139	Ogden City	D-IV
Jensen, Raymond L.	25020	Brooklyn Tapline Company	D-S
Jensen, Stewart A.	25058	Centerfield City	D-II
Jerominski, Paul E.	99141	Park City	T-IV
Jessen, Dallan J.	99530	Harmony Heights Water Company	D-I
Jessen, Darrow H.	99531	Harmony Heights Water Company	D-S
Jessop, Dan O.	96129	Kaysville City	D-IV
Jessop, Loyd Y.	97134	Washington County Water Conservancy District	D-II
Johnson, John L.	94525	Canyonlands National Park	T-II
Johnson, Russell K.	22191	Geneva Rock Products	D-S
Johnson, Ryan R.	24021	White City Water Improvement District	D-IV
Jolley, Richard K.	25021	Maeser Water Improvement District	D-I
Jones, Brad L.	99142	Logan City	D-IV
Jones, Stephen C.	99143	Orem City	D-IV
Jones, Tim L.	22212	St George City	D-IV
Jones, Zane T.	94136	Cedar City	D-IV
Jorgensen, Theodore S.	23006	Silver Lake Company	D-S
Judd, Daren W.	22213	St George City	D-IV
Kende, Albert S.	98128	Summit Water Distribution Company	D-IV
Kennard, Matthew M.	22135	Heber City	D-III

Kennedy, Ronald E.	00470	Castle Valley Special Service District	D-IV, T-IV
Kertamus, Ramon Joel	84016	Grantsville City	D-III
Kesler, Larry D.	94528	South Jordan City	T-I
Kimball, Richard J.	00007	Metropolitan Water District of SL & Sandy	D-IV
Knop, Michael E.	86677	Castle Valley Special Service District	D-IV
Kofford, Danny T.	00638	Price River Water Improvement District	D-IV
Kohler, Ronnie J.	97142	Timber Lakes Water SSD	T-IV
Kopfman, William R.	92131	Hill Air Force Base	D-IV, T-IV
Krajnyak, Andrew J.	21536	Price River Water Improvement District	T-IV
Lance, Jeffrey C.	22017	St George City	D-IV
Larkin, Brent S.	25022	St George City	D-IV
Larkins, Howard J.	92132	Layton City	D-IV
Larsen, Dean L.	97144	Uinta National Forest	D-III
Larsen, Max L.	87712	Gooseberry Guard Station	D-I
Lawson, John S.	96519	Kearns Improvement District	T-IV
Leatham, George B.	93528	Saratoga Springs City	D-IV
Leaver, Bob	22177	South Monroe Culinary Water	D-S
Leslie, Darrell	22019	Lakeside Range	D-S
Linford, Kirt J.	20531	Ogden City	D-IV
Lister, Nathan	25540	Vernal City	D-IV
Lofley, Blane D.	89120	Castle Valley Special Service District	T-III
Lofley, Keith	89121	Castle Valley Special Service District	D-III
Lovato, Sam D.	94144	Centerville City	D-II
Love, Sullivan	90122	Orem City	D-IV
Loveland, Bruce L.	22522	Granger-Hunter Improvement District	D-IV
Mabey, Brad G.	25059	Jordan Valley Water Conservancy District	T-IV
MacArthur, Kyle P.	24521	Park City	T-IV
MacFarlane, Ferris A.	23012	Riverside-North Garland Water Company	D-I
MacIntosh, Wayne S.	24063	St George City	D-IV
Manglona, PedroJose A.	21043	Hill Air Force Base	D-II
Martin, Van J.	88845	Summit Water Distribution Company	D-IV
Mason, George R.	99538	Cross Hollow Hills Subdivision	D-S
Massey, Flayne	90143	Jensen Water Improvement District	D-II
Matheson, Jeffery E.	99539	Metropolitan Water District of SL & Sandy	T-IV
Mathis, Rex B.	99148	Central Utah Water Conservancy District	D-IV
Matthews, Kipp M.	00760	Sandy City	D-IV
McClellan, Clark L.	98524	Central Utah Water Conservancy District	D-IV, T-IV
McDonald, Nick J.	25560	Jordan Valley Water Conservancy District	T-IV
McEown, Jayne S.	25060	Fishlake National Forest	D-S
McNeely, Troy L.	22022	Honeyville City	D-II
Meadows, Bryan K.	22198	Green River City	D-I, T-III
Memmott, Mark L.	25558	Pine Mountain Mutual Water Company	D-S
Meron, Julienne M.	25505	Rainbow Ranchos Water Company	D-S
Meyerhoffer, Chad L.	25061	Weber County Memorial Park	D-S
Middlemas, Robert K.	25519	Utah State Parks	D-S
Millard, Bart C.	22200	East Zion Special Service District	D-I
Miller, Alan W.	93122	Water Specialist	D-IV
Miller, Geoffrey A.	25520	Utah State University	D-IV
Miller, Hal R.	22214	Metropolitan Water District of SL & Sandy	D-IV, T-IV
Miller, John Bryant	84277	Herriman City	D-II
Miller, Marinda M.	25559	Granger-Hunter Improvement District	D-IV
Miller, Michael D.	87825	Salt Lake City Corporation	T-IV
Miller, Robert W.	24525	St George City	D-IV
Mills, Mathew	22179	South Monroe Culinary	D-S
Mills, Mike	22178	South Monroe Culinary	D-S
Mitchell, Duane C.	92137	Metropolitan Water District of SL & Sandy	D-IV
Mitchell, Kenneth G.	99151	Park City	D-IV
Mitchell, Ronald	99152	Central Utah Water Conservancy District	D-IV
Monroe, Jason D.	25521	Clinton City	D-III
Montes, Gerardo M.	99546	Ogden City	D-IV, T-IV
Montoya, Orlando R.	25544	Metropolitan Water District of SL & Sandy	D-I
Morris, Kendall A.	25025	Acme Water Company	D-I
Morzelewski, David	88111	Bountiful City	T-IV
Mouritsen, Dustin C.	98145	Santa Clara City	D-IV
Muhlestein, Shyloh M.	20118	Lehi City	D-IV
Murphy, Terry A.	25522	Green Hills Country Estates Water & Sewer	D-I
Myers, Kurt R.	92512	Central Utah Water Conservancy District	T-IV

Naranjo, Michael J.	99154	Layton City	D-IV
Nelson, Brad D.	25545	Weber Basin Water Conservancy District	T-IV
Nelson, Clayton J.	22142	River Heights City	D-III
Nelson, Eddie G.	22528	Kennecott Utah Copper	D-I
Nelson, Paul W.	92514	Perry City	D-II
Nelson, Robb D.	84043	Orem City	D-IV
Nicholas, Kelly T.	25546	Corinne City	D-I
Nielsen, Corey W.	99156	Hyrum City	D-III
Nielsen, Dennis M.	97151	Taylorville-Bennion Improvement District	D-IV
Nielson, Jerry O.	93123	Water Pro	D-IV
Norton, Grant D.	22144	Sandy City	D-IV
Nylander, Jerry A.	93124	Weber Basin Water Conservancy District	T-IV
Ochoa, Joseph A.	25548	Enoch City	D-III
Ohler, Brian R.	93532	Deseret Power	T-IV
Olson, James G.	25064	Metropolitan Water District of SL & Sandy	T-IV
Orchard, Theo R.	87735	Orem City	D-IV, T-IV
Ovard, Brent G.	22560	Henefer Town	D-I
Pace, Danny A.	25065	Wolf Creek Ranch and Jordanelle SSD	D-II
Paddock, Shane D.	92167	Jordanelle Special Service District	T-IV
Palmer, Marty Lynn	22145	Nephi City	D-III
Parker, R. Kent	95138	River Heights City	D-II
Paxman, Scott W.	93535	Weber Basin Water Conservancy District	T-IV
Pedersen, Rex M., Jr.	99162	Jordanelle Special Service District	D-III
Petersen, Ben L.	99164	Orem City	D-IV
Peterson, Thomas D.	21547	Ogden City	D-IV
Phan, An	87568	Salt Lake City Corporation	T-IV
Pitcher, David O.	93127	Central Utah Water Conservancy District	T-IV
Pollock, James G.	25028	Washington City	D-IV
Potts, Dennis A.	84587	Salt Lake City Corporation	T-IV
Preece, Abby Jo	99553	Weber Basin Water Conservancy District	D-IV
Prince, Robert L.	86635	Ogden City	D-IV
Pugsley, David R.	25523	ATK Thiokol	D-II
Pugsley, Tyler D.	96145	Brigham City	D-III
Pyne, Roger Lynn	93537	Orem City	D-IV
Quinn, Raymond L.	23540	North Emery Water Users SSD	T-II
Quitter, Jim E.	25029	Fremont Indian State Park	D-S
Raber, Robert W.	00647	Salt Lake City Corporation	D-IV
Rasmussen, Neil J.	25067	South Jordan City	D-IV
Reid, Travis J.	22534	Spanish Fork City	D-II
Reynolds, Casey J.	99555	Rocky Ridge Town	D-I
Rhodes, Barry V.	22202	Zion National Park, Sinawava	D-II
Richardson, Billy J.	22219	Eastland Special Service District	D-S
Richins, Jedediah K.	22216	Washington City	D-IV
Richins, Ken	96529	Hurricane City	D-IV
Ricketts, Scott R.	95143	Washington Terrace City	D-II
Riding, Alan K.	87749	Delta City	D-IV
Rino, Eugene A.	25069	Whispering Pines Water Company	D-S
Robbins, Brett F.	24084	Water Pro	T-IV
Roberts, John W.	99557	Water Specialist	D-II
Roberts, Wendle J.	25549	Wales Town	D-S
Robertson, Jeremy C.	22536	Riverton City	D-IV
Robinson, Gerri L.	95144	Ogden City	D-II
Robinson, Keith	84706	Kanab City	D-III
Roosendaal, Neil C.	22203	Swiss Alpine Water Company	D-S
Roth, David B.	22149	Metropolitan Water District of SL & Sandy	T-I
Roybal, Shelly S.	22204	Gorgoza Mutual Water Company	D-I
Rueckert, Jonathan A.	25551	North Salt Lake City	D-IV
Sabey, James E.	97180	Wasatch County	T-II
Sabey, Rick C.	93129	Wallsburg Town	D-IV
Sabuco, Francisco C.	00656	Metropolitan Water District of SL & Sandy	D-IV
Sadler, Dennis W.	20545	Mountain Regional Water SSD	D-IV
Sanchez, Ruben E.	22150	Kearns Improvement District	D-IV, T-II
Santistevan, Chris A.	96148	Riverton City	D-IV
Schnoor, Steven J.	22539	Kennecott Utah Copper	D-I
Scofield, Rusty	22152	Tremonton City	D-III
Scow, Gary W.	84029	Price River Water Improvement District	D-IV
Searcy, Dale K.	84297	Roy City	D-IV

Shafer, Robert D.	89133	South Ogden City	D-IV
Shaw, Cary D.	00723	Jordan Valley Water Conservancy District	D-IV
Shiner, Terry C.	90150	Vernal City	D-I
Shoop, Chris W.	22540	Buena Vista Community	D-I
Siddoway, Gary N.	22541	Kamas City	D-II
Simons, Bart	84061	Provo City	D-IV
Sims, Scott C.	22542	South Salt Lake City	D-II
Slack, Randy J.	97165	LaVerkin City	D-IV
Slade, Karl R.	98534	Taylorsville-Bennion Improvement District	D-IV
Slaugh, Wesley S.	25071	Dutch John	D-S, T-I
Smith, Gordon L.	90132	Metropolitan Water District of SL & Sandy	D-II
Smith, Lonnie M.	99170	Layton City	D-IV
Snook, Kenneth H.	00561	Price River Water Improvement District	T-IV
Snow, Troy J.	25073	Pleasant Grove City	D-IV
Solomon, Phillip T.	90134	St George City	D-IV, T-III
Sovine, Mark K.	25074	Grand Water & Sewer Service Agency	D-III
Spackman, David A.	87740	Jordan Valley Water Conservancy District	T-IV
Spencer, John B.	25032	Simplot Phosphates LLC	D-S
Spens, Paul J.	23134	Weber Basin Water Conservancy District	D-IV
Slagowski, Mark E.	84300	Bountiful City	D-IV
Stahler, Steven E.	99171	Syracuse City	D-IV
Stearns, Edward V.	23013	S&W Trailer Court	D-S
Stearns, Valentine E.	22545	S&W Trailer Court	D-S
Steed, Joshua D.	22155	Layton City	D-IV
Stewart, Rickey L.	25075	Roosevelt City	D-IV
Stock, Ronald A.	98155	Taylorsville-Bennion Improvement District	D-IV
Stokes, Brandon P.	22156	Park City	D-IV, T-IV
Stokes, Danny J.	88110	Roy City	D-IV
Stoneman, Don R.	95540	Spanish Fork City	D-II
Stout, Sam	22033	Boulder Excavating Company	D-I
Strickland, Fred A.	22547	Metropolitan Water District of SL & Sandy	T-IV
Stringham, Daniel D.	93547	Laketown City	D-I
Sulser, Kirk L.	99173	Timberlakes Water SSD	D-III
Sulser, Lynn J.	96152	Jordanelle Special Service District	D-IV
Sundberg, Marlin K.	92154	Holliday Water Company	D-IV, T-IV
Surrage, Val	25076	Taylor-West Weber Water District	D-II
Swasey, Daniel K.	25077	East Duchesne Culinary WID	D-II
Sweeney, Timothy J.	22157	Bureau of Land Management, Green River District	D-S
Tabish, Robert J.	95541	Sandy City	D-IV
Tabor, Robert W.	25078	Dugway Water Systems	D-II
Taylor, Marvin R.	84377	South Salt Lake City	D-IV
Terrell, Linson C.	97168	Kearns Improvement District	D-IV
Thackeray, Alan R.	99175	Jordan Valley Water Conservancy District	D-IV
Thanasilp, Savidtri	22550	Jordan Valley Water Conservancy District	T-IV
Thayn, Randy R.	99176	Deer Creek Mine	T-II
Tietje, Matthew	98539	Metropolitan Water District of SL & Sandy	D-IV
Tingey, Jeffrey S.	87641	Water Specialist	D-III
Tom, Pat	24538	Metropolitan Water District of SL & Sandy	D-IV
Toomer, Casey L.	25079	Castle Valley Special Service District	T-III
Totten, Robert S.	25552	Springdale Town	T-II
Trimble, Johnny D.	86609	Jordan Valley Water Conservancy District	D-IV, T-IV
Turpin, Ryan P.	25033	Mountain Springs Water Company	D-I
Twitchell, Kenneth C.	92157	Salt Lake City Corporation	D-IV
Udvary, George Jr.	25080	Spruce Culinary Wtr Co, Kolob Mtn Ranch Wtr Co	D-S
Vail, Gary L.	24078	Ogden City	D-IV
Vandemerwe, Jed	25081	Sandy City	D-IV
Vest, Russell R.	88145	Springville City	D-IV
Vigil, Anthony R.	22551	Kennecott Utah Copper	D-I
Voss, Larry D.	22037	UTTR Lakeside Range	D-S
Wageman, Bryan G.	22171	South Weber City	D-II
Walker, Rhett D.	25553	Herriman City	D-IV
Walton, Randal M.	22554	Central Utah Water Conservancy District	T-IV
Wanlass, Rodney K.	23073	Monroe City	T-II
Warner, William Alan	99180	Jordan Valley Water Conservancy District	D-IV
Welder, Paulette D.	99569	Ashley National Forest	T-I
Wells, Cory L.	92160	Murray City	D-IV

Wheeler, Claudia M.	94103	Metropolitan Water District of SL & Sandy	D-IV
White, Greg J.	20559	Summit Water Distribution Company	D-IV, T-IV
White, Morgan C.	22040	Cove Special Service District	D-S
White, Stanley J.	95157	Water Specialist	T-II
Whitney, Shane B.	23004	Clean Harbors	D-S
Whittle, Deon E.	00751	Jordan Valley Water Conservancy District	D-IV
Wilding, David M.	87840	Bountiful City	D-IV
Wilhelm, Robert K.	88537	North Logan City	T-III
Wilkinson, Arlon R.	00777	Salt Lake City Corporation	D-IV
Williams, Kenneth E.	88154	Centerville City	D-IV
Williams, Richard C.	25525	Deweyville Town	D-I
Williams, Ryan S.	20560	Mountain Regional Water SSD	D-IV
Williamson, Tom L.	23551	Metropolitan Water District of SL & Sandy	D-III
Wilson, Michael L.	93555	Metropolitan Water District of SL & Sandy	D-IV
Winward, Matthew L.	25084	South Jordan City	D-IV
Wittwer, Kurtis K.	84389	Water Specialist	D-IV
Wolfinger, Kirby L.	25526	Roosevelt City	D-IV
Wood, Larry D.	98543	East Carbon City	T-II
Wood, Rodney J.	22563	North Salt Lake City	D-IV
Woolsey, Scott J.	22041	Bicknell Town	D-S
Wootton, Nolan V.	21172	Water Pro	D-IV
Worley, Terry L.	21567	Metropolitan Water District of SL & Sandy	D-IV
Wright, Douglas J.	86649	South Salt Lake City	D-IV
Wright, Kurt A.	92520	Water Specialist	D-III
Ylincheta, Joe A.	25555	Sandy City	D-II
York, Ryan W.	98168	Provo City	D-IV
Young, Ronnie L.	93558	Myton City	D-I
Younger, Stacy I.	25527	Willard City	D-II
Zitting, Richard D.	25037	Mountain Springs Water Company	D-I
Zwahlen, Kent E.	25508	Chemical Lime	D-S

These renewals represent close to a minimum of 14,000 hours of training to obtain their required CEU's. Congratulations to these dedicated operators for their efforts in keeping their certifications current.

2009 Water Operator Exam Schedule

November 12, 2009 at 16 exam sites around the State. See the exam application for locations. The exam application deadline for this exam is October 22, 2009.

March 5, 2010 at the Dixie Convention Center in St. George. This at the Rural Water Association of Utah's Northern Conference. Contact them by calling 801-756-5123 or the website is <http://www.rwau.net>

April 8, 2010 at 16 exam sites around the State. See the exam application for locations. The exam application deadline for this exam is March 18, 2010.

Also November 4, 2010 at the 16 exam sites around the State. See the exam application for locations. The exam application deadline for this exam is October 14, 2010.



-----Detach and Mail to:-----
DDW 150N 1950W, SLC, UT 84116

DDW Customer Service Survey

Historically the Division of Drinking Water was open Monday through Friday 8 a.m. to 5 p.m. Then on August 4, 2008, as part of Governor Huntsman's "Working 4 Utah" initiative, our office is now open Monday - Thursday from 7 a.m. to 6 p.m. and closed Fridays.

Which Section(s) within the Division of Drinking Water (DDW) are you involved with? (check all that apply)

- Administrative Services (Front Desk Support, Source Protection)
- Construction Assistance (Financial Assistance)
- Engineering Section (Plan Review)
- Field Services (Sanitary Surveys, Operator Certification, Backflow Technicians)
- Rules Section (Monitoring & Reporting)

Has our quality of service changed since August 4, 2008 and the start of Working 4 Utah?

Much Worse Worse No Impact Better Much Better

Comments?

In your opinion, has DDW's ability to protect public health or the environment been affected by our new work hours?

Much Worse Worse No Impact Better Much Better

Comments?

*Alternatively, you may complete this survey available on our website: <http://www.drinkingwater.utah.gov>

Utah Division of Drinking Water
Operator Certification Program
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Salt Lake City, Utah 84114-4830

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